

# The Impact of Culture Consistency on Subunit Outcomes

Jasmijn C. Bol, *Tulane University*

Robert Grasser, *University of South Carolina*

Serena Loftus, *Kent State University*

Tatiana Sandino, *Harvard University*

January 2024

We thank Ryan Buell, Leslie John, Charles Wang; discussants Khim Kelly, Michael Majerczyk, and Wim Van der Stede; and participants at the 2022 *Journal of Management Accounting Research* Management Accounting Workshop Series, the 2022 Emerging Management Accounting Scholars Symposium (University of Illinois), the 2022 Global Management Accounting Research Symposium, and the 2023 Performance Management Field Research Symposium for their helpful comments and suggestions.

## **The Impact of Culture Consistency on Subunit Outcomes**

### **ABSTRACT**

We examine the association between subunit culture consistency—defined as the congruence between the organizational values espoused by top management and those perceived and practiced by subunit employees—and subunit outcomes. Using data from 235 subunits of a North American food and beverage chain, we draw from an analytical model (Van den Steen 2010a) to predict that subunits with greater culture consistency will exhibit greater employee satisfaction and performance but also lower creativity. As predicted, we find a positive association between subunit culture consistency and both employee satisfaction and performance, and these positive associations are amplified for subunits with greater coordination needs. Further, subunit culture consistency can substitute for a subunit leadership's reliance on direct supervision and performance rewards. Contrary to our expectation, we find no evidence that greater subunit culture consistency damps employee creativity. Overall our results highlight the importance of value congruence between decentralized subunits and top management.

**Keywords:** organizational culture, culture consistency, subunit culture, employee satisfaction, employee creativity

## **I. Introduction**

We examine the relation between subunit culture consistency and subunit outcomes. We define subunit culture consistency as the congruence between the values espoused by top management and those perceived and practiced by employees at the subunits. Understanding how culture consistency relates to subunit outcomes provides important insights into the use of organizational culture as a guide for employee decisions, especially in organizational domains where explicit rules and policies are difficult to define (Chatman and O'Reilly 2016; Campbell and Sandino 2019). It also provides organizations with insights into whether and why they should invest in increasing subunit culture consistency.

We examine the importance of culture consistency in a setting where top management determines the organization's values with the aim of shaping the overall culture. These values are disseminated across geographically dispersed and decentralized subunits, led by different regional leaders (hereafter operators). Management at headquarters supports the operators and their local subunits by providing controls designed to foster the desired culture. However, operators can decide how much to use these controls and which values to promote. Thus the extent to which employees receive information—including messages from corporate leadership that promote the organization's values and information about the values endorsed by operators independently—varies across subunits. Additionally, subunits are naturally exposed to diverse local conditions that may affect how subunit employees interpret the organization's values. This results in a heterogeneity of organizational culture, where the subunits' cultures can differ from each other.

We explore theoretical predictions based on analytical research, including Van den Steen's (2010a) model, about potential consequences of greater subunit culture consistency. We identify increased subunit employee satisfaction and performance as two potential benefits. Theory

suggests four reasons for these predictions. First, greater subunit culture consistency increases employees' agreement with top management, which increases satisfaction. Second, greater value alignment increases employees' perceived payoffs for their preferred actions, which increases their effort. Third, greater consistency in values increases coordination between top management and subunit employees. Fourth, greater value congruence enables top management to delegate greater responsibility to employees while reducing the need for monitoring.

Van den Steen's (2010a) model also suggests a negative effect of greater consistency of values: reduced creativity. Organizations often "... look to their employees for original ideas that can further organizational innovation, adaption, and growth," outputs of employee creativity (Kachelmeier, Reichert, and Williamson 2008, 342). Originality, in turn, stems from employees' creativity, which requires employees to think critically about the organization's operations and to have opportunities to express their ideas. As employees' values more closely resemble those of top management, their thoughts and actions become more congruent, which damps employee creativity. Therefore we explore one potential negative consequence of greater subunit culture consistency: lower employee creativity.

Besides the predictions discussed above, we also identify settings where the benefits of subunit culture consistency are either amplified or tempered by subunit characteristics. One benefit articulated by Van den Steen (2010a) is that of greater coordination or alignment of actions between subunit employees and top management. Subunits where coordination is challenging may benefit more from improved coordination; thus we expect the benefits of greater subunit culture consistency to be amplified for these subunits. We identify two subunit characteristics that may pose coordination challenges: distance from headquarters and operator organizational tenure. Thus our second set of hypotheses proposes that the benefits of greater subunit culture consistency are

amplified for subunits where coordination is challenging.

Finally, we identify elements of the subunit's management control system that may reduce the benefits of greater subunit culture consistency. According to Van den Steen (2010a), greater value congruence reduces top management's need to monitor employees. However, the benefit of reduced monitoring may be lessened in settings where the subunit's control system already includes controls that serve similar purposes. Based on the literature, we identify two elements of the control system that may substitute for subunit culture consistency: the degree of direct supervision employed by subunit leadership and the prevalence of performance-based compensation (hereafter performance rewards). Both controls provide information about employees' actions, either in real-time with direct supervision or ex post with performance metrics linked to rewards. Thus our third set of hypotheses predicts that the benefits of increased subunit culture consistency are lessened in subunits with high use of direct supervision and performance rewards.

To examine our hypotheses, we use field data from a North American food and beverage chain, including surveys administered to 10 top managers, 65 operators (most of them franchisees), and 1,259 employees across 235 subunits. This setting offers several advantages. First, culture consistency varies significantly across subunits in our setting, as subunit operators can make management control and culture choices for their subunits. Top management provides controls, such as recommended systems for recruiting and invitations to in-person cultural events featuring motivational speeches from top management. However, subunit operators have decision-making authority over the culture controls used and the values promoted at their subunits. This results in significant variation in value congruence across subunits. Moreover, local conditions vary across subunits, which allows us to perform cross-sectional tests. Also, all subunits sell the same products

and pursue the same strategy, which holds strategic considerations constant across subunits and allows for powerful tests of theory (Campbell, Datar, and Sandino 2009).

To measure subunit culture consistency, we capture differences between top managers' perceptions of the organization's values and employees' perceptions of the values practiced at their subunit. Then we examine the association between subunit culture consistency and subunit employee satisfaction, performance, and employee creativity, measured using survey and archival data. To ensure that our results do not arise from culture strength or intensity, we control for the extent to which employees identify with perceived organizational values.

In line with our predictions, our results highlight the benefits of greater subunit culture consistency, which is, on average, associated with greater employee satisfaction and performance. Our findings concerning employee creativity, however, differ from our predictions. Specifically, we find no evidence that greater subunit culture consistency damps creativity; rather, our results suggest that greater subunit culture consistency promotes employee creativity.

Tests of cross-sectional predictions generally support our hypotheses. First, results suggest amplified benefits of subunit culture consistency in settings where we expect coordination to be harder. Specifically, we find a more positive association between subunit culture consistency and performance for subunits distant from headquarters. We further find a more positive association between subunit culture consistency and both employee satisfaction and performance for subunits whose operators have shorter tenures. These results comport with greater benefits of subunit culture consistency in settings demanding improved coordination.

Our results also suggest two settings where the positive association between greater subunit culture consistency and subunit outcomes is lessened due to a reduced need for monitoring. Specifically, we find a less positive association between subunit culture consistency and employee

satisfaction for subunits with greater direct supervision. Similarly, we find that the positive association between subunit culture consistency and both subunit employee satisfaction and performance is lessened for subunits relying more on performance rewards. Consistent with our predictions, our results support the idea that greater subunit culture consistency can substitute for the monitoring provided by direct supervision or performance rewards.

Our study contributes to the literature on organizational culture in several ways. First, the dissemination of organizational values across subunits has received relatively little attention from empirical researchers, despite evidence that top managers are concerned with these challenges (Graham, Grennan, Harvey, and Raigopal 2022). The research that does exist is recent and has focused on selection and performance evaluation controls that increase employee-organization value alignment (Campbell 2012; Abernethy, Dekker, and Schulz 2015; Deller and Sandino 2020a, 2020b; Cai 2023; Deller, Gallani, and Sandino 2022). Our study complements this literature by showing how and when the consistency in values between top management and subunit employees relates to subunit outcomes in decentralized organizations.

Second, we add to a growing body of research on the configuration of management controls, which highlights the importance of examining how different controls interact (Grabner and Moers 2013; Abernethy et al. 2015). Specifically, we identify two potential controls that may substitute for greater subunit culture consistency. Thus our results corroborate the literature by showing that the overall effects of a specific control are impacted by the presence or absence of other management controls.

Our study also answers a call for greater insight into the intricate relation between organizational culture and employee creativity (e.g., Chatman and O'Reilly 2016). While some research suggests that high consensus can lead to conformity (Van den Steen 2010a; Shang,

Abernethy, and Hung 2020), other studies have shown that greater value congruence does not always damp employees' creativity (Chatman, Caldwell, O'Reilly, and Doerr 2014; Corritore, Goldberg, and Srivastava 2020). In line with this literature, we find no evidence that greater subunit culture consistency stifles creativity. Instead we reveal a positive and significant association between value congruence and employee creativity, particularly in the application of critical thinking. This finding supports the idea that any harms of greater culture consistency on employee creativity are offset by a benefit in terms of employees' desire to perform. Overall our research answers the call for a deeper understanding of the relation between value consistency and employee creativity, emphasizing how congruent organizational cultures might stimulate creativity.

Beyond our contributions to the literature, gaining a clearer understanding of how subunit culture consistency influences outcomes and identifying factors that enhance or diminish this relationship offers practical insights for managers. This knowledge is crucial for making decisions about where and how to direct resources to foster subunit culture consistency. Specifically, our results highlight the importance of considering subunit characteristics, such as distance from headquarters and subunit operator tenure, that may substitute for greater direct supervision and performance rewards. Managers should recognize that the returns on investments aimed at promoting subunit culture consistency can vary significantly and not all efforts in this direction yield equivalent benefits.

## **II. Hypothesis Development**

A large literature has shown that a healthy organizational culture can motivate employees to act in the organization's interests (e.g., Chatman 1991; Van den Steen 2010a). Studies also find that culture, or certain aspects of it, are associated with financial performance (Gordon and



DiTomaso 1992; Guiso, Sapienza, and Zingales 2015). For the organizational culture to motivate and direct, it should not only be designed with those goals in mind but should also be disseminated throughout the organization. However, the tacit nature of organizational culture can impede dissemination. This is especially true for organizations with decentralized and geographically dispersed subunits (Hofstede 1998; Lok, Westwood, and Crawford 2005). As a result, culture dissemination often remains incomplete across the different parts of the organization, creating variation in the degree of subunit culture consistency.

