



# “WANT TO” VERSUS “HAVE TO”: INTRINSIC AND EXTRINSIC MOTIVATORS AS PREDICTORS OF COMPLIANCE BEHAVIOR INTENTION

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*“Worthless,” “money burning,” or “black holes” is how media and professionals describe compliance practices today. Practitioners are unenthusiastic about control systems, codes of conducts, and systems for compliance management that are increasing in volume but not in effectiveness. In order to help practitioners clarify what actually makes employees comply with their compliance program, this study examines intrinsic and extrinsic motivators of 119 employees from procurement and sales. We contribute to the existing motivation literature, testing the self-determination theory in low and high hierarchical levels. Our findings show that intrinsic motivators are more strongly and positively related to compliance intention on higher hierarchical levels than the lower ones. However, employees from higher hierarchies show overall less compliance intention than employees from lower hierarchies. © 2015 The Authors. Human Resource Management published by Wiley Periodicals, Inc.*

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**P**ractitioners have raised concerns that their investments in compliance management systems have been ineffective. In a survey conducted by PricewaterhouseCoopers (PWC) in 2010, 45% of surveyed German executives reported that the bureaucratic control of compliance management worries them and 43% of them mentioned that the benefits did not justify the effort. Explanations for these negative results could be that the compliance efforts have been predominantly legally driven, often not

being more than a mere “window dressing” (Fiss & Zajac, 2006; Trullen & Stevenson, 2006) as well as ineffective, if the system has not been integrated into the company’s core activities (MacLean & Behnam, 2010; McCabe, Treviño, & Butterfield, 1996; Treviño, Gibson, Weaver, & Toffler, 1999). Although there is a dedicated compliance officer, who designs, implements, maintains, and reports compliance regulations (McKendall, DeMarr, & Jones-Ridders, 2002), it is the HR department that supports the integration of compliance practices

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into the company's core processes (Farndale, Paauwe, & Boselie, 2010). Understanding the motivators that increase the degree of employee compliance to the rules and norms of an organization is therefore salient for effective human resource management (HRM) (Chow, Huang, &

*The aftermath of large-scale compliance scandals (e.g., Enron in 2001) initiated a compliance offense with full-blown compliance program implementations in not only major but also mid-sized and smaller corporations. Therefore, we are now able to go beyond the illustrated research state by empirically analyzing what actually motivates employees to comply with their compliance program (intrinsic vs. extrinsic) and how hierarchical organizations moderate this effect within organizations.*

Liu, 2008; Gong & Janssen, 2012; see also Kish-Gephart, Harrison, & Treviño, 2010).

The reason people are noncompliant has often been approached from the viewpoint of traditional economic thought (Becker, 1968; Frey, Homberg, & Osterloh, 2013). It is argued that the noncompliant behavior is the result of a rational decision based on a cost-benefit analysis by individuals (Braithwaite & Makkai, 1991; Ehrlich, 1972; Grasmick & Bursik, 1990; Makkai & Braithwaite, 1994; Parker & Nielsen, 2011b; Paternoster & Simpson, 1996). Traditional economists often see sanctions as the most effective way to deter potential offenders (Williamson, 1975). Therefore, most of the time, core policies have aimed to scare off potential offenders by sanctions (e.g., fees, extra work). However, current studies show that control systems and sanctions are not only very difficult to introduce (Bowles & Polania-Reyes, 2012; Falk & Kosfeld, 2006; Lindenberg, 2001; Lindenberg & Foss, 2011) but also have little effect on compliance behavior (Braithwaite & Makkai, 1991; Frey et al., 2013; Parker & Nielsen, 2011b).

In the search for more prominent influences on behavioral intentions than solely external controls such as obtaining a desired reward or avoiding punishment, Deci and Ryan (1985) introduced self-determination theory (SDT), which centers on intrinsic motivation as an autonomous motivation in its purest form in the absence of any extrinsic motivators. Intrinsic motivation refers to doing an activity for its own sake because one finds the

activity inherently interesting and satisfying. In contrast, extrinsic motivation, or controlled motivation in its purest form, refers to doing an activity for an instrumental reason such as obtaining a reward or avoiding punishment (Gagné & Forest,

2008). Recent empirical studies have shown that intrinsic motivators are not only important but also more effective than extrinsic motivators in situations such as more complex work environments where direct incentive effects are more challenging to facilitate (Cerasoli, Nicklin, & Ford, 2014; Feldman, 2011; Frey et al., 2013; Gardner, 2012).

Looking back in the compliance literature, extrinsic and intrinsic motivators have always been discussed as the central pairs of opposites until today: Paine in 1994 first conceptualized legal (extrinsic) versus integrity (intrinsic) as the two ethical cornerstones of compliance, both shaping the word and how it has been used in the literature. Weaver and Treviño (2001) then focused on the management of compliance activities distinguishing between a compliance-oriented (extrinsic) versus a value-oriented (integrity) approach. Finally, Stansburry and Barry (2007) proposed an enabling versus a coercive control, while Tyler and Blader (2005) suggested a command-and-control versus a self-regulation control of implemented compliance activities (Tyler & Blader, 2005). Since then, the aftermath of large-scale compliance scandals (e.g., Enron in 2001) initiated a compliance offense with full-blown compliance program implementations in not only major but also mid-sized and smaller corporations. Therefore, we are now able to go beyond the illustrated research state by empirically analyzing what actually motivates employees to comply with their compliance program (intrinsic vs. extrinsic) and how hierarchical organizations moderate this effect within organizations.

First, we are able to contribute to the compliance literature by increasing our knowledge of the motivational sources behind employees' compliance behavior intention, including both extrinsic and intrinsic motivation. The employee's attitude mediates all outcome beliefs for compliance intention except work impediment, which shows that employees act ethical as they are willing to accept more work if it is to ensure better compliance standards.

Second, we contribute to motivation research by testing the assumptions of SDT in different organizational hierarchies. Although intrinsic motivators are more efficient at the top management level, our results also show that top managers in general show significantly less compliant intention than employees from lower hierarchies. These two faces of the top management may indicate that the incentive system promotes a "thrill of noncompliance," which may ultimately alter the compliance behavior intention at the top management of the company.

On the basis of our results, we intend to give evidence-based *advice* to the field of HRM by extending our knowledge of how to implement compliance management practices more effectively. In particular, we discuss the advantages and disadvantages for practitioners to adapt or not adapt the compliance program hierarchically, paying attention to intrinsic and extrinsic motivators.

## Theory and Hypotheses

### *Motivation and Compliance Theory*

The psychological motivation literature has predominantly focused on explaining the direction, persistence, and intensity of projected behavior (Deci & Ryan, 2000). The literature differentiates between two types of motivation theories: content and process theories. Process theory such as the theory of planned behavior (TPB) focuses on integrating personal and contextual factors, which allows for an effective selection of differing alternatives of actions (Deci & Ryan, 2000), whereas a content theory (e.g., SDT) encompasses individual (personal factors) and contextual motivators (situation factors). A motivator is a construct that may cause differing anticipations and evaluations of consequences of actions (e.g., positive or negative) (Deci & Ryan, 1985). Motivators can be divided into extrinsic and intrinsic motivators (Gagné & Deci, 2005). Extrinsic motivating behavior is implicit behavior that originates from external contingencies such as pressure (Gardner, 2012) or tangible, monetary rewards (Peterson & Luthans, 2006). In contrast, intrinsic motivation entails behaviors motivated in “the absence of any apparent external contingency” (Deci & Ryan, 1980, p. 42). Broadly speaking, this intrinsic and autonomous motivation is based on the motivation to pursue norms for their own sake (Gagné & Deci, 2005). Process theory has often built on the so-called expectancy value theorem, which basically argues that one chooses the product that maximizes the probability of achieving a target value (motivator) in combination with the value of this target. In combining TPB and SDT in this article, we ensure both process and content view of compliance behavior intention.

SDT is one of the most prominent frameworks for defining intrinsic motivation among the numerous theories of motivation that can be found in the social psychology literature (Deci & Ryan, 1985, 2000; Grant, Nurmohamed, Ashford, & Dekas, 2011). SDT predominantly deals with contingencies that increase or decrease autonomous motivation and has received considerable empirical support (for a more elaborate presentation, see Gagné & Deci, 2005). At the core of SDT

are three inherent psychological needs of each individual: autonomy, competence, and relatedness. The experience and fulfillment of self-determination and competence needs play an important role while determining intrinsic motivation. The concept of competence sees individuals pursuing an action in order to receive a reward feeling of efficacy (effectance motivation) when interacting with the environment (White, 1959). The autonomy concept sees the individual seeking responsibility for his own behavior, to be a causal agent, the primary locus of causation (deCharms, 1968). This internal locus of causality is extremely sensible to behavioral influences and external causes. Self-determination suffers from the introduction of external controls, such as monetary incentives. As a consequence, individuals move their locus inside out, following their duty only when external incentives exist. The third need is the need for relatedness, or feeling connected to others, and refers to caring for and being cared for by others as well as having a sense of belongingness to groups, communities, or organizations (Ryan & Deci, 2002). Experiencing satisfaction of this need plays an important role in the internalization of work-related rules and regulations (Gagné & Deci, 2005).

Compliance behavior is the attitude toward and intention to follow a given set of rules or norms of an individual’s environment (Lu, Sadiq, & Governatori, 2008). Such rules and regulations are expressed within all compliance efforts that aim to ensure that the management as well as the company’s employees behave lawfully (for an overview, see Pinto, Leana, & Pil, 2008). Integrating the compliance and motivation literature by applying SDT centers the compliance behavior on the autonomy of the individual as the driver of motivation. In this regard, intrinsic motivators increase compliance motivation, while extrinsic motivators (e.g., control) reduce noncompliance motivation.

Within SDT, Deci and Ryan (1985) introduced the compliance-relevant organismic integration theory, which explains situational factors that either hinder or promote internalization of the regulation of, for example, the individual’s organization. Internalization happens when regulations are aligned with one’s own needs and values and, hence, are completely assimilated to oneself. Internalized extrinsic motivated actions share

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many characteristics with intrinsic motivation. However, they remain extrinsic since they aim at discrete outcomes instead of innate enjoyment. But SDT distinguishes that extrinsically motivated actions may also convert in being self-determined when individuals start identifying with their completely assimilated regulations. Therefore, it is through internalization that individuals may become authentic and committed while following extrinsically motivated actions. For instance,

It is through internalization that individuals may become authentic and committed while following extrinsically motivated actions. For instance, when individuals focus on the well-being of others, they anticipate no compensation.

when individuals focus on the well-being of others, they anticipate no compensation. In this case, the community's benefit enters the individual's preferences (Frey et al., 2013), which is a prerequisite of organizational citizenship behavior (OCB).

Compliance behavior can be described as a subform of OCB (for an overview, see Podsakoff, Podsakoff, MacKenzie, Maynes, & Spoelma, 2014). As such, compliance behavior helps to create OCB's psychological and social environment that finally influences task performance. Van Dyne, Cummings, and Parks (1995) differentiate between two types of OCB: challenge-oriented and affiliation-oriented. Whilst challenge-oriented behavior is described as behaviors that challenge the status quo that emphasizes expression of constructive challenge, often with the goal to create something new (e.g., through

change or innovation), compliance behavior is an affiliation-oriented OCB due to its cooperative and interpersonal nature: being compliant strengthens or maintains relationships with other people through adjusting or integrating a given set of rules (Organ, Podsakoff, & MacKenzie, 2006). It can mean speaking up to others in order to prevent the occurrence of noncompliance (Podsakoff et al., 2014).