We extend prior research by examining the level of culture consistency at different subunits, i.e., the congruence between the organizational values espoused by top management and the values perceived and practiced by the employees at the subunits, and by investigating how the differing levels of subunit culture consistency impact important subunit outcomes. Our theoretical predictions on the potential impact of subunit culture consistency largely derive from the analytical model of Van den Steen (2010a). Van den Steen (2010a, 1718) develops testable propositions “regarding the positive and negative effects of corporate culture,” defined as the “shared beliefs and values” of managers and employees.<sup>1</sup> Van den Steen (2010a) views firms as consisting of individuals who each hold potentially differing beliefs or values. One of these members is the firm manager or formal leader, while the rest are employees. The premise of the model is that agency problems arise when parties have different objectives but that such differences shrink or disappear when managers and employees have shared beliefs and values. Hence culture homogeneity can reduce and eliminate the root of agency problems (Van den Steen 2010a, 1718).

Our construct of subunit culture consistency is an application of Van den Steen’s (2010a)

---

<sup>1</sup> Van den Steen (2010a) provides analytical propositions for both shared *beliefs* (referring to the beliefs about what actions will enhance firm profit) and shared *values* (referring to an individual’s private preferences). All propositions developed by Van den Steen (2010a) and adopted in this manuscript are equivalent for both shared values and beliefs.

construct of culture homogeneity. In our setting, top management resembles Van den Steen's (2010a) conceptualization of a manager who selects a preferred action to be executed by the organization's employees. Similarly, subunit employees in our setting resemble the employees described by Van den Steen (2010a), as they can implement (and can choose the amount of effort they expend) the selected action. In line with the analytical model, top management and subunit employees in our setting may have differing views of the organization's espoused values.

### **Benefits of Greater Subunit Culture Consistency**

Van den Steen (2010a) articulates various ways in which homogeneity in values can be beneficial.<sup>2</sup> First, Van den Steen (2010a, 1725) argues employees' satisfaction and expected utility decrease with the difference in values between the employee and the manager as follows:

... When an organization needs to choose a course of action and the members of that organization fundamentally disagree on the right course of action, then at least some members will feel that the organization goes down the wrong path. This lowers their expected utility from being part of the organization and will lower their motivation because they will feel that their effort is spent on the wrong project.

This argument also comports with cognitive dissonance theory, which suggests that people experience stress and dissatisfaction when faced with inconsistency in values (Aronson 1992; Elliot and Devine 1994), while employees whose values resemble those espoused by top management are likely to agree with management's selected actions, leading to higher satisfaction with their actions.

Second, Van den Steen (2010a) proposes that employees work harder to implement the manager's desired actions when the values of the manager and those of the employees are more similar. Thus employees increase their effort because the utility from engaging in the actions selected by the manager is greater if the manager's values (and hence the manager's preferences)

---

<sup>2</sup> Similar propositions are developed by Van den Steen (2009, 2010b), Merchant and Van der Stede (2011), and Gibbons and Henderson (2012).

are more congruent with their own values.

Third, increased homogeneity of values reduces coordination costs or costs arising from “... the alignment of actions” (Van den Steen 2010a, 1727) between the manager and employees. Van den Steen shows that greater homogeneity in values will reduce the difficulty and costs of coordination, operationalized as the expected time to reach an equilibrium where both parties agree on which actions to take. Van den Steen (2010a, 1728–1729) provides an intuitive interpretation of the findings in his analytical model showing that greater dissimilarity in beliefs increases coordination costs, described as follows:

... a smaller difference in beliefs implies that (a) the players are more likely to prefer the same equilibrium, and (b) when they do prefer different equilibria, the players are less likely to have a strong preference for one equilibrium over the other. As a consequence, they are more likely to either coordinate immediately (when they prefer the same equilibrium) or to settle quickly (when they prefer different equilibria but neither has a strong preference). Coordination is thus easier with more homogenous beliefs.

This conjecture is consistent with the work of Corritore et al. (2020), who show a positive association between consistent beliefs among employees, measured by the commonality of language used by employees on Glassdoor, and financial performance. Corritore et al. (2020) attribute this finding to improved employee coordination. We propose that enhanced coordination could also contribute to smoother workflow, potentially increasing employee satisfaction.

Finally, another benefit of increased homogeneity in values is a reduced need for monitoring, which Van den Steen (2010a) argues can result in better delegation of effort to employees who are more informed or can make decisions more efficiently. Van den Steen (2010a, 1724) states that monitoring “... gives the manager with some probability a chance to ‘correct’ the employee, i.e., to make sure that the employee takes the decision that the manager would have taken.” Van den Steen (2010a) shows that monitoring decreases as the homogeneity of employees’ and managers’ beliefs increases. Additionally, Merchant and Van der Stede (2011) argue that consistency in

values leads to mutual monitoring among employees, which helps direct employees' efforts toward organizational priorities without the need for monitoring.

Thus, based on Van den Steen's (2010a) model and other related literature, we predict that subunit culture consistency will enhance subunit employee satisfaction and performance because it will reduce coordination costs, improve alignment, and enhance utility and motivation. Applying these arguments to multiunit organizations, we predict:

**H1a:** Greater subunit culture consistency is associated with higher subunit employee satisfaction.

**H1b:** Greater subunit culture consistency is associated with higher performance.

### **Harms of Greater Subunit Culture Consistency**

There are also potential downsides to high subunit culture consistency. Specifically, Van den Steen (2010a, 1726) argues that greater homogeneity in beliefs can reduce employees' creativity, which reduces the organization's opportunity to learn from alternative outcomes. When employees share similar values, they will prefer similar actions, and consequently the organization enjoys fewer unique ideas and actions. This situation can harm the organization, as accounting scholars emphasize the critical role of employees' originality in driving organizational innovation, adaptation, and growth (Kachelmeier, Reichert, and Williamson 2008).

Therefore, based on Van den Steen's (2010a) model, we expect high culture consistency to be negatively associated with employee creativity because employees whose values perfectly align with those of top management are less likely to generate original ideas, relative to employees whose values differ from those of top management. This argument resembles those in the management literature, which finds that high consensus among employees undermines critical thinking, creativity, innovation, and adaptability in organizations (Tushman and O'Reilly 1996; O'Reilly and Tushman 2004). Therefore, and in the context of a multiunit organizations, we

predict:

**H1c:** Greater subunit culture consistency is associated with less subunit employee creativity.

### **Factors that Amplify the Benefits of Greater Subunit Culture Consistency**

To further delve into the impact of subunit culture consistency on subunit outcomes, we identify subunits where coordination is likely to be harder, such that greater culture consistency offers increased benefits from improved coordination.

First, we expect that greater geographical distance between employees and top management will impede coordination and therefore increase coordination costs. Communication and physical contact with top management are more complicated when employees work farther from headquarters, which can create difficulty aligning actions. Further, geographically distant employees may operate in different contexts than those familiar to top management, which inhibits communication and coordination (Nohria and Ghoshal 1994).

Recall that we expect greater culture consistency to improve coordination, resulting in enhanced employee satisfaction and performance. Given that employees in geographically distant subunits are likely to have more coordination challenges relative to those who are nearer to top management, we hypothesize:

**H2a:** The benefits of greater subunit culture consistency are amplified for subunits that are geographically distant from the organization's top management relative to those closer to the organization's top management.

Second, we expect that operator characteristics may impact coordination challenges faced by the employees of a subunit. Specifically, we expect coordination to be harder when operators have shorter organizational tenure, as operators with shorter tenures will likely have less knowledge about the organization (Deller et al. 2022; Gartenberg, Prat, and Serafeim. 2019). In addition to having less knowledge, operators with shorter tenures will be less likely to have

developed social networks within the organization that can facilitate coordination (Gupta and Govindarajan 1986). Enhanced coordination arising from greater subunit culture consistency can remedy these challenges. As a result, the coordination benefits of greater subunit culture consistency may be amplified for employees in subunits whose operators have shorter tenures relative to those with longer tenures. Formally, we predict:

**H2b:** The benefits of greater subunit culture consistency are amplified for subunits whose operators have shorter organizational tenures relative to those with longer tenures.

### **Factors that Temper the Benefits of Greater Subunit Culture Consistency**

A growing body of research documents that management controls act as substitutes when they generate similar benefits (Grabner and Moers 2013; Abernethy, Dekker, and Schulz 2015). As discussed above, a proposed benefit of higher culture consistency is better alignment, which enables greater delegation to informed employees and reduces the need for top management to monitor subunit employees' actions. When a subunit's management control system provides greater supervision, either through formal or informal channels, the benefits of reduced monitoring associated with subunit culture consistency diminish. Therefore we expect that the benefits of greater subunit culture consistency via reduced monitoring are tempered in subunits where direct supervision is already high relative to subunits with low direct supervision. Formally, we predict:

**H3a:** The benefits of greater subunit culture consistency are reduced for subunits with greater direct supervision relative to subunits with less direct supervision.

Another control that can align values is performance rewards. Following Abernethy, Dekker, and Schulz (2015, 637), we conceptualize performance rewards as a "performance measurement and reward system that provides individuals with pre-specified performance targets, measures the results or outcomes achieved, and provides rewards or sanctions for realized performance." Research has shown that performance rewards motivate employees to undertake desired actions.

As a result, we predict that their use tempers the benefits arising from increased subunit culture consistency because performance rewards already incentivize employees to heed management's direction. Thus, because we expect that incentive compensation will substitute for greater subunit culture consistency, we predict:

**H3b:** The benefits of greater subunit culture consistency are reduced for subunits with high use of performance rewards relative to subunits with low use of performance rewards.

### **III. The Research Setting and Design**

#### **Research Setting**

To test our hypotheses, we use proprietary data from a North American food and beverage chain with—at the time of data collection—286 geographically dispersed subunits, over 6,000 full-time employees, and annual sales of approximately \$400 million. Most of the subunits, totaling 252, operate as franchisees, while 34 are owned by the company. For simplicity, we refer to both franchisees and their company-appointed equivalents as operators. In total, the chain had 84 operators, each leading from one to 17 subunits. Subunit annual revenues range from around \$400,000 to over \$4 million.

All subunits sell the same products and pursue the same strategy; top management determines the homogenous products, branding, and prices. Top management believes that providing a uniform customer experience across subunits matters for the organization's success. As a result, top managers aim to disseminate consistent values to all subunits and therefore offer culture controls, such as recommended recruitment and training systems, access to business coaches, and invitations to in-person events.

Subunit operators, however, have considerable discretion; all operators have the autonomy to tailor their management controls, in general, and their cultural controls to meet their subunits' needs. Operators also can independently determine the values they promote within their subunits.

As a result, culture consistency varies significantly across subunits.

The values espoused by top management center on customers and employees. To differentiate itself from competitors, the organization focuses on providing a unique customer experience, the most important aspect of which is a memorable and upbeat interaction. The organization also focuses on developing employees, devoting resources to both developing job and transferable skills and mentoring. In contrast, striving for maximum profitability is not a value emphasized by top management.

### **Data Collection**

To understand our research setting and allow for quantitative analysis, we use a mixed-method research approach, gathering information by (a) conducting qualitative interviews, (b) surveying three participant groups, and (c) collecting proprietary and public archival data.

First, we conducted 16 semi-structured interviews with top managers, including the CEO and the executives responsible for finance, marketing, brand management, and customer service (see Table 1 Panel A for details).<sup>3</sup> These interviews lasted approximately one hour and provided insights into the organization's culture, strategy, and structure. We also interviewed nine operators to understand their role, decision-making authority, and methods of influencing subunit culture; each semi-structured interview also lasted approximately one hour. Second, we toured the headquarters and visited several subunits in multiple states to better understand the structure of the organization, its procedures, and customers' experiences. We also interviewed subunit employees to understand their experiences, and we studied internal documents related to the organization's mission, culture, procedures, and policies. Finally, we attended corporate events designed to promote the organization's culture across subunits. These qualitative activities occurred between

---

<sup>3</sup> All interviews and surveys reported in this paper received approval for the use of human subjects by the authors' affiliated institutions.



March and August 2017.

Quantitative data was collected in the second half of 2017 and early 2018. To gather quantitative data, we used the online survey tools SurveyMonkey and Qualtrics. Based on the insights gained from our interviews, we decided to implement three surveys: one of top managers, one of operators, and one of subunit employees (see Table 1 Panel B). Participants in the *top management survey* included 10 executives (including the CEO) identified by human resources as most influential to the organization. The company encouraged participation and followed up with invited participants, resulting in a 100% response rate. All top management participants were informed that our research was examining the organization's culture, but they did not know our specific research questions. Participants in the *operator survey* were contacted by the organization's headquarters by email to inform them about our study and ask them to participate. As a token of appreciation, we offered participating operators the chance to win a \$500 donation to a charity of the winner's choice. Sixty-five of the organization's 84 operators complied, yielding a participation rate of 77%. For the *subunit employee survey*, the company included an invitation to participate in our survey in its periodic mandatory online trainings, along with a link to the online instrument. We offered several participation incentives. One participant was randomly selected to receive a trip to Disneyland, while another received a \$500 gift card from a local restaurant for a team dinner. Of the roughly 6,000 employees invited to participate, 1,676 completed the survey for a participation rate of approximately 28%.

Of those 1,676 employees, 1,494 provided the information needed to identify their corresponding subunit. Of these 1,494 employees, 1,259 worked at subunits whose operators were among the 65 also surveyed. Thus our subunit analysis includes 1,259 employee and 65 operator observations from 235 of the 286 subunits (82%). We also collected proprietary, quantitative

archival data (see Table 1 Panel C) from the company, including such subunit information as addresses. This information allowed us to gather archival data on each subunit from public sources, such as Yelp.com (Yelp ratings), the US Census Bureau, and Google Maps (geographical information).

### **Measuring Culture Consistency**

We capture subunit culture consistency by asking top management and subunit employees to provide their perceptions of the organization’s or their subunits’ values, respectively, and comparing their responses. Specifically, our surveys ask top managers and subunit employees to indicate the relevance of 14 values to the organization or their subunit on a seven-point Likert scale (1 = not relevant at all, 7 = very relevant). These values were adapted from scales used in prior research (O’Reilly, Chatman and Caldwell 1991) and are shown in Appendix A under the definition of the *Culture Consistency* variable, while Appendix B presents mean ratings of all queried values by top management and subunit employees.

Top management’s ratings represent the organization’s espoused culture, and we compare employees’ responses to this benchmark. As indicated by the rank order in Appendix B, top managers identify “being supportive of others” and “being honest” as the most relevant values to the organization, while “making money for the subunit” and “being formal” are considered least relevant. For almost each value, employees’ perceptions of its relative importance differ from those of top management. As shown in Equation (1), we measure the squared deviation between an employee  $j$ ’s relevance rating and the mean rating of top management for each of the 14 queried values  $v$ .<sup>4</sup> We then add the 14 squared deviations for each employee  $j$ :

$$SQUARED\_DEVIATION\_SUM_j = \sum_{v=1}^{14} (MeanTopManagervalue_v - value_{vj})^2 \quad (1)$$

---

<sup>4</sup> Our results are robust to using the median ratings of top management.

Next we calculate the mean sum of squared deviations across employees of subunit  $i$  for all subunits. As higher values indicate greater differences between the values espoused by top management and those perceived by employees, we use the inverse of this measure to construct a subunit-level measure of subunit culture consistency, with higher values indicating greater consistency. The final *CULTURE CONSISTENCY<sub>SUB</sub>* variable was normalized to have a mean of 0 and a standard deviation of 1.

### **Other Independent Variables**

To test our interactive predictions, we capture four variables that we predict will influence the benefits of subunit culture consistency for subunit outcomes. H2a argues that the distance between a subunit and headquarters may amplify the benefits of subunit culture consistency. We identify whether a subunit is far from headquarters based on its distance in miles. The dummy variable *REMOTE FROM HQ* is assigned a value of 1 if the distance is more than approximately a one-day drive, or 500 miles, and 0 otherwise. Ten percent of the subunits in our sample qualify as remote under this definition.<sup>5</sup>

H2b argues that shorter operator tenure may amplify the benefits of greater subunit culture consistency. The operator survey measures tenure, which ranges from seven to 21 years.<sup>6</sup> Given the variability in average tenure across organizations, we examine the distribution of the

---

<sup>5</sup> Ninety percent of the subunits in our sample are located within 483 miles of headquarters. Beyond this distance, one subunit is 625 miles away from headquarters, and the remaining subunits are more than 800 miles away. Hence our variable is robust to a wide range of cutoffs. For robustness, we also used an alternative measure of geographic distance by using subunits' state versus headquarters' state. Specifically, we define a subunit as remote if its state is not the same as or does not border the headquarters' state. Under this definition, 11% of subunits qualify as remote. This alternative specification does not impact our inferences. In contrast, using distance from headquarters as a continuous variable does not capture coordination costs the same way as our dummy variable because gradual differences, such as 100 versus 150 miles, do not necessarily coincide with remoteness versus proximity. Hence, not surprisingly, using a continuous variable does not yield significant results in our analysis.

<sup>6</sup> Importantly, this measure includes an operator's tenure in non-operator roles, such as subunit manager, shift leader, and regular employee. Experience in these other roles is likely to contribute to operators' knowledge of the organization and the extent of that person's social network.

responding operators' tenure to identify those with comparatively short tenures. Specifically, *OPERATOR TENURE SHORT* is assigned a value of 1 if an operator's tenure falls within the bottom quartile of responding operators, which equates to 11 years or less, and 0 otherwise.<sup>7</sup>

H3a argues that the extent of direct supervision tempers the benefits of greater subunit culture consistency. To test this hypothesis, we measure the extent to which employees report being directly supervised by—or receiving explicit guidance from—the subunit's leadership team. Specifically, respondents indicated their agreement with the following statements on a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree): “My leadership team always observes my behavior at work” and “My leadership team emphasizes the importance of following rules.” Factor analysis shows that the responses to both questions load on a single factor (eigenvalue = 1.30; 65.16% of variance explained); however, responses do not satisfy common requirements of scale reliability (Cronbach's  $\alpha = 0.46$ ) (Cortina 1993). Thus our primary measure, *DIRECT SUPERVISION*, is the average of the responses to both questions (in lieu of an extracted factor).

H3b argues that higher use of performance rewards tempers the benefits of greater subunit culture consistency. Our variable *PERFORMANCE REWARDS* measures the extent to which subunit employees report that their performance is linked to rewards, as indicated by their agreement with the following statement on a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree): “High performance at my [subunit] is rewarded.”

### **Dependent Variables**

We investigate the effects of subunit culture consistency on employee satisfaction and performance as well as employee creativity. To capture satisfaction, we ask employees “How satisfied are you with your job at [Company Name]?” (1 = extremely dissatisfied, 7 = extremely

---

<sup>7</sup> Inferences are unchanged when the lowest quintile is used to identify operators with relatively short tenures.

satisfied) and “[Company Name] is the best place that I could be working at right now” (1 = strongly disagree, 7 = strongly agree). We average responses to each question by subunit. Using factor analysis, we find that responses to both questions load on a single factor (eigenvalue = 1.72) that captures 85.78% of the variation and is internally consistent (Cronbach’s  $\alpha = 0.818$ ). This common factor is our measure of *EMPLOYEE SATISFACTION*.

Our research setting does not allow us to directly observe performance. Thus we follow prior field research, including the work of Hauser, Simester, and Wernerfelt (1994) and Casas-Arce, Lourenço, and Martínez-Jerez (2017), and use customer satisfaction data as a measure of performance. This approach is valid because, for service-oriented sectors, such as the food and beverage industry, high customer satisfaction requires employees to exert high effort. Moreover, the literature in accounting argues that customer satisfaction is “... one of the key drivers of firm value” (Ittner and Larcker 1998). To proxy for performance, we collected all customer reviews from publicly available profiles of the organization’s subunits before September 2020 on Yelp.com. A review typically includes a written comment about the customer’s experience and a rating ranging from one star (lowest) to five stars (highest). Data collection yielded 24,506 customer reviews for 274 subunits, including ratings for 216 of the 235 subunits in our final sample. We then calculate the average rating for each subunit, which constitutes our proxy for *PERFORMANCE*.

We proxy for employee creativity by capturing critical thinking, a prerequisite for creativity. Creativity requires a grasp of the focal points of innovation, implying that employees must think deeply and reflect about their work to innovate (Kachelmeier, Wang, and Williamson 2019). Therefore *EMPLOYEE CREATIVITY* captures employees’ engagement in deep thinking at work, reflected by their agreement with the following statement on a seven-point Likert scale (1 =

strongly disagree, 7 = strongly agree): “I think a lot about the *why* behind procedures, rules, and customs at work.” We average responses across all employees by subunit to create a subunit-level variable for analysis.<sup>8</sup>

### **Control Variables**

To differentiate subunit culture consistency from related constructs, we control for culture intensity or the extent to which subunit employees identify with and act according to their understanding of the organization’s values.<sup>9</sup> Subunits can have intense cultures that influence and motivate employees but are inconsistent with the espoused organizational culture. That is, employees might feel very strongly about what they perceive the organizational culture to be, while the values that they have internalized are not consistent with what is espoused by top management. To understand the importance of value alignment, we isolate the impact of culture consistency by controlling for subunit culture intensity. Differentiating this aspect of organizational culture from subunit culture consistency also has practical relevance because the actions that organizations undertake to increase culture consistency across subunits are not necessarily the ones that enhance culture intensity.<sup>10</sup> To measure and control for subunit culture intensity, we ask employees to indicate their agreement with the statement, “I live the [Company Name] values in all aspects of

---

<sup>8</sup> For organizations to benefit from employees’ creative ideas, employees must be willing to share them with others. To capture this construct, we measure the agreement with the following statement on a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree): “I can express my creativity at work.” We create the subunit-level variable by averaging the responses of all employees by subunit. Using these responses or a combination of these responses with *EMPLOYEE CREATIVITY*, as the dependent variable in estimates of Equation 2 yields similar inferences.