Several researchers have investigated the influence of compliance management on actual behavior. As presented in Table I, there are basically four major pairs of opposites describing compliance behavior: (1) legal vs. integrity, (2) compliance vs. value, (3) coercive vs. enabling, and (4) command-and-control vs. self-regulation. All four approaches derive their opposites from extrinsic and intrinsic motivators.

Paine (1994) has been first in discussing the relevant division of corporate compliance and ethics (for a review, see Michaelson, 2006). She considers ethics in her pivotal work as the "driving force" of a company that defines "what the company is" and "what it stands for" (Paine, 1994, p. 111), while compliance is referred to as a specific approach, strategy, or policy. Paine (1994) claims the compliance orientation of companies is inadequate for exemplary conduct, since compliance serves only to prevent violations of the law. Instead, she recommends pursuing an approach of integrity and moral values, emphasizing strategies that go beyond a mere "legalistic" punishment and control-oriented compliance. In this way, ethics go beyond compliance (Maignan, Ferrell, & Hult, 1999; Norman, 2011). On the other hand, legal and economic responsibilities are subject to compliance management but shall always be considered in ethical management, too (Carroll, 1979, 1991).

Concerning the implementation of compliance programs, research findings indicate that value-oriented implementation based on self-direction and social values is more effective than (formal legal) compliance-oriented implementation based on controls and penalties (Adam & Rachman-Moore, 2004; Treviño et al., 1999; Weaver & Treviño, 1999). Stansbury and Barry (2007) investigated the different types of compliance control. In their research they differentiate between coercive (destructive) and enabling (constructive) control. Tyler and Blader (2005) found that a control-oriented approach is effective but could be improved by a self-regulatory approach,

**TABLE I** Extrinsic and Intrinsic Motivators in the Compliance Literature

Compliance Approach	Extrinsic Motivator	Intrinsic Motivator
Ethic approach (Paine, 1994)	Legal compliance	Integrity
Implementation of compliance managements (Weaver & Treviño, 2001)	(Legal) compliance-oriented	Value-oriented
Type of control (Adler & Borys, 1996; Stansbury & Barry, 2007)	Coercive control	Enabling control
Steering of correct behavior in the company (Tyler & Blader, 2005)	Command-and-control approach	Self-regulation approach

which relies on legitimacy and value congruence between employees and a company. They identify different determinants of steering correct behavior in a company depending on whether a company follows a command-and-control approach (focus on extrinsic motivation) or a self-regulatory approach. Our study attempts to build upon but also go beyond the present state of the literature by empirically measuring what factors drive employees to comply with their compliance program and which role plays the hierarchy within the organization. After a “compliance wave” with comprehensive compliance program implementations, we are now able to actually test the motivators that increase the employee’s compliance intention with the compliance program of not only major but also mid-sized and smaller organizations.

Indeed, traditional economic behavior models have been based on concepts that solely rely on incentives of extrinsic motivation (Frey, 1997). Intrinsic motivation is not considered irrelevant in economic approaches, but is perceived as a given exogenous constant (Frey & Jegen, 2001). Economists have justified this approach by treating intrinsic motivators as elements of morality and moving them to the realm of preferences (Frey, 1997). However, behavioral changes are always explained due to changes of restrictions

and not due to changes of preferences. Thus, the definition of intrinsic motivators is important. Depending on the conceptual bases, intrinsic aspects may be well integrated into a model of economic behavior (see, for example, Harbaugh, 1998; Paternoster & Simpson, 1996). In addition, when intrinsic motivators are excluded, pure extrinsic incentive mechanisms may cause negative effects such as the control paradox and the crowding-out effect (Frey & Jegen, 2001).

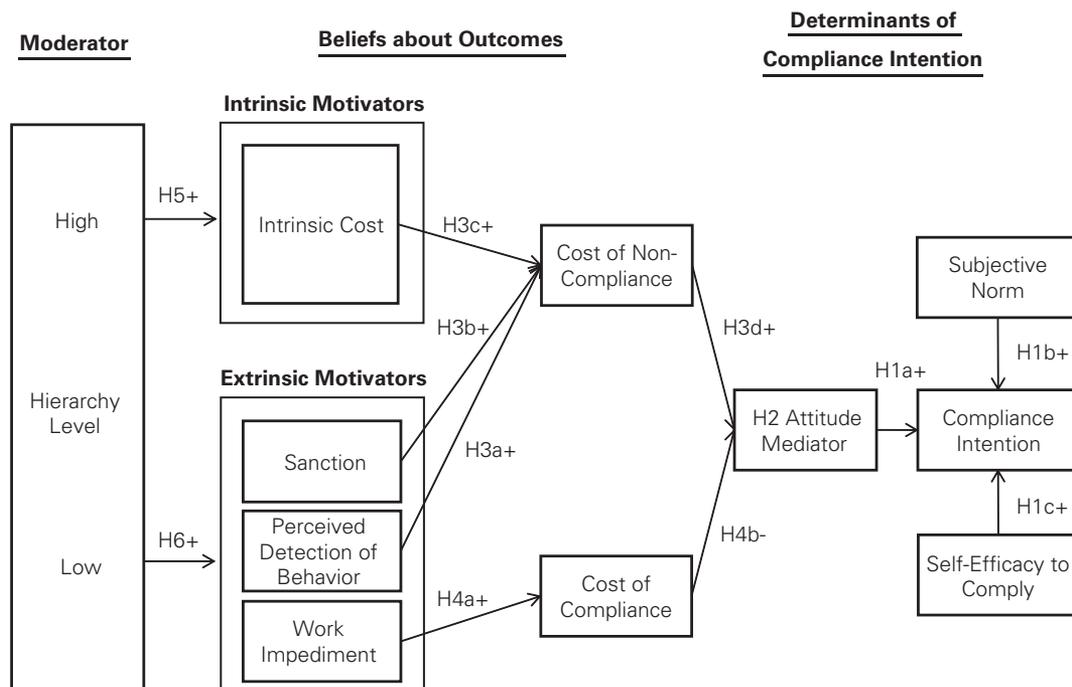
**Hypotheses**

As shown in Figure 1 and Table II, our conceptual model includes both intrinsic and extrinsic motivators in line with SDT (Gagné & Deci, 2005). We thereby recognize the relevance of extrinsic motivators like sanctions, as well as the relevance of intrinsic motivators like intrinsic costs. We assume that these costs may also include any benefits of complying (e.g., rewards) or not complying (e.g., “thrill”) that may be perceived as relevant increase or decrease in the costs of compliance or noncompliance by the employee. As such, we suggest that both extrinsic and intrinsic costs predict

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Note: Control variables are gender, company size, hierarchy, age, and industry.

**FIGURE 1.** Overview of Hypothetical Model of Compliance Behavior

**TABLE II** Overview of Constructs, Definitions, and Sources

Level	Construct	Definition	Source
Main construct	Compliance intention	The individual probability that a person complies to the compliance management	Ajzen (1991)
Compliance intention	Attitude toward compliance	Measures in how far an individual evaluates positively the compliance behavior	Ajzen (1991)
	Normative beliefs	Belief of person that important colleagues in his environment shall comply to the compliance management	Ajzen (1991)
	Self-efficacy to comply	Measures how much an individual has the capabilities, knowledge, and competences to comply with the compliance management	Ajzen (1991)
Costs of compliance and noncompliance	Perceived cost of compliance	Overall perceived negative consequences that an individual expects when complying with the compliance management	Bulgurcu et al. (2010)
	Perceived cost of noncompliance	Overall perceived negative consequences that an individual expects when not complying with the compliance management	Bulgurcu et al. (2010)
Extrinsic motivators	Sanctions	Formal, tangible and intangible sanctions that an individual expects when not complying with the compliance management	Boss & Kirsch (2007)
	Perceived detection of behavior	Perceived intensity of employee observation of the boss	Tyler & Blader (2005)
	Work impediment	Perceived impediment of daily work task and activities of the individual when complying with the compliance management	Bulgurcu et al. (2010)
Intrinsic motivators	Intrinsic costs	Perceived negative outcome that an individual relates to himself when not complying with the compliance management	Bulgurcu et al. (2010)

compliance behavior. In addition, we align our model with the theory of planned behavior (TPB). TPB proposes that individuals have a general idea about the consequences (i.e., costs of compliance or noncompliance behavior). The evaluation of the costs is determined by general ideas about the negative as well as positive consequences of individual behaviors, and based on these perceived outcomes, the individual develops an attitude toward behaviors more generally speaking (Armitage & Conner, 2001) and in our study specifically to compliance behavior.

### Compliance Intention

Recent studies have used TPB to explain information security compliance (Bulgurcu, Cavusoglu, & Benbasat, 2010; Herath & Rao, 2009; Hu, Dinev, Hart, & Cooke, 2012; Pahnla, Siponen, & Mahmood, 2007). According to TPB, the compliance behavior of individuals can be explained by behavioral intention, which is particularly appropriate to explain the underlying motivation for compliance (Ajzen, 1991) since, in a compliance context, the intention to comply may reflect a

rational state of mind, which in turn may affect the actual behavior in situations where the individual has to decide to comply or not to comply (Becker, 1968). Compliance intention is determined by three variables: (1) attitude toward the compliance behavior measures in terms of the degree to which individuals evaluate compliance behavior positively; (2) normative beliefs, which measure the person's judgment as to whether close colleagues would stick to compliance management requirements; and (3) self-efficacy, which is ultimately defined as a measure of the extent to which an individual has the skills, knowledge, and competencies to adhere to compliance management requirements; that is, it describes the ease or difficulty with which the individual complies (Ajzen, 1991). According to TPB, the greater these three determinants are, the higher the intention. Self-efficacy in this regard tests whether the compliance program and training help to increase the knowledge and skills that enable all employees to fulfill the program's requirements. Self-efficacy is the activator for one's own locus of control. It means to be able to autonomously act

and speak for oneself due to the feeling of being competent regarding the compliance rules (Deci & Ryan, 1985). Therefore, if employees feel that they are able to achieve the compliance targets, they are more likely to be compliant. In addition, employees who believe that their close colleagues will stick to the compliance program may show higher compliance intention than those who believe that their colleagues will not stick to the compliance program (e.g., Bulgurcu et al., 2010). Besides telling about one's own subjective norm, the perceived attitude of other colleagues toward rules may show that compliance can be perceived as a collective activity (Pinto et al., 2008): If the collective relevance of compliance decreases, it may hinder internalization since collective non-compliance may be the cause of individual non-compliance and, therefore, reduce the intention to be compliant. We assume:

*Hypothesis 1: The attitude (a), the normative belief (b), and the self-efficacy (c) concerning compliance behavior are positively related to the intention to adhere to the compliance management requirements.*

#### Costs of Compliance and Noncompliance Mediated by the Attitude toward Compliance Behavior

Following Fishbein and Ajzen (1975), the adjustment to the individual compliance behavior is a function of *behavioral beliefs* (Ajzen, 1991, 2005; Fishbein & Ajzen, 1975). In a compliance context, this means that individuals attribute specific consequences to behavior. To make this clear, the rational characteristics of white-collar crimes provide a strong backbone for the use of our applied rational choice model of compliance motivation as an exploratory mechanism. In our model, there are two behavioral options: compliance or non-compliance. Individuals attribute costs regarding consequences to both behaviors. Attitude acts in this case as a cost mediator. In this model, there are two alternatives: the perceived cost of compliance and the perceived costs of noncompliance (Bulgurcu et al., 2010; Parker & Nielsen, 2011b). These costs are the results of a calculus weighing positive and negative consequences. In a compliance context, the perceived costs of compliance may outweigh the perceived costs of noncompliance, which is often seen in contexts of fraud or corruption where top management ex-post justify their noncompliant behavior, arguing that they wanted to "save" the company and, particularly, their employees and decided to risk the perceived personal costs (e.g., image loss or even jail) they might face (Welsh & Ordóñez, 2014). As a

reaction, companies may either decrease the costs of compliance (e.g., via less bureaucracy or more compliance rewards) or increase the costs of non-compliance (e.g., via more penalties or a less risky business culture to avoid any "thrill" of noncompliance). According to Fishbein and Ajzen (1975), it is assumed that the belief about the costs of the behavior influences the attitude. Thus, we assume:

*Hypothesis 2: The attitude toward compliance behavior mediates the relationship between (a) perceived costs of compliance and (b) perceived cost of noncompliance and compliance intention.*

#### Perceived Cost of Noncompliance

The perceived cost of noncompliance is defined as the total expected negative consequences for an individual when she or he does not adhere to the requirements of compliance management (Bulgurcu et al., 2010). These costs may occur from beliefs about (1) intrinsic costs, (2) sanctions, and (3) perceived behavioral detection. First, intrinsic costs refer to negative feelings for an individual when she or he does not comply with compliance management, for example, because of an innate disagreement with the given set of rules that do not align with one's own needs and norms (Gagné & Deci, 2005). Besides formal deterrence mechanisms (e.g., sanctions or penalties), there are informal deterrence mechanisms that create costs of noncompliant activity (Cohen & Simpson, 1997; Paternoster & Simpson, 1993). These include feelings of shame or loss of respect from the individual's peers that may hurt more than formal sanctions (Grasmick & Bursik, 1990). Empirical studies show that informal aspects can better explain compliance and noncompliance than formal deterrence alone (Parker & Nielsen, 2011b; Paternoster & Simpson, 1996). Although the noncompliant activity is kept secret, individuals may perceive themselves negatively (self-image, self-esteem) in the short term and may become depressive in the long term when they do not comply with compliance management (Grasmick & Bursik, 1990). These costs may also be high because the individual may have an inner positive feeling related to compliance, for example, satisfaction, interest, or even joy (Bulgurcu et al., 2010; Deci & Ryan, 1985).

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*Although the noncompliant activity is kept secret, individuals may perceive themselves negatively (self-image, self-esteem) in the short term and may become depressive in the long term when they do not comply with compliance management.*

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For instance, it may be possible that compliance behavior may lead to the positive feeling of civic virtue rather free from external influences (Deci & Ryan, 1980). However, if the compliance motivation is to gain prestige, then it would be an extrinsic motivation (Harbaugh, 1998).

Second, formal sanctions are tangible or intangible penalties that a person receives from the company if they do not adhere to the requirements of compliance management, such as fines or reduced bonus payments (Bulgurcu et al., 2010). The traditional theory of deterrence posits to influence the rationality of individuals through sanctions so that the cost of noncompliance is sufficiently high to make noncompliance no longer profitable (Becker, 1968). These sanctions may also be perceived high due to an operational incentive system that intends to promote the desired behaviors of compliance (Becker, 1968). Those indirect sanctions (i.e., rewards) are often used as positive incentive mechanisms in economic theories (Frey, 1997). In the context of economic crime, empirical studies show that formal sanctions have no or partial positive effect on compliance behavior (Braithwaite & Makkai, 1991; Makkai & Braithwaite, 1994; Parker & Nielsen, 2011a). However, the general ineffectiveness of formal sanctions is not yet definitively proven concerning economic crimes. Tyler and Blader (2005) confirm the command-and-control approach to be partially effective. Thus, there is a need to examine whether extrinsic control mechanisms such as sanctions increase the costs of noncompliance by using the rational choice approach.

The perceived uncovering of the behavior of the individual is defined as the perceived intensity with which the individual's behavior is observed by the line manager (Tyler & Blader, 2005). In many models, there is a similar construct, namely, the probability that the noncompliant behavior is detected, which also affects the individual's cost calculation (Herath & Rao, 2009; Paternoster & Simpson, 1996). To uncover compliance behavior, employers usually use control and monitoring mechanisms, which belong to the extrinsically oriented command-and-control approach, and generate compliant behavior (Tyler & Blader, 2005). It is therefore likely that individuals will perceive behavioral controls as a cost of noncompliance (Ghoshal & Moran, 1996). Therefore, the following hypothesis is tested:

*Hypothesis 3: The (a) perceived behavioral detection, (b) intrinsic costs, and (c) sanctions positively relate to the perceived overall costs of noncompliance, which in turn (d) is positively related to the attitude toward compliance.*

### *Perceived Cost of Compliance*

The perceived cost of compliance is defined as the total expected negative consequences for an individual who conforms to compliance requirements. These costs may be predominantly shaped by extrinsic work impediments. A perceived work impediment is defined as a perceived disability in carrying out the everyday professional tasks and activities of a person if they conform to compliance management requirements (Bulgurcu et al., 2010). Introducing a compliance system comes with an increased documentation and reporting of compliance action. A compliance management system may contain certain provisions that lead to increased bureaucracy, which in turn leads to time-consuming decisions. This impairment of routine work is perceived by workers as a cost of compliance. The work impediment may be perceived as a high cost due to a gain of efficiency that comes with noncompliance. This efficiency gain may even lead to a positive feeling of doing something more efficient than the rest, who are still following the rules. The increased work impediment is assumed to relate negatively to the attitude to the compliance program. Employees are expected to associate negative feelings and thoughts due to the increased bureaucracy that may negatively influence their attitude toward the compliance program. Accordingly, the following hypothesis is examined:

*Hypothesis 4: The perceived work impediment is positively related to the overall cost of compliance (a), which is negatively related to the attitude toward compliance behavior (b).*

### *The Moderating Role of Hierarchical Level*

According to the organizational contingency literature (e.g., Johns, 2006), organizational level may determine the extent to which compliance practices influence compliance behavior. More specifically, each organizational level provides different contextual perceptions of the same organization (Schminke, Cropanzano, & Rupp, 2002), shaped by the person's access to resources and social identification that come along as artifacts depending on the hierarchical level a person has (Begley, Lee, & Hui, 2006). Resource theory sees individuals defined by their access to resources within an organization, due to which there may be greater autonomy and less need for extrinsic controls at higher hierarchical levels (Gagné & Deci, 2005). Instead, employees at higher levels are assumed to be more intrinsically concerned about effective resource allocation, while at lower levels people's

focus lies on following compliance procedures under extrinsic obligations when constrained to pursue more intrinsic motives. Employees from higher hierarchies have their own goals necessarily aligned to the goals of the organization due to their increased commitment related to the positive career progress (Weibel, Rost, & Osterloh, 2010). Any extrinsic alignments such as bonus payments or incentive payments are from an SDT perspective for higher hierarchies perceived as extrinsic and, therefore, may harm rather than help. These extrinsic payments may be counterproductive and distort any intrinsic behavior of highly intrinsically motivated top managers (Rost & Weibel, 2013).

Furthermore, social identity theory views the individual as social and states that people define their identities at least partly based on their status within their groups and organizations (Tajfel & Turner, 1986). At higher levels, authority is therefore considered to be an element of social status (e.g., Tyler, 1999) that differentiates members of higher levels from members of lower levels. The danger of losing such authority through unfair behavior is, therefore, assumed to be rather high (Van den Bos, Lind, Vermunt, & Wilke, 1997; Van den Bos, Wilke, & Lind, 1998). People at higher levels are therefore intrinsically motivated to maintain their authority being an archetype for their subordinates. Extrinsic motivators may distort this particular intrinsically driven behavior. Conversely, at lower levels people possess less authority and have less reason to fear a loss of image and authority. We therefore hypothesize the following:

*Hypothesis 5: At higher organizational levels the relationship between employees' compliance intention and intrinsic motivation is more positive than is the corresponding relationship at lower organizational levels.*

*Hypothesis 6: At lower organizational levels the relationship between employees' compliance motivation and extrinsic motivation is more positive than the corresponding relationship at higher organizational levels.*

## Methodology

### Data Collection and Sampling

The data were collected through an anonymous online survey using a standardized questionnaire during the period December 2012 to February 2013. The survey was conducted among employees at all levels of organizations in the functional areas of distribution and sales, and purchasing and

procurement. These areas are especially sensitive toward compliance violations due to cooperation with many business partners, which may increase the risk of corruption (Harland, Brenchley, & Walker, 2003). As a result, the presence of compliance management, for example, in the form of anticorruption management, is more probable in these departments.

In order to reduce the influence of potential biases due to the sensitivity of the topic (e.g., social desirability bias), we decided to ensure a maximum of anonymity by obtaining suitable study participants from the online business network XING. Anonymity is central for a successful questionnaire with a sensitive topic since in company settings, we experienced (during interviews and other projects) that employees are often afraid of possible consequences regarding their individual answers to compliance issues and therefore respond in a socially desirable fashion. We assume that the tendency of respondents to answer questions in a manner that will be viewed favorably by others (i.e., their colleagues) may be small since the questionnaire has not been issued or distributed by the company via the internal mail system. Instead, participants have been contacted on their private business profile, which is often used as an opportunity to express the respondent's individuality. We made it clear from the beginning that this survey is absolutely anonymous and results are presented only in an aggregated manner. We think overreporting of "good behavior" or underreporting "bad" or undesirable behavior can be assumed to be low.

On the other hand, while online networks or databases form a more suitable environment for people to respond to sensitive topics such as compliance, online surveys bear the risk of self-selection bias. We assume that this bias is rather low for the following reasons: First, XING is well suited to represent the entire population since it is Germany's biggest business network, with 5.5 million members. In addition, XING is used not only for career progress HR (81%) or external communication (73%) but also for sales (29%). There is reason to assume that employees in procurement and sales are highly represented in this biggest German business network. Our sample reflects the composition of the population as described by the Federal Statistical

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*Employees at higher levels are assumed to be more intrinsically concerned about effective resource allocation, while at lower levels people's focus lies on following compliance procedures under extrinsic obligations when constrained to pursue more intrinsic motives.*

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Office: (1) fewer employees in senior management than in middle and lower management; and (2) men are more numerous than women, which is particularly related to the purchasing and sales profession, since the latter is a “classic men’s domain” (Funken, 2004).

Taking into account these conditions, we contacted 400 persons via XING and invited them to participate in this study. From participants’ questionnaires, cases that had completed less than 75% of the questions were eliminated. We also asked each respondent if he or she has a compliance program and if he or she is aware of its content. The hypotheses in this study could not be examined with participants who were completely unaware of the existence or the requirements of their compliance program, or who did not work under the rules of compliance programs. We excluded no respondents because every employee had a compliance program installed in their company.

We also deleted 19 cases that did not work in procurement and sales. In terms of how to deal with missing data, we decided to use the expectancy maximization algorithm as suggested by Newman (2014), which resulted in a final sample size of 119 people and a response rate of 29.75% (see also Myers, 2011; Schafer & Graham, 2002). Half of the sample worked in procurement (47.1%) and the other half in sales (52.9%). The average age of the participants in our sample was 40 years, and there were more male (72.3%) than female (27.7%) participants. The most frequently reported industries were the manufacturing sector (13.4%), information and communication (8.4%), financial and insurance services (6.7%), and retail (5.9%). The majority of respondents worked in large companies with more than 250 employees (77.3%). People who worked in smaller businesses (51–250 employees) made up 15.1% of the sample. The rest of the participants worked in very small businesses (European Commission, 2009). Slightly more than half of the participants (50.4%) worked in the lowest of three levels of hierarchy in the company, 34.8% in the medium, and 14.8% in the upper management level.