<sup>9</sup> Our definition of subunit culture intensity resembles measures in cross-cultural research by Gelfand, Nishii, and Raver (2006) that identify intensity on a continuum of looseness to tightness. It differs, however, from the norm intensity set forth by Chatman et al. (2014), who define intensity as how intensely organizational members hold specific norms on a norm-by-norm basis. We capture how intensely employees hold the values of the organization, whatever they understand those values to be.

<sup>10</sup> For example, a team-building social activity could strengthen culture intensity without increasing subunit culture consistency.

my life,” on a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree). The subunit-level variable *CULTURE INTENSITY<sub>SUB</sub>* is the average of all employee answers by subunit.

We also measure other variables that may control for differences other than subunit culture consistency that affect outcomes. First, we capture several employee-related variables that might influence both their perceptions of the subunits’ culture and employee outcomes. We control for employees’ perceived fairness of their compensation (*COMPENSATION FAIRNESS*), which is measured based on employees’ agreement with three statements (1 = strongly disagree, 7 = strongly agree): “The pay I receive is appropriate for my position at [Company Name],” “My leadership team has favorites who get special treatment and rewards” (we reverse coded responses to this statement), and “The pay I receive is justified given my performance.” We average employee responses by subunit for each of these questions and run a factor analysis that yields a single factor (eigenvalue = 2.04). The factor, which captures 68.00% of the variation and shows internally consistent responses (Cronbach’s  $\alpha = 0.73$ ), is our measure of *COMPENSATION FAIRNESS*. We also control for employees’ perceived opportunities for promotion (*PROMOTION OPPORTUNITIES*) by asking them to indicate their agreement with the statement, “There are a lot of opportunities for promotion inside [Company Name]” (1 = strongly disagree, 7 = strongly agree). We also identify employees who may lack familiarity with the organization or its culture by controlling for low *EMPLOYEE TENURE*, which equals 1 if the average tenure of a subunit’s employees is one year or more and 0 otherwise. To distinguish employees’ performance rewards from the incentives offered to subunit leadership, we control for the use of incentive pay for subunit managers (*MANAGER INCENTIVES*) based on operators’ responses to the survey question “How much of managers’ total compensation is made up of variable pay that is based on performance?”

(0%–100%).<sup>11</sup>

Second, we control for subunit characteristics that might influence the operators' choice to promote subunit culture consistency and implement the culture controls offered by top management. Specifically, *OPERATOR FRANCHISEE* is equal to one if the subunit is operated by a franchisee and zero if the subunit is company owned. We also control for the number of subunit employees managed by a given operator (*OPERATOR SIZE*), captured via the question “How many employees do you have at your operation?”

Third, we control for elements of the subunits' operating environment that could lead to lower culture consistency or performance (Li and Sandino 2018). We capture market divergence (*MARKET DIVERGENCE*) to control for differences between the company's mainstream market and the subunit's market. Like prior research (Campbell, Datar, and Sandino 2009), we collect the following census data for each subunit by ZIP code: average household size, median age, per-capita income, population density, and percentage of the population that is white. We calculate the organization's mean for each of these characteristics. To represent divergence, we calculate each subunit's distance from the organization's mean for each characteristic, measured in standard deviations, which we sum across all five characteristics to create *MARKET DIVERGENCE*. We also extract from the US Census Bureau the population per square mile in a subunit's ZIP code, which we use to control for each subunits' population density (*POPULATION DENSITY*). To control for the subunits' competition (*COMPETITION*), we capture the number of industry competitors within a five-mile radius of a subunit using Google Maps, geographic coordinates (latitude and longitude), and a keyword search for words related to the organization's industry and

---

<sup>11</sup> Since some operators with multiple subunits employ multiple local managers, this variable can be an operator's estimate of his or her average local manager incentives. The same value is used for all subunits supervised by that operator.



largest competitors. Finally, we use company documents to identify the year of each subunit's opening, which allows us to calculate each subunits' age in years (*SUBUNIT AGE*).

### **Descriptive Statistics**

Table 2 presents descriptive statistics of the dependent variables, independent variables, and control variables at the subunit level. Table 3 shows Pearson correlation coefficients for all variables. Notably, our measure of subunit culture consistency is positively correlated with all outcome variables (all  $\rho \geq 0.149$ , all  $p < 0.05$ ). To ensure that this measure differs from our measure of subunit culture intensity, we examine the correlation between both. A low positive correlation indicates discriminant validity ( $\rho = 0.150$ ,  $p < 0.05$ ).<sup>12</sup>

### **IV. Results**

Because our hypotheses concern subunit culture consistency, they are all tested at the subunit level. Because one operator may operate multiple subunits, all OLS regressions use standard errors clustered by operator.

#### **Effect of Subunit Culture Consistency on Employee Satisfaction, Performance, and Creativity: Tests of H1a, H1b, and H1c**

Our first set of hypotheses explores the impact of greater subunit culture consistency on subunit such outcomes as employee satisfaction, performance, and creativity. For each subunit  $i$ , we test the following equation:

$$OUTCOME_i = \alpha + \beta_1 \times CULTURE\ CONSISTENCY_{SUB\ i} + \sum CONTROL\ VARIABLES_i + \varepsilon_i \quad (2)$$

For H1a and H1b, a positive and significant coefficient on  $\beta_1$  supports our prediction, and, for H1c, a negative and significant coefficient on  $\beta_1$  supports our prediction.

---

<sup>12</sup> Widely accepted thresholds of discriminant validity range between 0.70 and 0.85.

Table 4 reports results with *EMPLOYEE SATISFACTION*, *PERFORMANCE*, and *EMPLOYEE CREATIVITY* as the dependent variables in Columns 1, 2, and 3, respectively. A positive and significant coefficient for  $\beta_1$  suggests that subunit culture consistency is associated with greater *EMPLOYEE SATISFACTION* ( $t = 2.79, p < 0.01$ ) and *PERFORMANCE* ( $t = 2.20, p < 0.05$ ).<sup>13</sup> That is, we find greater subunit culture consistency to be beneficial for employee satisfaction and performance, which supports H1a and H1b.

In contrast to the prediction of H1c, subunit culture consistency is associated positively with *EMPLOYEE CREATIVITY* ( $t = 3.03, p < 0.01$ ). This unexpected finding might be explained by positive effects of subunit culture consistency on employee effort and performance. As discussed in our theory for H1b and suggested by our results on *PERFORMANCE*, one of the potential benefits of greater subunit culture consistency is enhanced motivation. This is important for employee creativity because research shows that motivated employees are more likely to be creative than demotivated ones (Amabile 1988). Moreover, employees are more creative when they believe their ideas are appreciated, consistent with Van den Steen's (2010a) suggestion that top management is more likely to respond positively to new ideas generated by employees with greater value alignment. In an untabulated analysis, we find additional support for this latter interpretation. Using the same model as in Equation 2, we replace *EMPLOYEE CREATIVITY* with participants' perception of how welcoming their work environment is toward expression of creativity (measured by the question "I can express my creativity at work"; 1 = strongly disagree, 7 = strongly agree). The association of *CULTURE CONSISTENCY* with this variable is positive and significant ( $t = 4.00, p < 0.01$ ).

---

<sup>13</sup> All  $p$ -values on coefficients that are consistent with their directional predictions are one-tailed; other  $p$ -values are two-tailed. We further test for multicollinearity by calculating the variance inflation factor. The mean VIF is 1.37, and the highest VIF of a single explanatory variable is 2.22. Both values reject concerns of multicollinearity.

We next examine whether the statistically significant effects of subunit culture consistency are also economically relevant. Based on the coefficients presented in Table 4, we find that a one standard deviation change in *CULTURE CONSISTENCY<sub>SUB</sub>* leads to a change of 0.186 standard deviations in *EMPLOYEE SATISFACTION*, 0.154 standard deviations (or 0.057 out of five Yelp stars) in *PERFORMANCE*, and 0.206 standard deviations (or 0.222 out of seven Likert points) in *EMPLOYEE CREATIVITY*. Alternatively, moving from the lowest to the highest observed value of *CULTURE CONSISTENCY<sub>SUB</sub>* in our sample (-5.58 versus 1.86) is associated with a change of 1.384 standard deviations in *EMPLOYEE SATISFACTION*, 1.146 standard deviations (or 0.424 out of five Yelp stars) in *PERFORMANCE*, and 1.532 standard deviations (or 1.652 out of seven Likert points) in *EMPLOYEE CREATIVITY*. These results show that subunit culture consistency is not only statistically significant but also economically significant.

### **Factors Amplifying the Benefits of Subunit Culture Consistency: Tests of H2a and H2b**

Our second hypothesis explores two factors that may amplify the benefits of greater subunit culture consistency for subunit *i*: being distant from top management (H2a) and having an operator with a shorter organizational tenure (H2b). To test H2a, we run the following regression at the subunit level:

$$\begin{aligned}
 OUTCOME_i = & \alpha + \beta_1 \times CULTURE\ CONSISTENCY_{SUB\ i} + \beta_2 \times REMOTE\ FROM\ HQ_i + \\
 & \beta_3 \times CULTURE\ CONSISTENCY_{SUB\ i} \times REMOTE\ FROM\ HQ_i + \\
 & \sum CONTROL\ VARIABLES_i + \varepsilon_i
 \end{aligned} \tag{3}$$

A positive and significant coefficient on  $\beta_3$  supports H2a.

Table 5 reports our results. First,  $\beta_1$  is positive and significant for *EMPLOYEE SATISFACTION* ( $t = 2.73, p < 0.01$ ) and *PERFORMANCE* ( $t = 2.13, p < 0.05$ ), which indicates a positive effect of subunit culture consistency on both outcomes for subunits that are near the

organization's top management. Results also indicate partial support for H2a, as  $\beta_3$  is positive and significant for *PERFORMANCE* ( $t = 1.60, p < 0.10$ ), which suggests that some benefits of greater subunit culture consistency are amplified (by a factor of 4.8) for remote subunits. In contrast to our prediction,  $\beta_3$  is insignificant when *EMPLOYEE SATISFACTION* is the dependent variable ( $t = 0.80, p > 0.10$ ). One explanation for this finding might be that employee satisfaction may be less affected by the implications of increased coordination costs and more sensitive to the employees' personal experiences.

We test H2b with the following equation at the level of the subunit:

$$\begin{aligned}
 OUTCOME_i = & \alpha + \beta_1 \times CULTURE\ CONSISTENCY_{SUB\ i} + \beta_2 \times \\
 & OPERATOR\ TENURE\ SHORT + \beta_3 \times CULTURE\ CONSISTENCY_{SUB\ i} \times \\
 & OPERATOR\ TENURE\ SHORT + \sum CONTROL\ VARIABLES_i + \varepsilon_i \quad (4)
 \end{aligned}$$

A positive and significant coefficient on  $\beta_3$  supports our hypothesis that the benefits of greater subunit culture consistency are amplified in subunits whose operators have shorter organizational tenures.

Table 6 reports results. The positive and significant coefficient for  $\beta_1$  indicates that subunit culture consistency positively affects both outcomes for subunits whose operators have longer operational tenures (*OPERATOR TENURE SHORT* = 0). Specifically,  $\beta_1$  is positive and significant for *EMPLOYEE SATISFACTION* ( $t = 1.69, p < 0.05$ ) and *PERFORMANCE* ( $t = 1.41, p < 0.10$ ). Importantly, results also indicate support for H2b.  $\beta_3$  is positive and significant for *EMPLOYEE SATISFACTION* ( $t = 2.24, p < 0.05$ ) and *PERFORMANCE* ( $t = 1.77, p < 0.05$ ), which suggests that the benefits of greater subunit culture consistency are amplified (almost tripled in both cases) for subunits whose operators have shorter organizational tenures.

Overall results largely support H2a and H2b, as the effect of greater subunit culture

consistency on performance is considerably amplified for geographically distant subunits and those whose operators have shorter tenures. While the benefits of greater subunit culture consistency on performance are substantially amplified for subunits with shorter organizational tenures, there is no evidence that distance amplifies the benefits of subunit culture consistency for employee satisfaction.

### **Factors Tempering the Benefits of Subunit Culture Consistency: Tests of H3a and H3b**

Our third hypothesis explores how two elements of the subunit's management control system—the extent of direct supervision (H3a) and performance rewards (H3b)—may temper the benefits of greater subunit culture consistency for subunit  $i$ . For H3a, we test the following equation at the subunit level:

$$\begin{aligned}
 OUTCOME_i = & \alpha + \beta_1 \times CULTURE\ CONSISTENCY_{SUB\ i} + \beta_2 \times DIRECT\ SUPERVISION_i + \\
 & \beta_3 \times CULTURE\ CONSISTENCY_{SUB\ i} \times DIRECT\ SUPERVISION_i + \\
 & \sum CONTROL\ VARIABLES_i + \varepsilon_i
 \end{aligned} \tag{5}$$

A negative and significant coefficient on  $\beta_3$  supports our hypothesis by suggesting reduced benefits of greater subunit culture consistency for subunits with extensive direct supervision.

Table 7 reports results. For *EMPLOYEE SATISFACTION*, the positive and significant  $\beta_1$  coefficient ( $t = 2.74, p < 0.01$ ) and the negative and significant  $\beta_3$  coefficient ( $t = 2.36, p < 0.05$ ) support H3a and suggest reduced benefits of greater subunit culture consistency for subunits with extensive direct supervision (reduced by 15% per Likert point of *DIRECT SUPERVISION*). However,  $\beta_1$  is not significant when *PERFORMANCE* is the dependent variable ( $t = 0.65, p > 0.10$ ), and neither is  $\beta_3$  ( $t = 0.43, p > 0.10$ ), which is inconsistent with subunit culture consistency and direct supervision having substitute effects on performance. One possible explanation for this finding is that performance may be less affected by the implications of reduced monitoring costs

and more sensitive to the way that employees' experience monitoring, such as whether monitoring is coercive.

To explore H3b, we test the following equation at the subunit level:

$$\begin{aligned}
 OUTCOME_i = & \alpha + \beta_1 \times CULTURE\ CONSISTENCY_{SUB\ i} + \beta_2 \times \\
 & PERFORMANCE\ REWARDS_i + \beta_3 \times CULTURE\ CONSISTENCY_{SUB\ i} \times \\
 & PERFORMANCE\ REWARDS_i + \sum CONTROL\ VARIABLES_i + \varepsilon_i \quad (5)
 \end{aligned}$$

A negative and significant coefficient on  $\beta_3$  supports our hypothesis that the benefits of greater subunit culture consistency are tempered in subunits with more extensive performance rewards for employees.

Table 8 reports results. For *EMPLOYEE SATISFACTION*, the positive and significant  $\beta_1$  coefficient ( $t = 2.94, p < 0.01$ ) and the negative and significant  $\beta_3$  coefficient ( $t = 2.52, p < 0.01$ ) suggest that the benefits of greater subunit culture consistency are tempered for subunits with high use of performance rewards. Likewise,  $\beta_1$  is positive and significant when *PERFORMANCE* is the dependent variable ( $t = 2.33, p > 0.05$ ), and  $\beta_3$  is negative and significant ( $t = 1.76, p > 0.05$ ). The effects of *CULTURE CONSISTENCY* on both outcomes shrink in subunits with high use of performance rewards (by roughly 16% per Likert point of *PERFORMANCE REWARDS*). This is consistent with subunit culture consistency and performance rewards acting as substitutes regarding performance.

Overall the results suggest that the benefits of greater subunit culture consistency regarding employee satisfaction are tempered for subunits with extensive direct supervision and high use of performance rewards. This is consistent with the idea that culture controls can substitute for more formal elements of the control system (Merchant and Van der Stede 2011).

For performance, we find support for the substitution of subunit culture consistency with

performance rewards but not with direct supervision. Instead direct supervision is directly associated with performance at the subunit level ( $t = 2.03, p < 0.05$ ), regardless of subunit culture consistency. This finding suggests that more extensive direct supervision increases employees' ability to deliver uniform, high-quality service.

## **V. Conclusion**

This study explores the effects of subunit culture consistency, defined as the congruence between the organizational values espoused by top management and those perceived and practiced by employees at dispersed and decentralized subunits. We use survey data collected from 10 top managers, 65 operators, and 1,259 employees at 235 subunits of a North American food and beverage chain to test predictions adapted from the analytical model of Van den Steen (2010a). Our findings support analytical propositions about the benefits of greater subunit culture consistency. Specifically, we find that greater subunit culture consistency is associated with greater employee satisfaction and performance. In contrast to the analytical propositions of Van den Steen (2010a), we find no evidence that greater value alignment reduces employee creativity. Further, we identify two factors that amplify the coordination benefits of greater subunit culture consistency: remoteness from the organization's top management and shorter operator organizational tenure. Finally, we identify two factors that can act as substitutes regarding the monitoring and alignment benefits of greater subunit culture consistency: greater direct supervision and high use of performance rewards.

For managers, our results illuminate the benefits of value congruence for decentralized organizations. When evaluating costly investments to promote subunit culture consistency, our results suggest that managers should consider the characteristics of a given subunit, including its geographic distance from the organization's headquarters and whether its operator has a short

organizational tenure as well as the presence of management controls that may act as potential substitutes, such as greater direct supervision and performance rewards at the subunit.

Our research design has many advantages. For instance, we directly measure top management's espoused organizational values using survey responses from key executives, including the CEO. Our measure of subunit culture consistency is not organization-specific and thus can be used in future research. In addition, our analyses control for the strength of a subunit's culture to differentiate the effects of subunit culture consistency from culture intensity.

Nonetheless, our research does have limitations that provide opportunities for future research. While our results suggest that greater culture consistency influences subunit outcomes, our documented effects may be subject to boundary conditions. In our setting, the organization's values are aligned with its strategy, but results may vary for organizations whose values are misaligned with their strategy. Also, the organization we study emphasizes organizational culture in its management control system. Culture may be less prominent in other organizations, potentially altering inferences. Future research can explore the effects of subunit culture consistency in organizations with low alignment between culture and strategy and in organizations that do not emphasize culture controls.



## Appendix A

### Descriptions of Variables

<b>Subunit Outcomes</b>	
<b>Variable</b>	<b>Description</b>
<i>EMPLOYEE SATISFACTION</i>	Principal-component factor (with an eigenvalue = 1.72 and a Cronbach $\alpha$ = 0.818) that captures 85.78% of the variation in the subunit averages of employees' responses to the following questions: <ol style="list-style-type: none"> <li>1. "How satisfied are you with your job at [Company Name]?" (1 = <i>extremely dissatisfied</i>, 7 = <i>extremely satisfied</i>)</li> <li>2. "Please indicate your agreement with the following statement: [Company Name] is the best place that I could be working at right now." (1 = <i>strongly disagree</i>, 7 = <i>strongly agree</i>)</li> </ol>
<i>PERFORMANCE</i>	To proxy for performance, we use the average subunit rating of individual customer reviews (1–5 stars) collected from Yelp.com.
<i>EMPLOYEE CREATIVITY</i>	The average of subunit employees' agreement with the following statement (1 = <i>strongly disagree</i> , 7 = <i>strongly agree</i> ): "I think a lot about the <i>why</i> behind procedures, rules, and customs at work."
<b>Independent Variables</b>	
<b>Variable</b>	<b>Description</b>
<i>CULTURE CONSISTENCY<sub>SUB</sub></i>	The congruence between the values espoused by top management and the values perceived and practiced by a subunit's employees. The measure is calculated as follows. Employees (top managers) answer the following question: Please use the rating scales below to indicate how relevant each of these values are to the work culture at your subunit (organization) (1 = <i>not relevant at all</i> , 7 = <i>very relevant</i> ): <ol style="list-style-type: none"> <li>1. Being innovative</li> <li>2. Paying attention to detail</li> <li>3. Being part of a team</li> <li>4. Being nonconfrontational</li> <li>5. High expectations for performance</li> <li>6. Helping employees grow</li> <li>7. Being supportive of others</li> <li>8. Being competitive</li> <li>9. Being honest</li> <li>10. Being positive</li> <li>11. Being ready to adapt to new customer needs</li> <li>12. Putting others first</li> <li>13. Making money for the subunit</li> <li>14. Being formal</li> </ol> For all values, the difference between an employee's answer and the mean of the answers provided by top management was squared. Per employee, the 14 squared differences were summed and used to