In addition, given the response rate, we examined whether our data could be influenced by nonresponse bias (Armstrong & Overton, 1977). We performed a *t*-test to check if the mean values were significantly different between the groups “early responders” and “late responders.” Late responders are defined as persons who took part before the last “wave,” that is, after sending the last personal messages (13 participants). This group was compared to the first 13 participants (representing approximately the first and last 10%). The results of these analyses showed

no significant differences with respect to response behavior between the two groups. Based on this, it seems less likely that a nonresponse bias has influenced our results. This is important to mention since a nonresponse bias could be an indicator for a self-selection bias, which means that people that answer fast (positive attitude toward the topic) may be a good proxy for self-selector (also positive attitude toward the topic). Therefore, we statistically imply that nonresponse bias may be also used in our study as a proxy for self-selection bias, which we assume to be of lesser importance.

Finally, since the measurement of latent dependent and independent variables is only done by a single method within a specific context (online survey), and since these measurements were obtained from the answers of each person to the same questions, common method bias could play a role (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff, MacKenzie, & Podsakoff, 2012). First, a series of measures are applied in order to avoid such distortions, such as the assurance that the survey will be analyzed anonymously and that there is no “correct attitude” or “wrong answers” using different scales (Likert scale, semantic differential) and a careful selection of indicators and use of words. Furthermore, we empirically checked the data of any common method bias following Williams, Edwards, and Vandenberg (2003). Here, a latent method construct is used in second order, which includes all the indicators of the model generated; and all indicators are converted into single-indicator constructs (first-order constructs) (Williams et al., 2003). Then, the variance of the single-indicator constructs is compared with the variance explained by the methods construct. In this case, the average variance explained by the substantive constructs (0.873) is much greater than the variance explained by the method factor (0.010). The loadings of the single-indicator constructs and the methods construct (second-order construct) are mostly not significant. It can be cautiously concluded that a common method bias does not seem to influence our observations (Podsakoff et al., 2003).

### *Construct Measurement*

We analyzed our data in a structural equation model by using the software smart PLS3. Advantages of the PLS approach over the covariant approach are mainly that even smaller sample sizes are sufficient to achieve meaningful model results, and that the PLS approach has less restrictive distributional assumptions (Marcoulides, Chin, & Saunders, 2009; McIntosh, Edwards, & Antonakis, 2014; Rönkkö & Evermann, 2013). Based on the questionnaire of Jarvis, MacKenzie,

and Podsakoff (2003), all constructs can be specified in this model as reflective measurement models. All measures were validated in a discussion with compliance managers (DeVellis, 2012). For this purpose we organized a two-hour interview with a compliance manager of a large company, asking him each question of our survey. From his explanations we were able to redraw and adjust the questions in order to make them more practically sensible. All indicators were asked in such a way that the individual perceptions and evaluations of the employees were queried, for example, the perceived costs of compliance or noncompliance. With the exception of attitude and self-efficacy, indicators were measured on a 7-point Likert scale (Ajzen & Fishbein, 1980) from 1 = *strongly disagree* to 7 = *strongly agree*. Employees' compliance intention was measured by asking the participant if he/she intends to comply with the requirements of the compliance practice and the organization's standards in the future and to carry out the prescribed responsibility. The influences of attitude, normative beliefs, and self-efficacy on the compliance intention were measured as follows.

#### Compliance Intention

To measure the attitude toward compliance intention, a semantic differential was used as a global measure (Ajzen & Fishbein, 1980). Here, the participants were asked how necessary, important, or useful they deem compliance management to be (1 = *very unimportant* to 7 = *extremely important*). We asked concretely if the respondent intended to (a) comply with the requirements of the CP of his/her organization in the future, (b) comply with the organization standards according to the requirements of the CP of his/her organization in the future, (c) carry out the responsibilities prescribed in the CP of the organization when he/she works for the organization in the future (Ajzen & Fishbein, 1980). Consolidating these items to one factor reached a satisfactory alpha of 0.97.

Self-efficacy was measured based on the assessment of individual skills, knowledge, and competence in relation to the observance of compliance management requirements on a 7-point Likert scale from 1 = *almost never* to 7 = *almost always*. Here, the respondent was asked if he/she has the necessary skills, knowledge, and competence to comply with the compliance program. We subsumed these items to one factor that reached a satisfactory alpha of 0.91.

Normative beliefs were measured asking the participant if influential, important, or respected people think that he/she should comply with the compliance practice requirements. The participant's attitude is influenced by intrinsic and

extrinsic motivators and measured as follows, which can be attributed as being costs or benefits of compliance/noncompliance. Here, the satisfactory alpha is 0.94.

#### Costs of Compliance and Noncompliance

The perceived cost of compliance was measured by asking participants how time consuming, burdensome, and costly it would be to comply with the compliance practice (satisfactory alpha of 0.88). Finally, perceived cost of noncompliance was measured by asking each participant if not complying with the compliance practice would be harmful in terms of having a negative impact or being disadvantageous for him/her. The Cronbach's alpha shows 0.97.

#### Intrinsic Motivators

Intrinsic costs were measured by asking the participant if not complying with the compliance rules would make him/her feel bad, dissatisfied, or a sense of a lack of accomplishment. Intrinsic costs reached a satisfactory alpha of 0.92.

#### Extrinsic Motivators

Extrinsic sanctions were measured by asking the participant if he/she perceives it probable that he/she will be punished or demoted or receive an oral or written personal reprimand or monetary or nonmonetary penalties as the result of not complying with compliance management requirements. The satisfactory alpha is 0.88. Extrinsic work impediment was measured by asking the participant if conforming to the requirements of the compliance practice would hold him/her back from doing the actual work, slow down response times, or hinder productivity. The alpha is 0.96. Extrinsic behavior detection was measured by asking participants about their perception of how much attention and care the supervisor pays to making them comply with the compliance practice. Here, the satisfactory alpha is 0.76.

#### Hierarchy Moderator

Hierarchy as a control variable was measured as a categorical variable, asking participants if they belonged to a low, medium, or high hierarchical level.

#### Contextual Control Variables

Organizational research has frequently been criticized for neglecting the role of contextual factors (e.g., Bamberger, 2008). To address that critique and to make our results robust across contexts, we included a range of contextual variables including age, gender, company size, function, and industry (e.g., Bulgurcu et al., 2010). Gender (female

vs. male) was measured by a dichotomous variable, while age was measured as a categorical variable asking participants their respective age range (under 20, 21–30, 31–40, 41–50, and above 50). Both control variables can be assumed to be important following a study of compliance to speed limits, where TPB variables mediated the influence of gender and age on compliance behavior (Elliott, Armitage, & Baughan, 2003). Company size has also been measured with a categorical variable: small (less than 51 employees), medium-sized (51–250 employees), and large (above 250 employees). This variable may be important since bigger companies have stronger external pressure to implement their compliance programs (see Vroom & Von Solms, 2004, for an example of accounting compliance). Finally, the industry to which each participant belongs has been identified in detail, including 16 different industry options. Responses were later newly coded as a dichotomous variable to show whether participants belong to either the service or the manufacturing segment, in order to increase the variable's statistical power. For hierarchy, age, and size, we used a continuous PLS approach due to the continuous nature of the defined categories, while for the rest of the controlled variables, we used a dichotomous PLS approach.

## Results

### *Quality Control of the Outer Model*

To check reliability and validity at the construct and indicator level, the following quality criteria were used: content validity, indicator reliability, construct reliability, and discriminant validity (Hulland, 1999). We ensured content validity by our careful selection of indicators through a literature search, and our selection was later confirmed

by an expert scholar within the field of compliance research. Concerning the indicator level, the reliability analysis shows the proportion of the variance of an indicator that is explained by its underlying construct (Hulland, 1999). All indicators loaded significantly greater than 0.8 to their constructs, with the exception of the indicator perceived detection of behavior, in which the loading was only 0.487. Since we deemed this indicator as essential for representing the theoretical breadth of its variable, we chose to retain it in the model, in line with expert advice (Hulland, 1999), since the loading exceeded 0.4.

For quality evaluation, the reliability of construct or the convergence validity was used at the construct level (Hulland 1999). In the present case, all constructs demonstrated higher values than 0.6 (see Table III), indicating a robust construct reliability. As an alternative or additional criterion of convergence reliability, Cronbach's alpha ( $\alpha$ ) is often cited [construct reliability is fulfilled in the case of values  $> 0.7$  (Hulland, 1999; Nunnally, 1978)]. In the present measurement model, both the thresholds for construct reliability and Cronbach's alpha were at satisfactory levels (the minimum value was 0.76).

Furthermore, the average variance extracted (AVE) of each construct was higher than the recommended value of 0.50 (Bagozzi & Yi, 1988; Hair, Sarstedt, Ringle, & Mena, 2012). Finally, concerning discriminant validity, all squared correlations per construct were consistently smaller than the AVE, and therefore we were satisfied with the discriminant validity of our measures (please see the detailed table of correlations and squared correlations of the individual constructs in the Appendices A–C). Finally, we performed a confirmatory factor analysis (data can be provided on request). All Kaiser-Meyer-Olkin (KMO) values

**TABLE III** Overview of Convergence and Discriminant Validity

Construct	Composite Reliability	Cronbach's $\alpha$	AVE	Maximum squared correlation
Attitude	0.951	0.924	0.867	0.488
Cost of compliance	0.929	0.883	0.813	0.550
Cost of noncompliance	0.982	0.973	0.949	0.339
Behavior detection	0.802	0.759	0.591	0.070
Intention	0.979	0.968	0.940	0.463
Intrinsic cost	0.948	0.919	0.860	0.302
Normative beliefs	0.963	0.943	0.896	0.241
Sanction	0.925	0.880	0.805	0.339
Self-efficacy	0.941	0.907	0.842	0.488
Work impediment	0.975	0.961	0.928	0.550

Notes: AVE = average variance extracted.

TABLE IV Detailed Information of Control, Moderator, and Explanatory Power

Exogenous Variable	Path Coefficient	t-value	F <sup>2</sup>	Endogenous Variable	R <sup>2</sup> (corrected)
<b>Control Variables</b>				Compliance intention	0.572 (0.490)
Age	-0.004	0.116	0.041		
Female	0.091	1.321	0.025		
Company size	-0.084	1.055	0.028		
Service	-0.083	1.451	0.027		
Hierarchy	-0.181	2.600	0.032		
<b>Moderator Variables</b>					
Hierarchy*intrinsic costs	0.088	1.667	0.023		
Hierarchy*sanctions	0.049	0.983	0.034		
Hierarchy*detection of behavior	-0.013	0.459	0.040		
Hierarchy*work impediment	0.007	0.373	0.040		
<b>Explanatory Variables</b>					
Attitude	0.270	1.731	0.026		
Normative beliefs	0.081	0.797	0.031		
Self-efficacy to comply	0.231	2.585	0.022		
Cost of compliance	-0.090	1.075	0.012	Attitude	0.308 (0.296)
Cost of noncompliance	0.546	7.013	0.431		
Work impediment	0.686	10.594	0.890	Cost of compliance	0.471 (0.466)
Sanctions	0.376	5.208	0.197	Cost of noncompliance	0.389 (0.373)
Detection of behavior	0.002	0.034	0.000		
Intrinsic costs	0.319	3.673	0.122		

Note: These are standardized path coefficients; sample size = 119; R<sup>2</sup> = explained variance.

were higher than 0.6, and all Bartlett tests can be rejected (Chin, 1998; Hair et al., 2012). All of the measurement item loadings of the intended constructs were above 0.8 and were at least 0.1 less on their loadings on other constructs.