	calculate a mean across all employees of a given subunit. We take the inverse of the resulting subunit-level values so that higher values indicate higher subunit culture consistency. Finally, the variable is normalized.
<i>REMOTE FROM HQ</i>	Dummy variable equal to 1 if the subunit is more than 500 miles away from the organization’s headquarters and 0 otherwise.
<i>OPERATOR TENURE SHORT</i>	Dummy variable equal to 1 if the operator’s tenure at the organization (including all non-operator roles) is 11 years or less, and 0 otherwise.
<i>DIRECT SUPERVISION</i>	Index variable consisting of the average of subunit employees’ agreement with the following statements (1 = <i>strongly disagree</i> , 7 = <i>strongly agree</i> ): <ol style="list-style-type: none"> <li>1. “My leadership team always observes my behavior at work.”</li> <li>2. “My leadership team emphasizes the importance of following rules.”</li> </ol>
<i>PERFORMANCE REWARDS</i>	The average of subunit employees’ agreement with the following statement (1 = <i>strongly disagree</i> , 7 = <i>strongly agree</i> ): “High performance at my [subunit] is rewarded.”
<b>Control Variables</b>	
<b>Variable</b>	<b>Description</b>
<i>CULTURE INTENSITY<sub>SUB</sub></i>	The average of subunit employees’ agreement with the following statement (1 = <i>strongly disagree</i> , 7 = <i>strongly agree</i> ): “I live the [Company Name] values in all aspects of my life.”
<i>COMPENSATION FAIRNESS</i>	Principal-component factor (with an eigenvalue = 2.04 and a Cronbach $\alpha$ = 0.818) that captures 68.00% of the variation in the subunit averages of employees’ agreement with the following statements (1 = <i>strongly disagree</i> , 7 = <i>strongly agree</i> ): <ol style="list-style-type: none"> <li>1. “The pay I receive is appropriate for my position at [Company Name].”</li> <li>2. “My leadership team has favorites who get special treatment and rewards.” (reverse coded)</li> <li>3. “The pay I receive is justified given my performance.”</li> </ol>
<i>PROMOTION OPPORTUNITIES</i>	The average of subunit employees’ agreement with the following statement (1 = <i>strongly disagree</i> , 7 = <i>strongly agree</i> ): “There are a lot of opportunities for promotion inside [Company Name].”
<i>EMPLOYEE TENURE</i>	Dummy variable based on the following question on the employee survey:

	<p>“How long have you worked at [Company Name]?” (1 = 1 month to less than 3 months, 2 = 3 months to less than 6 months, 3 = 6 months to less than 1 year, 4 = 1 year to less than 3 years, 5 = 3 years to less than 5 years, 6 = 5 years or more)</p> <p>The dummy variable is 1 for average subunit responses of “4” or higher (= 1 year or more) and 0 otherwise.</p>
<i>MANAGER INCENTIVES</i>	<p>Operators’ response to the following question:  “How much of [subunit] managers’ total compensation is made up of variable pay that is based on performance?” (0%–100%)</p> <p>The response is an average across all subunit managers working for a given operator.</p>
<i>OPERATOR FRANCHISEE</i>	<p>Dummy variable that is equal to 1 if a subunit is operated by a franchisee and 0 if the subunit is company-owned and managed by an operator who is a company employee.</p>
<i>OPERATOR SIZE</i>	<p>Operators’ response to the following question:  “How many employees do you have in total at your operation?”</p> <p>The response is the total number for all subunits belonging to the same operator.</p>
<i>MARKET DIVERGENCE</i>	<p>Measure for the market divergence of a subunit following Campbell et al. (2009), which compares the area a subunit is in with the organization’s mean across five characteristics:</p> <ol style="list-style-type: none"> <li>1. Average household size</li> <li>2. Median age</li> <li>3. Per-capita income</li> <li>4. Population density</li> <li>5. Percentage of the population that is white</li> </ol> <p>Data for all characteristics were collected from the US Census Bureau based on a subunit’s ZIP code. For each subunit, we calculate the distance from the chain mean measured in standard deviations and sum the distances for all five characteristics.</p>
<i>POPULATION DENSITY</i>	<p>Population per square mile in a subunit’s ZIP code.</p>
<i>COMPETITION</i>	<p>Number of industry competitors within a five-mile radius of a subunit.</p>
<i>SUBUNIT AGE</i>	<p>A subunit’s age in years.</p>

## Appendix B

### Top Management's and Subunit Employees' Value Ratings

Value	HQ mean (sd)	Subunit mean (sd)	% subunits below/above HQ mean
1. Being supportive of others	7.00 (0.00)	6.53 (0.57)	66.0% / 0.0%*
2. Being honest	7.00 (0.00)	6.31 (0.62)	79.6% / 0.0%*
3. Being part of a team	6.90 (0.32)	6.55 (0.53)	66.0% / 34.0%
4. Being positive	6.90 (0.32)	6.64 (0.49)	59.3% / 40.7%
5. Being ready to adapt to new customer needs	6.80 (0.42)	6.63 (0.56)	50.2% / 49.8%
6. Putting others first	6.80 (0.42)	6.34 (0.74)	70.9% / 29.1%
7. Helping employees grow	6.80 (0.42)	6.34 (0.71)	68.8% / 31.2%
8. High expectations for performance	6.50 (0.71)	6.36 (0.55)	49.1% / 40.7%*
9. Paying attention to detail	6.20 (1.03)	6.41 (0.59)	32.6% / 67.4%
10. Being innovative	5.60 (1.17)	5.58 (0.86)	45.6% / 54.4%
11. Being competitive	5.20 (0.92)	3.96 (1.07)	90.5% / 9.5%
12. Being nonconfrontational	5.10 (1.45)	4.93 (0.96)	58.6% / 41.4%
13. Making money for the subunit	4.10 (1.52)	4.52 (1.09)	35.4% / 64.6%
14. Being formal	1.70 (0.82)	4.13 (1.07)	1.4% / 98.6%

For each of the 14 values, the table shows (a) the mean relevance rating of the 10 participants in the top management survey which we use as the benchmark for the values “espoused by top management” and (b) the mean of all relevance ratings on the subunit level. That means, we first calculate the mean employee rating in each subunit and then average these means over all subunits. The %-age column indicates how many subunits consider a value as more (less) relevant than top management divided by the number of subunits.

\* Numbers do not add up to 100% if subunit ratings were identical to top management's ratings at headquarters.

## References

- Abernethy, M. A., H. C. Dekker, and A. K. D. Schulz. 2015. Are employee selection and incentive contracts complements or substitutes? *Journal of Accounting Research* 53 (4): 633-668.
- Aronson, E. 1992. The return of the repressed: Dissonance theory makes a comeback. *Psychological Inquiry* 3 (4): 303-311.
- Cai, W. 2023. Formalizing the informal: Adopting a formal culture-fit measurement system in the employee selection process. *The Accounting Review* 98 (3): 47-70.
- Campbell, D. 2012. Employee selection as a control system. *Journal of Accounting Research* 50 (4): 931-966.
- Campbell, D., S. M. Datar, and T. Sandino. 2009. Organizational design and control across multiple markets: The case of franchising in the convenience store industry. *The Accounting Review* 84 (6): 1749-1779.
- Campbell, D., and T. Sandino. 2019. Sustaining corporate culture in a growing organization. *Harvard Business School Technical Note*: 119-109.
- Casas-Arce, P., S. M. Lourenço, and F. A. Martínez-Jerez. 2017. The performance effect of feedback frequency and detail: Evidence from a field experiment in customer satisfaction. *Journal of Accounting Research* 55 (5): 1051-1088.
- Chatman, J. A. 1991. Matching people and organizations: selection and socialization in public accounting firms. *Administrative Science Quarterly* 36 (3): 459-484.
- Chatman, J. A., D. F. Caldwell, C. A. O'Reilly, and B. Doerr. 2014. Parsing organizational culture: How the norm for adaptability influences the relationship between culture consensus and financial performance in high-technology firms. *Journal of Organizational Behavior* 35 (6): 785-808.
- Chatman, J. A., and C. A. O'Reilly. 2016. Paradigm lost: Reinvigorating the study of organizational culture. *Research in Organizational Behavior* 36: 199-224.
- Corritore, M., A. Goldberg, and S. B. Srivastava. 2020. Duality in diversity: How intrapersonal and interpersonal cultural heterogeneity relate to firm performance. *Administrative Science Quarterly* 65 (2): 359-394.
- Cortina, J. 1993. What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology* 78 (1): 98-104.
- Deller, C., S. Gallani, and T. Sandino. 2022. Using a 360-degree assessment system to promote core values: A field experiment in a retail chain. *Harvard University and University of Pennsylvania* (unpublished). Available at: [https://www.hbs.edu/ris/Publication%20Files/18-069\\_0837340f-fc1a-4599-a529-4fe635355b00.pdf](https://www.hbs.edu/ris/Publication%20Files/18-069_0837340f-fc1a-4599-a529-4fe635355b00.pdf).
- Deller, C., and T. Sandino. 2020a. Effects of a tournament incentive plan incorporating managerial discretion in a geographically dispersed organization. *Management Science* 66 (2): 911-931.
- Deller, C., and T. Sandino. 2020b. Who should select new employees, headquarters or the unit

- manager? Consequences of centralizing hiring at a retail chain. *The Accounting Review* 95 (4): 173-198.
- Elliot, A. J., and P. G. Devine. 1994. On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort. *Journal of Personality and Social Psychology* 67 (3): 382-394.
- Gartenberg, C., A. Prat, and G. Serafeim. 2019. Corporate purpose and financial performance. *Organization Science* 30 (1): 1-18.
- Gelfand, M. J., L. H. Nishii, and J. L. Raver. 2006. On the nature and importance of cultural tightness-looseness. *Journal of Applied Psychology* 91 (6): 1225-1244.
- Gibbons, R., and R. Henderson. 2012. Relational contracts and organizational capabilities. *Organization Science* 23 (5): 1350-1364.
- Gordon, G. G. and N. Ditomaso. 1992. Predicting corporate performance from organizational culture. *Journal of Management Studies* 29 (6): 783-798.
- Grabner, I., and F. Moers. 2013. Management control as a system or a package? Conceptual and empirical issues. *Accounting, Organizations and Society* 38 (6): 407-419.
- Graham, J. R., J. Grennan, C. R. Harvey, and S. Rajgopal. 2022. Corporate culture: Evidence from the field. *Journal of Financial Economics* 146: 552-593.
- Guiso, L., P. Sapienza, and L. Zingales. 2015. The value of corporate culture. *Journal of Financial Economics* 117 (1): 60-76.
- Gupta, A. K., and V. Govindarajan. 1986. Resource sharing among SBUs: Strategic antecedents and administrative implications. *Academy of Management Journal* 29 (4): 695-714.
- Hauser, J. R., D. I. Simester, and B. Wernerfelt. 1994. Customer satisfaction incentives. *Marketing Science* 13 (4): 327-350.
- Hofstede, G. 1998. Identifying organizational subcultures: An empirical approach. *Journal of Management Studies* 35 (1): 1-12.
- Ittner, C. D., and D. F. Larcker. 1998. Are nonfinancial measures leading indicators of financial performance? An analysis of customer satisfaction. *Journal of Accounting Research* 36 (Supplement): 1-35.
- Kachelmeier, S. J., B. E. Reichert, and M. G. Williamson. 2008. Measuring and motivating quantity, creativity, or both. *Journal of Accounting Research* 46 (2): 341-373.
- Kachelmeier, S. J., L. W. Wang, and M. G. Williamson. 2019. Incentivizing the creative process: From initial quantity to eventual creativity. *The Accounting Review* 94 (2): 249-266.
- Li, S. X., and T. Sandino. 2018. Effects of an information sharing system on employee creativity, engagement, and performance. *Journal of Accounting Research* 56 (2): 7130-747.
- Lok, P., R. Westwood, and J. Crawford. 2005. Perceptions of organizational subculture and their significance for organizational commitment. *Applied Psychology: An International Review* 54 (4): 490-514.
- Merchant, K. A., and W. A. Van der Stede. 2011. *Management Control Systems: Performance Measurement, Evaluation and Incentives*. 3rd edition. Pearson Education.