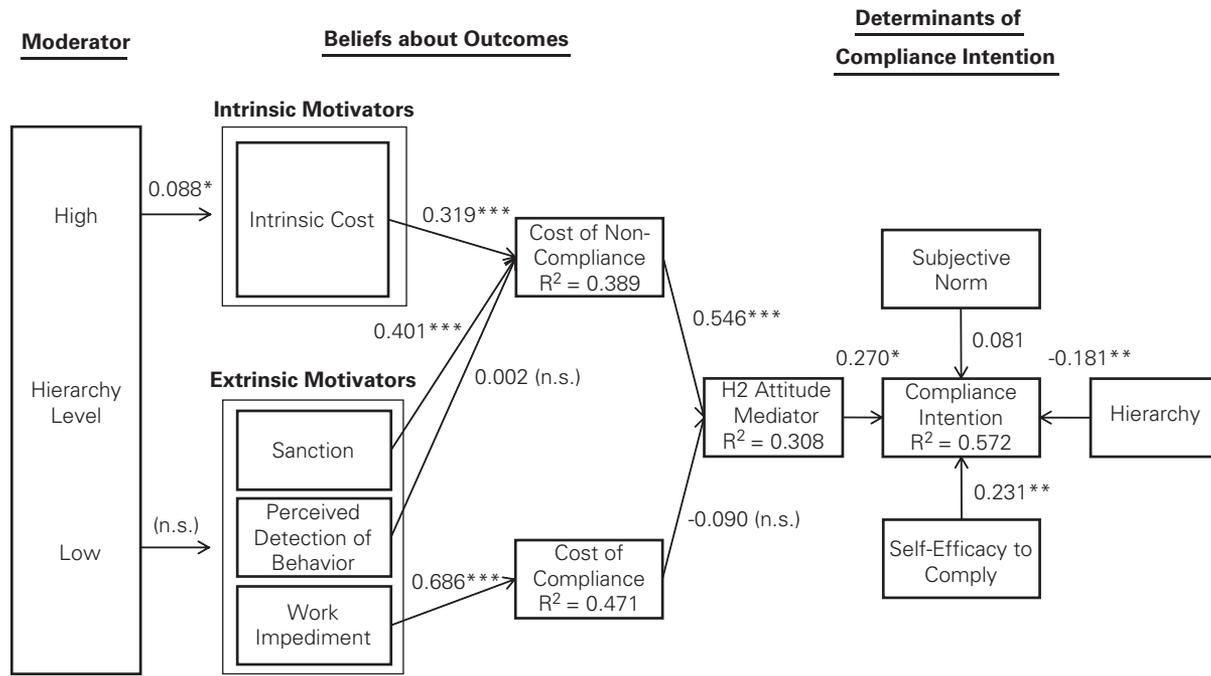
### Quality Control of the Inner Model

In Table IV, all results of the parameter estimation of the internal model and the quality assessment are summarized. Our model showed hardly any change when control variables were added (control variables were age, gender, company size and service industry). As reported in Table IV, hierarchy is the only control variable that has a significant negative influence on compliance intention ( $\beta = -0.181$ ;  $p < .05$ ). The rest of the variables are nonsignificant applying the .10  $p$ -value threshold. The constructs measured in the external model are characterized by a high validity (convergent, discriminant, and nomological). The vast majority of the presumed relationships of latent variables could be confirmed and have sufficiently high significant path coefficients. Nearly all relationships

were significant and showed strong path coefficients greater than  $p = .2$  with the exception of the path coefficient between normative beliefs to comply and compliance-intention. R<sup>2</sup> values from .308 to .572 or corrected R<sup>2</sup> values from .296 to .490 can be considered acceptable, since the model always explain only a few (two or maximum three) exogenous or endogenous variables (Henseler, Ringle, & Sinkovics, 2009). Looking at the effect size F<sup>2</sup> of Table IV, the exogenous variables "cost of noncompliance," "sanctions," intrinsic costs, and work impediment show a medium effect; the other variables of the significant paths, in contrast, have only small effects (Chin, 1998). In the overall view, the evaluation of the outer and inner model provides a high quality of the overall model.

### Test of Main Model

In partial support of Hypothesis 1, the results of the parameter estimates of the structural model show that the self-efficacy to comply ( $\beta = 0.231$ ,  $p < .05$ ) and the attitude toward compliance behavior ( $\beta =$



Notes: These are standardized path coefficients; the control variables age, company size, gender, and industry have not been significant; the moderator hierarchy was tested between the four motivators and compliance intention; sample size = 119; significance levels: + < .1, \* < .05, \*\* < .01; R² = explained variance; n.s. = not significant.

FIGURE 2. Overview of Results of Structural Equation Model of Compliance Behavior

0.270;  $p < .10$ ) are positively related to compliance intention (see Figure 2). The normative beliefs ( $\beta = 0.081$ ) show no significant relationship with the compliance intention.

The present structural equation model assumes that the variable attitude fully mediates the relationship between general beliefs about the consequences of behavior and compliance intention.

In line with Hypothesis 3 the perceived cost of noncompliance ( $\beta = 0.546$ ;  $p < .01$ ) is positively related to attitude. Intrinsic costs ( $\beta = 0.319$ ;  $p < .01$ ) and extrinsic sanctions ( $\beta = 0.401$ ;  $p < .01$ ) are perceived both as costs of noncompliance with a similar intensity. Only the perceived behavioral detection ( $\beta = 0.002$ ) has a nonsignificant relationship with the total perceived cost of noncompliance.

Hypothesis 4 is not supported because a nonsignificant relationship is observed between the perceived cost of compliance and the attitude toward conforming to the compliance system. It should

be noted that work impediment is significantly related to cost of compliance ( $\beta = 0.686$ ,  $p < .01$ ).

**Test of Mediators**

The present structural equation model assumes that the variable *attitude* fully mediates the

relationship between general beliefs about the consequences of behavior and compliance intention. In line with Hypothesis 2, the results of the conducted z-tests by Sobel (1982) demonstrate a mediational role in the adjustment for the variable perceived cost of noncompliance (see Table V). The value of path c, on the other hand, explains that the relationship between attitude to the perceived cost of noncompliance and compliance intention is only partially mediated.

**Test of Moderators**

The moderating test with help of four interaction terms is shown in Table IV and in line with Hypothesis 5, hierarchy has a positive moderating effect between intrinsic costs and compliance intention. Hence, the relationship between intrinsic motivators and compliance intention is assumed to be slightly stronger for the upper management level group than for the lower management level group ( $\beta = 0.088$ ,  $p < .1$ ). The influence of extrinsic motivators makes no difference regarding the hierarchical levels. Hypothesis 6, therefore, is not supported.

**Discussion**

In this study, we set out to contribute to the HRM literature by increasing our knowledge of

**TABLE V** Mediator Analysis of Attitude and Compliance Intention

IV	Path a <sup>1</sup>	Path b <sup>1</sup>	Path c <sup>1</sup>	Path d	SE a	SE b	z-Value	p-Value
Cost of compliance	-0.090	0.270*	-0.025	-0.057	0.084	0.156	-0.576	0.568
Cost of noncompliance	0.546***	0.270*	0.126**	0.287**	0.078	0.156	1.643	0.100

Notes:

IV = independent variable

<sup>1</sup> Here we used standardized path coefficients (see Sobel, 1982, p. 301).

Path a: Path coefficient relationship of IV → Attitude (mediator variable)

Path b: Path coefficient relationship of Attitude → Intention

Path c: Path coefficient relationship of IV → Intention (direct effect)

Path d: Path coefficient relationship of IV → Intention (without mediator variable; i.e., entire effect = a · b + c)

Significance levels: + < .1, \* < .05, \*\* < .01

SE: standard error

z: Evaluation of significance of indirect effects via  $z = \frac{a \cdot b}{\sqrt{b^2 \cdot SF_a^2 + a^2 \cdot SF_b^2}}$

the sources of employees' motivation for holding higher levels of compliance behavior intention. In addition, we contribute to the motivation literature (i.e., SDT) by showing how these sources differ, comparing low and high organizational hierarchies.

**Implications for Compliance Research**

Our results contribute to our knowledge in compliance research in two ways: First, we observe that the compliance intention seems to be influenced by the employee's skills and the knowledge that they have to be able to comply with the various provisions of the compliance management system. Second, a generally positive attitude toward conforming to compliance management requirements, which is shaped by extrinsic and intrinsic motivators, seems essential for achieving high levels of compliance intention.

Our research extends and challenges TPB and SDT by integrating both theoretical approaches. First, our findings suggest that employees' compliance intention does not depend on what they think that their colleagues believe about the compliance program. Following SDT, this can be explained due to the extrinsic nature of such normative beliefs. Following the compliance program is possibly an innate feeling of attitude and self-efficacy that may not be significantly related to the opinion of others.

Second, the strong validity of our rational choice model generally supports the more rational approach to compliance in the corporate crime context (Becker, 1968). However, the non-significant effect of cost of compliance on attitude reveals a new perspective on rational choice theory. Employees apparently do understand the importance of complying with the compliance program and perceive resulting impediments in their work as ethically justified, which could explain the nonsignificant relationship with the attitude toward compliance intention. Indeed, in

our study the asked employees separate the cost of compliance from any calculus to comply, which distinguishes them from purely rational-acting individuals (Midgley, 1994).

Specifically, a mere business-administrative consideration of compliance management that considers its implementation cost in terms of bureaucracy and inefficiency at work seems to be of little relevance for employees (see also Barsky, 2007, for a related model of ethical costs). Rather, our findings indicate that the attitude of the staff depends on external incentives leading to costs of noncompliance and on the fear of the consequences of their own behavior. Indeed, intrinsic costs (e.g., the feeling of inner dissatisfaction in the case of non-compliance) are strongly related to attitude toward compliance intention. We also do not find that superiors' observation of employees' behavior (e.g., surveillance and control measures) is related to the cost of noncompliance. One explanation for this may be related to the fact that external control and monitoring may not be seen as a clear and direct incentive for behavior since it requires giving up one's own locus of control following SDT (Gagné & Deci, 2005).

Regarding the control variables, the results show that employees from higher hierarchies have less intention to comply than employees from lower hierarchies. This result is astonishing and may explain that most crimes happen at higher hierarchies. Reasons for this may be that top managers have more freedom to act and also possess the power to execute their own rules, which may distance them from following these rules. These

Employees apparently do understand the importance of complying with the compliance program and perceive resulting impediments in their work as ethically justified, which could explain the nonsignificant relationship with the attitude toward compliance intention.

results may explain why the most and worst economic crimes happen at higher levels (PWC, 2010).

### *Implications for Motivation Research*

Our results enhance our understanding in motivation research by analyzing how extrinsic and intrinsic motivators may influence compliance intention on low and high organizational levels. Although higher hierarchies have a negative effect on the compliance intention, it turns out that intrinsic costs are more positive related to the compliance intention in the upper management level than in the lower level. This may be due to the reason that people in upper management are more likely to follow intrinsic values since they are used to act as a role model for compliance management (Dries & Pepermans, 2012).

Self-determination is apparently influenced by the contextual settings that come with higher hierarchies, which are status within the organization, the relatedness to the organization's objectives, and the competence within the organization.

People in the upper level may have to worry more about informal losses from noncompliance behavior than do employees at lower levels (e.g., loss of power, prestige, credibility and status), which could ultimately be manifested in a stronger sense of anticipated dissatisfaction (Cohen & Simpson, 1997). Additionally, being involved in the central decisions may lead to an increased internalization of external regulations, which is due to the close relation of the top manager's and the company's goals compared to the employees of the lower hierarchies of the organization. In order to close this gap, companies may either flatten the hierarchies or align the employee's goals with the goals of the organization. Thus, scholars should further investigate these structural factors as they form an important factor of self-determination within organizations. Self-determination is appar-

ently influenced by the contextual settings that come with higher hierarchies, which are status within the organization, the relatedness to the organization's objectives, and the competence within the organization.