- Nohria, N., and S. Ghoshal. 1994. Differentiated fit and shared values: Alternatives for managing headquarters-subsidary relations. *Strategic Management Journal* 15 (6): 491-502.
- O'Reilly III, C. A., J. Chatman, and D. F. Caldwell. 1991. People and organizational culture: A profile comparison approach to assessing person-organization fit. *Academy of Management Journal* 34 (3): 487-516.
- O'Reilly III, C. A., and M. L. Tushman. 2004. The ambidextrous organization. *Harvard Business Review* 82 (4): 74-83.
- Shang, R., M. Abernethy, and C. Hung. 2020. Group identity, performance transparency, and performance. *The Accounting Review* 95 (5): 373-397.
- Tushman, M. L., and C. A. O'Reilly. 1996. Ambidextrous organizations: Managing evolution and revolutionary change. *California Management Review* 38 (4): 8-30.
- Van den Steen, E. 2009. Organizational beliefs and managerial vision. *Journal of Law, Economics, & Organization* 21 (1): 256-284.
- Van den Steen, E. 2010a. Culture clash: The costs and benefits of homogeneity. *Management Science* 56 (10): 1718-1738.
- Van den Steen, E. 2010b. On the origin of shared beliefs (and corporate culture). *RAND Journal of Economics* 41 (4): 617-648.

**Table 1: Study Design**

<b>Panel A: Qualitative Interviews</b>	
<p>16 in-depth semi-structured interviews at company headquarters, including:</p> <ul style="list-style-type: none"> <li>• CEO, CFO</li> <li>• VP of HR</li> <li>• VP of culture</li> <li>• Operator coaching team</li> <li>• Legal</li> <li>• Marketing</li> </ul>	<p>9 interviews at the subunit level, including:</p> <ul style="list-style-type: none"> <li>• Operators</li> <li>• Subunit managers</li> <li>• Entry-level employees</li> </ul>
<b>Panel B: Surveys</b>	
<p>Top management survey:</p> <ul style="list-style-type: none"> <li>• Measures the content of the organizational culture</li> <li>• 10 participants (including CEO and VP of culture)</li> </ul>	<p>Operator survey:</p> <ul style="list-style-type: none"> <li>• Measures operator characteristics</li> <li>• 65 participants operating 235 subunits completed the survey</li> </ul> <p>Employee survey at the subunit level:</p> <ul style="list-style-type: none"> <li>• Measures culture at the subunits</li> <li>• Measures employee outcomes</li> <li>• 1,676 participants completed the survey, of whom 1,494 could be matched to one of 285 subunits</li> </ul>
<b>Panel C: Archival Data</b>	
<p>Subunit-level data include:</p> <ul style="list-style-type: none"> <li>• Operator affiliation, subunit age(s), and subunit address(es) (provided by headquarters)</li> <li>• Customer Yelp ratings, census data, and geographic information (public sources)</li> </ul>	



**Table 2: Descriptive Statistics**

	N	Mean	St. dev	min	p25	Median	p75	max
<i>EMPLOYEE SATISFACTION</i>	285	0	1	-4.98	-.38	0.27	0.66	1.13
<i>PERFORMANCE</i>	263	4.09	0.37	2.64	3.90	4.11	4.30	5
<i>EMPLOYEE CREATIVITY</i>	285	5.01	1.08	1	4.40	5	5.67	7
<i>CULTURE CONSISTENCY<sub>SUB</sub></i>	285	0	1	-5.58	-0.29	0.18	0.60	1.86
<i>CULTURE INTENSITY<sub>SUB</sub></i>	285	6.33	0.52	4	6	6.39	6.67	7
<i>REMOTE FROM HQ</i>	285	0.10	0.30	0	0	0	0	1
<i>OPERATOR TENURE SHORT</i>	235	0.23	0.42	0	0	0	0	1
<i>DIRECT SUPERVISION</i>	285	5.65	0.64	3.50	5.30	5.67	6	7
<i>PERFORMANCE REWARDS</i>	285	5.12	1.08	1	4.57	5.20	5.80	7
<i>COMPENSATION FAIRNESS</i>	285	0	1.41	-6.39	-0.72	0.08	0.85	2.82
<i>PROMOTION OPPORTUNITIES</i>	285	5.33	1.06	1	4.75	5.50	6	7
<i>EMPLOYEE TENURE</i>	285	0.40	0.49	0	0	0	1	1
<i>MANAGER INCENTIVES</i>	233	14.34	12.30	0	7	11	20	80
<i>OPERATOR FRANCHISEE</i>	285	0.88	0.32	0	1	1	1	1
<i>OPERATOR SIZE</i>	245	184.25	171.61	15	65	125	233	750
<i>MARKET DIVERGENCE</i>	283	3.73	1.84	0.97	2.56	3.30	4.57	13.86
<i>POPULATION DENSITY</i>	284	1635.44	2044.52	4.14	154.19	657.97	2912.24	14404.07
<i>COMPETITION</i>	285	32.07	38.60	0	9	22	43	277
<i>SUBUNIT AGE</i>	285	8.08	4.56	0	4	8	12	18

See the Appendix A for descriptions of variables.

**Table 3: Correlations**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
<i>EMPLOYEE SATISFACTION</i> (1)	1.000																	
<i>PERFORMANCE</i> (2)	0.197**	1.000																
<i>EMPLOYEE CREATIVITY</i> (3)	0.029	0.009	1.000															
<i>CULTURE CONSISTENCY<sub>SUB</sub></i> (4)	0.287***	0.161**	0.149*	1.000														
<i>CULTURE INTENSITY<sub>SUB</sub></i> (5)	0.537***	0.172**	0.139*	0.150*	1.000													
<i>REMOTE FROM HQ</i> (6)	0.093	0.122*	0.048	0.019	0.064	1.000												
<i>OPERATOR TENURE SHORT</i> (7)	-0.025	-0.007	-0.026	-0.066	-0.011	0.473***	1.000											
<i>DIRECT SUPERVISION</i> (8)	0.357***	0.139*	0.121*	0.175**	0.256***	-0.016	-0.035	1.000										
<i>PERFORMANCE REWARDS</i> (9)	0.463***	0.042	0.011	0.245***	0.312***	0.060	-0.057	0.463***	1.000									
<i>COMPENSATION FAIRNESS</i> (10)	0.577***	0.084	0.018	0.195***	0.360***	0.140*	0.061	0.398***	0.459***	1.000								
<i>PROMOTION OPPORTUNITIES</i> (11)	0.436***	0.138*	0.010	0.152*	0.360***	0.190**	-0.003	0.360***	0.515***	0.400***	1.000							
<i>EMPLOYEE TENURE</i> (12)	-0.249***	0.004	0.083	0.082	-0.150*	-0.135*	-0.150*	-0.232***	-0.128*	-0.238***	-0.190**	1.000						
<i>MANAGER INCENTIVES</i> (13)	0.014	-0.091	0.111	-0.049	-0.033	0.119	0.245***	-0.046	0.052	0.071	-0.008	-0.166*	1.000					
<i>OPERATOR FRANCHISEE</i> (14)	-0.065	-0.069	0.028	0.046	0.010	0.122*	0.010	-0.016	0.037	-0.028	0.005	0.007	0.125	1.000				
<i>OPERATOR SIZE</i> (15)	-0.034	0.044	-0.008	0.045	-0.012	0.676***	0.290***	0.032	0.047	0.029	0.184**	-0.090	-0.065	0.088	1.000			
<i>MARKET DIVERGENCE</i> (16)	0.007	0.005	-0.061	0.014	0.014	0.112	0.279***	0.055	0.029	0.046	0.070	-0.173**	0.109	-0.117*	0.104	1.000		
<i>POPULATION DENSITY</i> (17)	-0.019	-0.133*	-0.058	0.026	-0.024	0.309***	0.321***	-0.050	0.077	-0.013	0.015	-0.041	0.103	-0.001	0.314***	0.455***	1.000	
<i>COMPETITION</i> (18)	-0.035	-0.062	-0.066	-0.007	-0.163**	0.156**	0.054	-0.103	0.024	-0.032	-0.043	0.085	0.141*	0.105	0.217***	0.347***	0.631***	1.000
<i>SUBUNIT AGE</i> (19)	-0.136*	0.119	-0.044	0.011	-0.106	-0.187**	-0.230***	-0.083	-0.088	-0.091	-0.100	0.125*	-0.175**	-0.051	0.036	-0.178**	-0.143*	-0.146*

See the Appendix A for descriptions of variables. \*, \*\*, and \*\*\* represent significance levels of 5%, 1%, and 0.1%, respectively.

**Table 4: Relation Between Subunit Culture Consistency and Subunit Outcomes  
(Tests of H1a, H1b, and H1c)**

Explanatory variable	Prediction	H1a DV = <i>EMPLOYEE SATISFACTION</i>	H1b DV = <i>PERFORMANCE</i>	H1c DV = <i>EMPLOYEE CREATIVITY</i>
<i>CULTURE CONSISTENCY<sub>SUB</sub></i>	+ / + / -	0.186 (2.79)***	0.057 (2.20)**	0.222 (3.03)***
<i>CULTURE INTENSITY<sub>SUB</sub></i>		0.603 (5.13)***	0.119 (2.18)**	0.306 (2.00)*
<i>COMPENSATION FAIRNESS</i>		0.190 (5.84)***	-0.029 (1.45)	0.009 (0.14)
<i>PROMOTION OPPORTUNITIES</i>		0.160 (2.51)**	0.034 (1.11)	-0.025 (0.29)
<i>EMPLOYEE TENURE</i>		-0.238 (2.18)**	-0.015 (0.34)	0.200 (1.25)
<i>MANAGER INCENTIVES</i>		-0.002 (0.85)	-0.001 (0.33)	0.014 (3.46)***
<i>OPERATOR FRANCHISEE</i>		-0.352 (3.11)***	-0.100 (0.85)	-0.007 (0.03)
<i>OPERATOR SIZE</i>		-0.000 (1.90)*	0.000 (1.41)	0.000 (0.33)
<i>MARKET DIVERGENCE</i>		-0.019 (0.72)	0.019 (0.94)	-0.012 (0.27)
<i>POPULATION DENSITY</i>		-0.000 (1.41)	-0.000 (2.26)**	-0.000 (0.93)
<i>COMPETITION</i>		0.004 (1.33)	0.001 (1.04)	0.002 (0.69)
<i>SUBUNIT AGE</i>		-0.018 (1.81)*	0.008 (1.36)	-0.003 (0.21)
Constant		-3.971 (5.24)***	3.139 (8.13)***	2.914 (2.55)**
$R^2$		0.52	0.16	0.09
$N$		231	214	231

See the Appendix A for descriptions of variables. Cells show coefficient estimates and  $t$ -statistics in parentheses. \*, \*\*, and \*\*\* represent significance levels of 10%, 5%, and 1%, respectively (one-tailed for directional predictions, two-tailed otherwise).

**Table 5: Moderating Effect of Distance from Headquarters on the Relation Between Subunit Culture Consistency and Subunit Outcomes (Tests of H2a)**

Explanatory variable	Prediction	DV =	DV =
		<i>EMPLOYEE SATISFACTION</i>	<i>PERFORMANCE</i>
<i>CULTURE CONSISTENCY<sub>SUB</sub></i>	+	0.185 (2.73)***	0.055 (2.13)**
<i>REMOTE FROM HQ</i>	?	0.016 (0.10)	0.227 (1.92)*
<i>REMOTE FROM HQ</i> × <i>CULTURE CONSISTENCY<sub>SUB</sub></i>	+	0.155 (0.80)	0.209 (1.60)*
<i>CULTURE INTENSITY<sub>SUB</sub></i>		0.603 (5.12)***	0.119 (2.20)**
<i>COMPENSATION FAIRNESS</i>		0.189 (5.71)***	-0.032 (1.58)
<i>PROMOTION OPPORTUNITIES</i>		0.160 (2.50)**	0.031 (1.03)
<i>EMPLOYEE TENURE</i>		-0.238 (2.14)**	0.003 (0.06)
<i>MANAGER INCENTIVES</i>		-0.002 (0.81)	-0.001 (0.53)
<i>OPERATOR FRANCHISEE</i>		-0.354 (3.13)***	-0.109 (0.95)
<i>OPERATOR SIZE</i>		-0.000 (1.45)	-0.000 (0.23)
<i>MARKET DIVERGENCE</i>		-0.018 (0.69)	0.022 (1.08)
<i>POPULATION DENSITY</i>		-0.000 (1.40)	-0.000 (2.57)**
<i>COMPETITION</i>		0.004 (1.31)	0.001 (1.18)
<i>SUBUNIT AGE</i>		-0.018 (1.62)	0.012 (1.83)*
Constant		-3.968 (5.22)***	3.160 (8.22)***
<i>R</i> <sup>2</sup>		0.52	0.18
<i>N</i>		231	214

See the Appendix A for descriptions of variables. Cells show coefficient estimates and *t*-statistics in parentheses. \*, \*\*, and \*\*\* represent significance levels of 10%, 5%, and 1%, respectively (one-tailed for directional predictions, two-tailed otherwise).

**Table 6: Moderating Effect of Operator Tenure on the Relation Between Subunit Culture Consistency and Subunit Outcomes (Tests of H2b)**

Explanatory variable	Prediction	DV =	DV =
		<i>EMPLOYEE SATISFACTION</i>	<i>PERFORMANCE</i>
<i>CULTURE CONSISTENCY<sub>SUB</sub></i>	+	0.133 (1.69)**	0.042 (1.41)*
<i>OPERATOR TENURE SHORT</i>	?	-0.066 (0.56)	0.091 (1.08)
<i>OPERATOR TENURE SHORT</i> × <i>CULTURE CONSISTENCY<sub>SUB</sub></i>	+	0.256 (2.24)**	0.072 (1.77)**
<i>CULTURE INTENSITY<sub>SUB</sub></i>		0.587 (4.98)***	0.118 (2.13)**
<i>COMPENSATION FAIRNESS</i>		0.193 (5.99)***	-0.030 (1.46)
<i>PROMOTION OPPORTUNITIES</i>		0.162 (2.56)**	0.039 (1.26)
<i>EMPLOYEE TENURE</i>		-0.195 (1.69)*	-0.003 (0.07)
<i>MANAGER INCENTIVES</i>		0.001 (0.34)	-0.000 (0.22)
<i>OPERATOR FRANCHISEE</i>		-0.401 (3.84)***	-0.094 (0.76)
<i>OPERATOR SIZE</i>		-0.000 (1.31)	0.000 (0.93)
<i>MARKET DIVERGENCE</i>		-0.016 (0.65)	0.016 (0.80)
<i>POPULATION DENSITY</i>		-0.000 (1.38)	-0.000 (2.77)***
<i>COMPETITION</i>		0.004 (1.12)	0.001 (1.33)
<i>SUBUNIT AGE</i>		-0.021 (1.87)*	0.011 (1.82)*
Constant		-3.882 (5.04)***	3.091 (7.96)***
$R^2$		0.53	0.17
$N$		225	208

See the Appendix A for descriptions of variables. Cells show coefficient estimates and  $t$ -statistics in parentheses. \*, \*\*, and \*\*\* represent significance levels of 10%, 5%, and 1%, respectively (one-tailed for directional predictions, two-tailed otherwise).

**Table 7: Attenuating Effect of Direct Supervision on the Relation Between Subunit Culture Consistency and Subunit Outcomes (Tests of H3a)**

Explanatory variable	Prediction	DV = <i>EMPLOYEE SATISFACTION</i>	DV = <i>PERFORMANCE</i>
<i>CULTURE CONSISTENCY<sub>SUB</sub></i>	+	0.999 (2.74)***	0.161 (0.65)
<i>DIRECT SUPERVISION</i>	?	0.137 (1.62)	0.089 (2.03)**
<i>DIRECT SUPERVISION</i> × <i>CULTURE CONSISTENCY<sub>SUB</sub></i>	-	-0.152 (2.36)**	-0.020 (0.43)
<i>CULTURE INTENSITY<sub>SUB</sub></i>		0.596 (5.39)***	0.108 (2.14)**
<i>COMPENSATION FAIRNESS</i>		0.169 (5.47)***	-0.043 (1.91)*
<i>PROMOTION OPPORTUNITIES</i>		0.137 (2.00)**	0.028 (0.91)
<i>EMPLOYEE TENURE</i>		-0.211 (2.02)**	-0.010 (0.21)
<i>MANAGER INCENTIVES</i>		-0.001 (0.53)	-0.000 (0.19)
<i>OPERATOR FRANCHISEE</i>		-0.378 (3.63)***	-0.105 (0.89)
<i>OPERATOR SIZE</i>		-0.000 (2.14)**	0.000 (1.24)
<i>MARKET DIVERGENCE</i>		-0.027 (1.13)	0.015 (0.81)
<i>POPULATION DENSITY</i>		-0.000 (1.02)	-0.000 (2.25)**
<i>COMPETITION</i>		0.005 (1.37)	0.001 (1.28)
<i>SUBUNIT AGE</i>		-0.019 (1.89)*	0.009 (1.41)
Constant		-4.552 (6.11)***	2.741 (5.36)***
$R^2$		0.53	0.17
$N$		231	214

See the Appendix A for descriptions of variables. Cells show coefficient estimates and  $t$ -statistics in parentheses. \*, \*\*, and \*\*\* represent significance levels of 10%, 5%, and 1%, respectively (one-tailed for directional predictions, two-tailed otherwise).

**Table 8: Attenuating Effect of Performance Rewards on the Relation Between Subunit Culture Consistency and Subunit Outcomes (Tests of H3b)**

Explanatory variable	Prediction	DV = <i>EMPLOYEE SATISFACTION</i>	DV = <i>PERFORMANCE</i>
<i>CULTURE CONSISTENCY<sub>SUB</sub></i>	+	0.740 (2.94)***	0.247 (2.33)**
<i>PERFORMANCE REWARDS</i>	?	0.159 (2.67)***	-0.020 (0.50)
<i>PERFORMANCE REWARDS</i> × <i>CULTURE CONSISTENCY<sub>SUB</sub></i>	-	-0.120 (2.52)***	-0.040 (1.76)**
<i>CULTURE INTENSITY<sub>SUB</sub></i>		0.577 (5.30)***	0.128 (2.37)**
<i>COMPENSATION FAIRNESS</i>		0.135 (4.57)***	-0.029 (1.14)
<i>PROMOTION OPPORTUNITIES</i>		0.122 (1.70)*	0.043 (1.49)
<i>EMPLOYEE TENURE</i>		-0.275 (2.76)***	-0.024 (0.53)
<i>MANAGER INCENTIVES</i>		-0.003 (1.10)	-0.001 (0.34)
<i>OPERATOR FRANCHISEE</i>		-0.407 (4.11)***	-0.112 (0.97)
<i>OPERATOR SIZE</i>		-0.000 (1.74)*	0.000 (1.22)
<i>MARKET DIVERGENCE</i>		-0.020 (0.84)	0.018 (0.92)
<i>POPULATION DENSITY</i>		-0.000 (1.76)*	-0.000 (2.21)**
<i>COMPETITION</i>		0.005 (1.42)	0.001 (1.42)
<i>SUBUNIT AGE</i>		-0.021 (2.42)**	0.008 (1.32)
Constant		-4.279 (5.43)***	3.167 (7.38)***
$R^2$		0.55	0.17
$N$		231	214

See the Appendix A for descriptions of variables. Cells show coefficient estimates and  $t$ -statistics in parentheses. \*, \*\*, and \*\*\* represent significance levels of 10%, 5%, and 1%, respectively (one-tailed for directional predictions, two-tailed otherwise).