In contrast, the influence of extrinsic motivators on compliance intention are not moderated by the hierarchical level. For employees in the lower level, it seems that fears of punishment or negative assessments are equally salient influences on the perceived cost of noncompliance than for their supervisors. Thus, it can be argued that in the upper management level, extrinsic motivators tend to play a similar role than they do in

the subordinated levels of management. This may also be due to the function of top management as role models for compliance management and the fact that higher hierarchies may also fear (informal) losses and other types of consequences from extrinsic punishments.

### *Practical Implications for HR Managers*

Our results show that both extrinsic and intrinsic motivators may predict the individual cost of employees with regard to corporate compliance behavior. However, pursuing both strategies at the same time may be difficult for an organization since intrinsic motivators require the absence of extrinsic motivators. For companies, shaping areas free of extrinsic motivators may be essential since they provide the opportunity for employees to internalize external regulations (Deci & Ryan, 1985). This way, extrinsically motivated compliance regulations may become perceived as being satisfying, inherent, or interesting to pursue, which are classic intrinsic motivation characteristics. Although this internalization of external regulations poses the biggest challenges for companies today, it may have the biggest potential to increase compliance behavior.

Comparing our hierarchical moderating results with our control variable results, there is something of a double standard, where on the one hand top managers are held to be intrinsically motivated but on the other are in general less compliant and, hence, often the cause of compliance scandals. Following SDT, we argue that the relatively high intrinsic motivation of top managers (as our results show) may be lowered by extrinsic incentive systems. This means if the goal is to maximize intrinsic motivation at the top management level, high bonus payments may be particularly harmful (Rost & Weibel, 2013). Imposing external incentives such as payments, laws, or regulations threatens a crowding out of intrinsic motivation (Tyler & Blader, 2005). However, if a company is aware of its set of extrinsic and intrinsic motivators, pursuing a combined strategy is not only possible but also more efficient. Nowadays, companies are not considering intrinsic motivators as part of their compliance management system (Frey et al., 2013). Compliance management, however, needs to be perceived as a holistic concept of internalization of external company values. Aligning the values and needs of the company with their employees' has to be a top priority. For instance, by way of providing a greater degree of involvement and a greater voice, employees can be convinced that compliance behavior is built on their own responsibility instead of control and external regulations (Gagné

& Deci, 2005). Incentives in the form of pay raises, promotions, praise, or recognition can have a powerful effect on compliance management, but these extrinsic effects may not lead to internalization of the companies' regulation as values. Especially in the sales area, rewards or sanctions for reaching or not reaching certain sales targets are widely used and familiar incentives for employees (Treviño & Nelson, 2011), but there is very little use of individual recognition techniques beyond the "employee of the month."

The incentive system that includes the achievement of sales targets or even compliance goals (e.g., avoidance of certain illegal sales techniques) should, therefore, leave room for intrinsic achievements, such as a simple recognition by a colleague for an outstanding behavior. In the case of pay, individuals often hold normative beliefs that perceive money as a less noble cause of motivation than factors such as challenging tasks (Rynes, Gerhart, & Minette, 2004). But, if positive feedback for the employees in the form of praise comes unexpectedly and is perceived as informing (and not as controlling) a feel of competence, ultimately the feeling of intrinsic motivation can be initiated (Deci, Ryan, & Koestner, 1999). Concerning normative beliefs, companies may identify groups with a strong cohesion and affect the group leader, so that the group members are positively influenced in relation to compliance behavior (Treviño & Nelson, 2011). Training on the company's internal compliance management requirements may contribute to an increased self-efficacy of the employee, that is, the knowledge and skills that are needed for them to comply with the requirements of the compliance management system.

Finally, valuable resources for controls and incentives can be provided by companies if the employees work as a result of their own sense of responsibility, that is, if they conform on their own to compliance management requirements (Tyler & Blader, 2005). In particular, it is useful to have employees from different departments involved in the design and development of the compliance management system (Treviño et al., 1999; Weaver & Treviño, 1999). This participative management increases intrinsic motivation due to an increase in the feeling of self-determination and competence (Deci, Ryan, & Guay, 2013; Lynch, Vansteenkiste, Deci, & Ryan, 2010). According to Paine (1994), such a value-based integrity strategy can contribute to responsible and exemplary ethical behavior, rather than seeking the minimum goal of preventing breaches of the law. Additionally, it is necessary to enforce the requirements of compliance management in a fair

and equitable manner (Treviño & Nelson, 2011). Sanctions in the enterprise context are especially effective if the employees consider them fair (Ball, Treviño, & Sims, 1994). This means that the sanctions conform to the particular rule infringement and are applied equally to all employees (Treviño & Nelson, 2011). Moreover, sanctions should be constructively and clearly explained to the employees. Anchoring detailed and complicated-sounding laws of conduct in the compliance management system should be avoided. Instead, the ethical values of the company should be clearly communicated and strongly supported by the top management.

### *Limitations and Future Research Directions*

Since cross-sectional data for the empirical verification of the model is used in the present study, it is recommended that future studies resolve the correlation versus causality problem by doing research at different time points (Rossmann, 2011). If compliance intention and the affecting variables are measured at different time points, it would make sense to also capture the actual compliance behavior. The more the measurement is based on actual observed behavior of employees, as opposed to self-reported behavior, the statement of behavior will be more substantial. Other methods may be appropriate for such an endeavor (e.g., focusing on particular companies and the use of case studies and scenarios). Our findings might have implications not only for further in-role expectations, but also for the broader execution of the work role. Accordingly, future research could study outcomes beyond in-role expectations, such as corporate citizenship behavior and counterproductive work behaviors.

In terms of cost assessments of individuals with regard to compliance management, the possible benefit of noncompliance is not included in this study. However, individuals may see a benefit in a failure to accomplish the requirements of a compliance management system, such as a "thrill" or obtaining a commercial advantage [e.g., when selling techniques that are prohibited by the compliance management system are applied (Paternoster & Simpson, 1996)]. We did include this perspective indirectly assuming that it might decrease the costs of noncompliance. Since our rational choice approach does explicitly not cover

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*If positive feedback for the employees in the form of praise comes unexpectedly and is perceived as informing (and not as controlling) a feel of competence, ultimately the feeling of intrinsic motivation can be initiated.*

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the concept of “thrill,” the tested model offers potential for expansion.

The identification and exploration of the “two faces” of top management might be an interesting object of investigation for future research. Empirical research shows that firms targeted by class action lawsuits over securities (e.g. Niehaus & Roth, 1999) and by the Securities and Exchange Commission because of fraudulent financial statements (Agrawal, Jaffe, & Karpoff, 1999) are also those yielding higher rates of CEO turnover. Similarly, while there is proof that corruption is related to national cultural differences (see Werner, 2000) and a country’s level of economic development (see Ehrlich & Lui, 1999), few studies have explicitly linked corruption with career success (e.g., Hamori, 2007; Harris & Ogbonna, 2006). The identification and exploration of these “two faces” of top management might be an interesting object of investigation for future research.

A model based on a widely conceived rational choice approach, which links the two aspects of motivation with each other (i.e., extrinsic and intrinsic factors) can provide a deeper understanding of individual compliance behavior in the corporate context. A sound theoretical basis with which intrinsic motivation can be added to classical extrinsic incentives and integrated into an economic model of behavior is crucial. Furthermore, the perceived behavior detection has not proven to be a significant influencing factor for perceived costs of noncompliance. This variable should be checked, if necessary, in an alternative model. In addition, the operationalization of intrinsic motivators in relation to compliance behavior should be further developed. Finally, a cross-sectional study may focus on the crowding-out effect and the control paradox in order to make statements about how compliance change depends on the types of motivation intervention and how motivators interact.

Concepts that are related to intrinsic motivators such as legitimacy and procedural justice may be included in an alternative model. Therefore, future research efforts may build on these two possible determinants of intrinsic

motivation in the context of compliance and to identify empirically any further determinants (e.g., corporate cultural aspects). Finally, the work on perceived consequences of action focuses only on the individuals themselves. It is also conceivable that the recruitment of individuals depends on the costs and benefits that affect the company. Examples of this can be the risks for companies (reputation and financial loss). Such consequences, which affect the company and not the individuals, will also be a useful addition to the model. As a final limitation, our PLS-based measurement approach provides prediction orientation rather than aiming at testing model relationships in an explanatory sense (i.e., theory testing), which can only be done by covariance-based structural equation modeling (Rigdon, 2012). Our design attempted a smaller but specialized sample to identify the new compliance phenomenon rather than big data, which is needed for covariance-based testing. Hence, we recommend development of a variance-based approach in order to test the mentioned hypotheses of this article.

## Conclusion

Compliance management is used to address legal risks and ethical challenges to avoid financial and reputational damage from illegal actions. Compliance management systems are not always followed by the company’s employees. The present study has examined motivational factors for compliance behavior in terms of compliance with the company’s internal compliance management system. We show that the intention to conform to the requirements of the internal corporate compliance management system is largely explained by the individual’s attitude toward compliance behavior. The employees develop their attitude as part of a rational cost calculation, which in turn is based on beliefs about the consequences of courses of action. These anticipated consequences are influenced by extrinsic motivators across all hierarchical levels of an organization, while the top management is particularly influenced by intrinsic motivators.

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## References

- Adam, A. M., & Rachman-Moore, D. (2004). The methods used to implement an ethical code of conduct and employee attitudes. *Journal of Business Ethics*, 54(3), 223–242.
- Adler, P. P., & Borys, B. (1996). Two types of bureaucracy: Enabling and coercive. *Administrative Science Quarterly*, 41(1), 61–89.
- Agrawal, A., Jaffe, J. F., & Karpoff, J. M. (1999). Management turnover and governance changes following the revelation of fraud. *Journal of Law and Economics*, 42(1), 309–342.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Ajzen, I. (2005). *Attitudes, personality, and behavior* (2nd ed.). Maidenhead, England: Open University Press.
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice Hall.
- Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40(4), 471–499.
- Armstrong, J. S., & Overton, T. S. (1977). Estimating non-response bias in mail surveys. *Journal of Marketing Research*, 14(3), 396–402.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94.
- Ball, G. A., Treviño, L. K., & Sims, H. P. Jr. (1994). Just and unjust punishment: Influences on subordinate performance and citizenship. *Academy of Management Journal*, 37(2), 299–322.
- Bamberger, P. (2008). From the editors beyond contextualization: Using context theories to narrow the micro-macro gap in management research. *Academy of Management Journal*, 51(5), 839–846.
- Barsky, A. (2007). Understanding the ethical cost of organizational goal-setting: A review and theory development. *Academy of Management Annual Meeting Proceedings*, 1–6. doi:10.5465/AMBPP.2007.26533588
- Becker, G. S. (1968). Crime and punishment: An economic approach. *Journal of Political Economy*, 76(2), 169.
- Begley, T. M., Lee, C., & Hui, C. (2006). Organizational level as a moderator of the relationship between justice perceptions and work-related reactions. *Journal of Organizational Behavior*, 27(6), 705–772.
- Boss, S. R., & Kirsch, L. J. (2007, December 9–12). The last line of defense: Motivating employees to follow corporate security guidelines. *Proceedings of the 28th International Conference on Information Systems*, Montreal, Paper 103.
- Bowles, S., & Polanía-Reyes, S. (2012). Economic incentives and social preferences: Substitutes or complements? *Journal of Economic Literature*, 50(2), 368–425. doi:10.1257/jel.50.2.368
- Braithwaite, J., & Makkai, T. (1991). Testing an expected utility model of corporate deterrence. *Law and Society Review*, 25(1), 7–40.
- Bulgurcu, B., Cavusoglu, H., & Benbasat, I. (2010). Information security policy compliance: An empirical study of rationality-based beliefs and information security awareness. *MIS Quarterly*, 34(3), 523–548.
- Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review*, 4(4), 497–505.
- Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*, 34(4), 39–48.
- Cerasoli, C. P., Nicklin, J. M., & Ford, M. T. (2014). Intrinsic motivation and extrinsic incentives jointly predict performance: A 40-year meta-analysis. *Psychological Bulletin*. Advance online publication, <http://dx.doi.org/10.1037/a0035661>

- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern business research methods* (pp. 295–336). Mahwah, NJ: Lawrence Erlbaum.
- Chow, I. H., Huang, J.-C., & Liu, S. (2008). Strategic HRM in China: Configurations and competitive advantage. *Human Resource Management*, 47(4), 687–706.
- Cohen, M. A., & Simpson, S. S. (1997). The origins of corporate criminality: Rational individual and organizational actors. In W. S. Lofquist, M. A. Cohen, & G. A. Rabe (Eds.), *Debating corporate crime* (pp. 33–51). Highland Heights, KY: Academy of Criminal Justice Sciences, Northern Kentucky University.
- deCharms, R. (1968). *Personal causation: The internal affective determinants of behavior*. New York, NY: Academic Press.
- Deci, E. L., & Ryan, R. M. (1980). The empirical exploration of intrinsic motivational processes. *Advances in Experimental Social Psychology*, 13(2), 39–80.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum Press.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
- Deci, E. L., Ryan, R. M., & Guay, F. (2013). Self-determination theory and actualization of human potential. In D. M. McInerney, H. W. Marsh, R. G. Craven, & F. Guay (Éds.), *Theory driving research: New wave perspectives on self-processes and human development* (pp. 109–133). Scottsdale, AZ: Information Age.
- Deci, E. L., Ryan, R. M. & Koestner, R. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, 125(6), 627–668.
- DeVellis, R. F. (2012). *Scale development: Theory and applications* (3rd ed.). Thousand Oaks, CA: Sage.
- Dries, N., & Pepermans, R. (2012). How to identify leadership potential: Development and testing of a consensus model. *Human Resource Management*, 51(3), 361–385. doi:10.1002/hrm.21473
- Ehrlich, I. (1972). The deterrent effect of criminal law enforcement. *Journal of Legal Studies*, 1(2), 259–276.
- Ehrlich, I., & Lui, F.T. (1999). Bureaucratic corruption and endogenous economic growth. *Journal of Political Economy*, 107(6), 270–293.
- Elliott, M. A., Armitage, C. J., & Baughan, C. J. (2003). Drivers’ compliance with speed limits: An application of the theory of planned behavior. *Journal of Applied Psychology*, 88(5), 964–972.
- European Commission. (2009). Commission staff working document on the implementation of commission recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises. Brussels, Belgium: Author.
- Falk, A., & Kosfeld, M. (2006). The hidden costs of control. *American Economic Review*, 96(5), 1611–1630.
- Farndale, E., Paauwe, J., & Boselie, P. (2010). An exploratory study of governance in the intra-firm human resources supply chain. *Human Resource Management*, 49(5), 849–868.
- Feldman, Y. (2011, Winter). The complexity of disentangling intrinsic and extrinsic compliance motivations: Theoretical and empirical insights from the behavioral analysis of law. *Washington University Journal of Law & Policy*, 35, 11–51.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.
- Fiss, P. C., & Zajac, E. J. (2006). The symbolic management of strategic change: Sensegiving via framing and decoupling. *Academy of Management Journal*, 49(6), 1173–1193.
- Frey, B. S. (1997). *Not just for the money: An economic theory of personal motivation*. Cheltenham, England: Brookfield.
- Frey, B. S., Homberg, F., & Osterloh, M. (2013). Organizational control systems and pay-for-performance in the public service. *Organization Studies*, 34, 949–972.
- Frey, B. S., & Jegen, R. (2001). Motivation crowding theory. *Journal of Economic Surveys*, 15(5), 589–611.
- Funken, C. (2004). Geld statt Macht? Weibliche und männliche Karrieren im Vertrieb: eine organisationssoziologische studie [Money instead of power? Female and male careers in sales: An organization sociological study]. campus, Frankfurt and New York.
- Gagné, M., & Deci, E.L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26(4), 331–362. doi:10.1002/job.322.
- Gagné, M., & Forest, J. (2008). The study of compensation through the lens of self-determination theory: Reconciling 35 years of debate. *Canadian Psychology*, 49(3), 225–232. doi:10.1037/a0012757
- Gardner, H. K. (2012). Performance pressure as a double-edged sword: Enhancing team motivation but undermining the use of team knowledge. *Administrative Science Quarterly*, 57, 1–46.
- Ghoshal, S., & Moran, P. (1996). Bad for practice: A critique of the transaction cost theory. *Academy of Management Review*, 21(1), 13–47.
- Gong, Y., & Janssen M. (2012). From policy implementation to business process management: Principles for creating exibility and agility. *Government Information Quarterly*, 29(1), 61–71.
- Grant, A. M., & Nurmohamed, S. Ashford, S. J., & Dekas, K. (2011). The performance implications of ambivalent initiative: The interplay of autonomous and controlled motivations. *Organizational Behavior and Human Decision Processes*, 116, 241–251.
- Grasmick, H. G., & Bursik, R. J. Jr. (1990). Conscience, significant others, and rational choice: Extending the deterrence model. *Law and Society Review*, 24(3), 837–862.
- Hair, J. F., & Sarstedt, M., & Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414–433.
- Hamori, M. (2007). Career success after stigmatizing organizational events. *Human Resource Management*, 46(4), 493–511.
- Harbaugh, W. T. (1998). The prestige motive for making charitable transfers. *American Economic Review*, 88(2), 277–282.
- Harland, C., Brenchley, R., & Walker, H. (2003). Risk in supply networks. *Journal of Purchasing and Supply Management*, 9(2), 51–62.

- Harris, L. C., & Ogbonna, E. (2006). Approaches to career success: An exploration of surreptitious career-success strategies. *Human Resource Management*, 45(1), 43–65.
- Henseler, J., Ringle, C., & Sinkovics, R. (2009). The use of partial least squares path modeling in international marketing. *Advances in International Marketing*, 20, 277–319.
- Herath, T., & Rao, H. R. (2009). Protection motivation and deterrence: A framework for security policy compliance in organizations. *European Journal of Information Systems*, 18(2), 106–125.
- Hu, Q., Dinev, T., Hart, P., & Cooke, D. (2012). Managing employee compliance with information security policies: The critical role of top management and organizational culture. *Decision Sciences*, 43(4), 615–659.
- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, 20(2), 195–204.
- Jarvis, C. B., MacKenzie, S. B., & Podsakoff, P. M. (2003). A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *Journal of Consumer Research*, 30(2), 199–218.
- Johns, G. (2006). The essential impact of context on organizational behavior. *Academy of Management Review*, 31(2), 386–408.
- Kish-Gephart, J. J., Harrison, D. A., & Treviño, L. (2010). Bad apples, bad cases, and bad barrels: Meta-analytic evidence about sources of unethical decisions at work. *Journal of Applied Psychology*, 95(1), 1–31.
- Lindenberg, S. (2001). Intrinsic motivation in a new light. *Kyklos*, 54, 317–342.
- Lindenberg, S., & Foss, N. J. (2011). Managing joint production motivation: The role of goal framing and governance mechanisms. *Academy of Management Review*, 36(3), 500–525. doi:10.5465/AMR.2011.61031808
- Lynch, M. F., Vansteenkiste, M., Deci, E. L., & Ryan, R. M. (2010). Autonomy as process and outcome: Revisiting cultural and practical issues in motivation for counseling. *The Counseling Psychologist*, 39(2), 286–302.
- Lu, R., Sadiq, S., & Governatori, G. (2008). Measurement of compliance distance in business processes. *Information Systems Management*, 25(4), 344–355.
- MacLean, T. L., & Behnam, M. (2010). The dangers of decoupling: The relationship between compliance managements, legitimacy perceptions, and institutionalized misconduct. *Academy of Management Journal*, 53(6), 1499–1520.
- Maignan, I., Ferrell, O. C., & Hult, G. T. M. (1999). Corporate citizenship: Cultural antecedents and business benefits. *Journal of the Academy of Marketing Science*, 27(4), 455–469.
- Makkai, T., & Braithwaite, J. (1994). The dialectics of corporate deterrence. *Journal of Research in Crime and Delinquency*, 31(4), 347–373.
- Marcoulides, G. A., Chin, W. W., & Saunders, C. (2009). A critical look at partial least squares modeling. *MIS Quarterly: Management Information Systems*, 33(1), 171–176.
- McCabe, D. L., Treviño, L. K., & Butterfield, K. D. (1996). The influence of collegiate and corporate codes of conduct on ethics-related behavior in the workplace. *Business Ethics Quarterly*, 6(4), 461–476.
- McIntosh, C. N., Edwards, J. R., & Antonakis, J. (2014). Reflections on partial least squares path modeling. *Organizational Research Methods*, 17(2), 210–251.
- McKendall, M., DeMarr, B., & Jones-Ridders, C. (2002). Ethical compliance managements and corporate illegality: Testing the assumptions of the corporate sentencing guidelines. *Journal of Business Ethics*, 37(4), 367–383.
- Michaelson, C. (2006). Compliance and the illusion of ethical progress. *Journal of Business Ethics*, 66(2), 241–251.
- Midgley, M. (1994). *The ethical primate: Humans, freedom and morality*. London, England: Routledge.
- Myers, T. A. (2011). Goodbye, listwise deletion: Presenting hot deck imputation as an easy and effective tool for handling missing data. *Communication Methods and Measures*, 5(4), 297–310.
- Newman, D. A. (2014). Missing data: Five practical guidelines. *Organizational Research Methods*, 17(4), 372–411.
- Niehaus, G., & Roth, G. (1999). Insider trading, equity issues, and CEO turnover in firms subject to securities class action. *Financial Management*, 28(4), 52–72.
- Norman, W. (2011). Business ethics as self-regulation: Why principles that ground regulations should be used to ground beyond-compliance norms as well. *Journal of Business Ethics*, 102(1), 43–57.
- Nunnally, J. (1978). *Psychometric theory* (2nd ed.). New York, NY: McGraw-Hill.
- Organ, D. W., Podsakoff, P. M., & MacKenzie, S. B. (2006). Organizational citizenship behavior: Its nature, antecedents, and consequences. Thousand Oaks, CA: Sage.
- Pahnila, S., Siponen, M., & Mahmood, A. (2007). Employees' behavior towards IS security policy compliance. *Proceedings of the 40th Hawaii International Conference on System Sciences*, Los Alamitos, CA, pp. 156–166.
- Paine, L. (1994). Managing for organizational integrity. *Harvard Business Review*, 72(2), 106–117.
- Parker, C., & Nielsen, V. L. (2011a). Introduction. In C. Parker & V. L. Nielsen (Eds.), *Explaining compliance: Business responses to regulation* (pp. 1–33). Cheltenham, England: Edward Elgar.
- Parker, C., & Nielsen, V. L. (2011b). Deterrence and the impact of calculative thinking on business compliance with regulation. *The Antitrust Bulletin*, 56(2), 377–426.
- Paternoster, R., & Simpson, S. (1993). A rational choice theory of corporate crime. In R. V. Clarke & M. Felson (Eds.), *Routine activity and rational choice: Advances in criminological theory* (pp. 37–58). Transactions Publishers New Brunswick (U.S.A.) and London (U.K.): New Jersey.
- Paternoster, R., & Simpson, S. (1996). Sanction threats and appeals to morality: Testing a rational choice model of corporate crime. *Law and Society Review*, 30(3), 549–583.
- Peterson, S. J., & Luthans, F. (2006). The impact of financial and nonfinancial incentives on business-unit outcomes over time. *Journal of Applied Psychology*, 91(1), 156–165.
- Pinto, J., Leana, C., & Pil F. (2008). Corrupt organizations or organizations of corrupt individuals? Two types of organization-level corruption. *Academy of Management Review*, 33(3), 685–709.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and

- recommendations on how to control it. *Annual Review of Psychology*, 63, 539–569.
- Podsakoff, N. P., Podsakoff, P. M., MacKenzie, S. B., Maynes, T. D., & Spoelma, T. M. (2014). Consequences of unit-level organizational citizenship behaviors: A review and recommendations for future research. *Journal of Organizational Behavior*, 35(1), 87–119.
- PricewaterhouseCoopers (PWC). (2010). Compliance und Unternehmenskultur: Zur aktuellen Situation in deutschen Großunternehmen [Compliance and corporate culture: The current situation in large German companies]. Retrieved March 12, 2014, from [http://www.pwc.de/de/risiko-management/assets/studie\\_Compliance-und-Unternehmenskultur.pdf](http://www.pwc.de/de/risiko-management/assets/studie_Compliance-und-Unternehmenskultur.pdf)
- Rigdon, E. E. (2012). Rethinking partial least squares path modeling: In praise of simple methods. *Long Range Planning*, 45(5), 341–358.
- Rönkkö, M., & Evermann, J. (2013). A critical examination of common beliefs about partial least squares path modeling. *Organizational Research Methods*, 16(3), 425–448.
- Rossmann, C. (2011). Theory of reasoned action, theory of planned behavior. Baden-Baden, Germany: International Specialized Book Service Incorporated, 2010.
- Rost, K., & Weibel, A. (2013). CEO pay from a social norm perspective: The infringement and reestablishment of fairness norms. *Corporate Governance: An International Review*, 21(4), 351–372. doi:10.1111/corg.12018
- Ryan, R. M., & Deci, E. L. (2002). An overview of self-determination theory. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 3–33). Rochester, NY: University of Rochester Press.
- Rynes, S. L., Gerhart, B., & Minette, K. A. (2004). The importance of pay in employee motivation: Discrepancies between what people say and what they do. *Human Resource Management*, 43(4), 381–394.
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, 7(2), 147–177.
- Schminke, M., Cropanzano, R. S., & Rupp, D. E. (2002). Organization structure and fairness perceptions: The moderating effects of organizational level. *Organizational Behavior and Human Decision Processes*, 89, 881–905.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 290–312). San Francisco, CA: Jossey-Bass.
- Stansbury, J., & Barry, B. (2007). Ethics managements and the paradox of control. *Business Ethics Quarterly*, 17(2), 239–261.
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. D. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Chicago, IL: Nelson Hall.
- Treviño, L. K., & Nelson, K. A. (2011). *Managing business ethics: Straight talk about how to do it right* (5th ed.). Hoboken, NJ: Wiley.
- Treviño, L. K., Gibson, D. G., Weaver, G. R., & Toffler, B. L. (1999). Managing ethics and legal compliance: What works and what hurts. *California Management Review*, 41(2), 131–151.
- Trullen, J., & Stevenson, W. B. (2006). Strategy and legitimacy. *Business & Society*, 45(2), 178–210.
- Tyler, T. R. (1999). Why people cooperate with organizations: An identity-based perspective. In B. M. Staw & R. Sutton (Eds.), *Research in organizational behavior* (pp. 201–246). Greenwich, CT: JAI Press.
- Tyler, T. R., & Blader, S. L. (2005). Can businesses effectively regulate employee conduct? The Antecedents of rule following in work settings. *Academy of Management Journal*, 48(6), 1143–1158.
- Van den Bos, K., Lind, E. A., Vermunt, R., & Wilke, H. A. M. (1997). How do I judge my outcome when I do not know the outcome of others? The psychology of the fair process effect. *Journal of Personality and Social Psychology*, 72, 1034–1046.
- Van den Bos, K., Wilke, H. A. M., & Lind, E. A. (1998). When do we need fairness? The role of trust in procedural authority. *Journal of Personality and Social Psychology*, 75, 1449–1458.
- Van Dyne, L., Cummings, L. L., & Parks, J. M. (1995). Extrarole behaviors: In pursuit of construct and definitional clarity (a bridge over muddied waters). *Research in Organizational Behavior*, 17, 215–285.
- Vroom, C., & Von Solms, R. (2004). Towards information security behavioural compliance. *Computers & Security*, 23(3), 191–198.
- Weaver, G. R., & Treviño, L. K. (1999). Compliance and values oriented ethics managements: Influences on employees' attitudes and behavior. *Business Ethics Quarterly*, 9(2), 315–335.
- Weaver, G. R., & Treviño, L. K. (2001). Outcomes of organizational ethics managements: Influences of perceived values, compliance, and distrust orientations. *Academy of Management Proceedings*, No. 1, B1–B6.
- Weibel, A., Rost, K., & Osterloh, M. (2010). Pay for performance in the public sector: Benefits and (hidden) costs. *Journal of Public Administration Research and Theory*, 20(2), 387–412.
- Welsh, D. T., & Ordóñez, L. D. (2014). The dark side of consecutive high performance goals: Linking goal setting, depletion, and unethical behavior. *Organizational Behavior and Human Decision Processes*, 123(2), 79–89.
- Werner, C. (2000). Gifts, bribes, and development in post-Soviet Kazakhstan. *Human Organization*, 59(1), 11–22.
- White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review*, 66, 297–333.
- Williams, L. J., Edwards, J. R., & Vandenberg, R. J. 2003. Recent advances in causal modeling methods for organizational and management research. *Journal of Management*, 29(6), 903–936.
- Williamson, O. (1975). *Markets and hierarchies: Analysis and antitrust implications. A study in the economics of internal organization*. New York, NY: Free Press.

APPENDIX A Overview of Questionnaire: Scales and Data		Scale	Average	STD	Loading	t-Value
<b>Dimensions &amp; Questions</b>						
<b>Intention to comply with the Compliance Program (CP)</b>						
C1: I intend to comply with the requirements of the CP of my organization in the future.	a	6.395	1.166	0.947		26,609
C2: I intend to comply to the organization standards according to the requirements of the CP of my organization in the future.	a	6.336	1.329	0.983		90,686
C3: I intend to carry out my responsibilities prescribed in the CP of my organization when I work for the organization in the future.	a	6.345	1.330	0.978		68,500
<b>Normative Beliefs</b>						
_____ think that I should comply with the requirements of the CP.						
NB1: People who are influential to me	a	5.496	1.987	0.933		34,772
NB2: People who are important to me	a	5.352	1.899	0.951		52,264
NB3: People whom I respect	a	5.543	1.854	0.955		71,935
<b>Self-Efficacy to Comply</b>						
I have the necessary _____ to fulfill the requirements of the CP.						
SE1: skills	b	6.223	1.166	0.928		25,346
SE2: knowledge	b	5.917	1.345	0.933		49,689
SE3: competencies	b	5.880	1.412	0.891		24,788
<b>Attitude</b>						
To me, complying with the requirements of the CP is _____.						
A1: unnecessary ... necessary	c	6.144	1.237	0.944		68,152
A2: unbeneficial ... beneficial	c	6.047	1.359	0.947		60,274
A3: unimportant ... important	c	5.654	1.430	0.902		38,230
<b>Perceived Cost of Compliance</b>						
Complying with the requirements of the CP is _____ for me.						
CC1: time consuming	a	3.588	2.089	0.940		72,467
CC2: burdensome	a	3.496	2.004	0.928		64,259
CC3: costly	a	2.714	1.918	0.833		26,234
<b>Perceived Cost of Noncompliance</b>						
My noncompliance with the requirements of the CP would _____.						
CNC1: be harmful to me	a	5.933	1.609	0.968		63,241
CNC2: impact me negatively	a	5.812	1.691	0.979		98,773
CNC3: create disadvantages for me	a	5.739	1.729	0.975		104,490
<b>Work Impediment</b>						
Complying with the requirements of the CP _____.						
WI1: holds me back from doing my actual work	a	2.790	1.789	0.950		63,627
WI2: slows down my response time to my colleagues, customers, managers, etc.	a	2.874	1.829	0.972		122,200
WI3: hinders my productivity at work	a	2.826	1.814	0.967		106,489
<b>Intrinsic Costs</b>						
If I don't comply with the requirements of the CP. it would make me feel _____.						
IC1: bad	a	4.748	2.030	0.943		74,199
IC2: dissatisfied	a	4.514	2.009	0.948		52,050
IC3: unaccomplished	a	3.916	2.069	0.890		30,769

APPENDIX A		Continued				
Dimensions & Questions		Scale	Average	STD	Loading	t-Value
<b>Sanctions</b>						
_____ I don't comply with the requirements of the CP.						
S1: I will probably be punished or demoted if	a	4.966	2.029	0.935	82,540	
S2: I will receive personal reprimand in oral or written assessment reports if	a	5.067	1.999	0.890	25,230	
S3: I will incur monetary or non-monetary penalties if	a	4.008	2.227	0.864	25,701	
<b>Behavior Detection</b>						
BD1: How much attention does your supervisor pay to whether or not you comply with the requirements of the CP?	a	5.143	2.056	0.970	12,258	
BD2: How easily is it for your supervisor to observe whether you comply with the requirements of the CP?	a	4.143	2.047	0.770	5,017	
BD3: How much does your supervisor care whether you do your job well?	a	3.496	1.995	0.487	1,631	

## Scale:

a 1 = Strongly Disagree – 7 = Strongly Agree

b 1 = Almost Never; 2 = Very Rarely; 3 = Rarely; 4 = Occasionally; 5 = Frequently; 6 = Very Frequently; 7 = Almost Always

c 1 = Extremely; 2 = Quite; 3 = Slightly; 4 = Neither; 5 = Slightly; 6 = Quite; 7 = Extremely

Abbreviation: STD = Standard deviation.

**A P P E N D I X B Correlational Matrix of Compliance Behavior Model**

	Mean	STD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Age	39.546	9.652															
2 Attitude	5.948	1.342	0.055														
3 Cost of compliance	3.266	2.004	-0.066	-0.114													
4 Cost of Noncompliance	5.828	1.676	0.029	0.574	-0.014												
5 Behavior detection	4.261	2.0323	-0.003	0.264	0.132	0.125											
6 Gender	1.722	0.45	0.145	0.086	-0.015	0.029	-0.096										
7 Hierarchy	2.357	0.728	-0.236	0.003	-0.089	0.006	0.055	-0.174									
8 Compliance intention	6.358	1.275	-0.019	0.680	-0.101	0.456	0.135	0.034	0.188								
9 Intrinsic costs	4.393	2.036	-0.107	0.549	-0.077	0.538	0.277	-0.174	-0.105	0.527							
10 Normative beliefs	5.464	1.913	-0.083	0.461	-0.028	0.457	0.239	-0.032	0.234	0.491	0.427						
11 Sanctions	4.68	2.085	0.110	0.302	0.026	0.582	0.257	-0.144	0.025	0.408	0.543	0.442					
12 Self-efficacy to comply	6.007	1.308	0.096	0.699	-0.076	0.529	0.070	0.013	0.116	0.626	0.385	0.343	0.373				
13 Service	0.4787	0.502	0.154	-0.070	0.108	0.077	0.106	0.015	0.011	-0.128	-0.138	-0.027	0.098	-0.095			
14 Size	2.698	0.604	0.065	0.134	-0.118	0.110	-0.074	0.156	0.166	0.149	0.122	0.099	0.303	0.254	-0.132		
15 Work impediment	2.83	1.811	0.022	-0.225	0.742	-0.020	0.037	0.021	0.068	-0.061	-0.114	0.063	0.127	-0.127	0.119	0.026	

Note: The upper half of the matrix represents the squared correlations of the latent variable.