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This empirical study evaluated the moderating effects of unit customer orientation (CO) climate and climate strength on the relationship between service workers’ level of CO and their performance of customer-oriented behaviors (COBs). In addition, the study examined whether aggregate COB performance influences unit profitability. Building on multisource, multilevel data, the study’s results suggest that the influence of employee CO on employee COB performance is positive when the unit’s CO climate is relatively high and that the constructs are unrelated when unit CO climate is relatively low. In addition, the data reveal that unit COB performance influences unit profitability by enhancing revenues without a concomitant increase in costs. The study’s results underscore the theoretical importance of considering cross-level influencers of employee-level relationships and suggest that managers should focus on creating a climate that is supportive of COBs if their units are to profit from the recruitment, hiring, and retention of customer-oriented employees.

Keywords: employee customer orientation, unit customer orientation climate, services marketing and management, multilevel modeling, synergistic person–situation interaction

In developed economies, service production and delivery constitute a significant component of economic activity and employment. For instance, nearly 80% of gross domestic output and 85% of all jobs in the United States fall within the services sector (The World Factbook, 2009; U.S. Bureau of Labor Statistics, 2009). In many industries within this sector (e.g., hospitality and tourism), service workers are central and inseparable from service delivery, so much so that workers represent—or even become—the services organization to consumers (Brown, Mowen, Donavan, & Licata, 2002; Hartline, Maxham, & McKee, 2000). For this reason, frontline worker performance is inextricably linked to the performance of service-based organizations (Heskett, Sasser, & Schlesinger, 1997).

Service workers differ in numerous ways that influence their on-the-job performance. Particularly relevant to organizational performance are those individual differences that determine the extent to which service workers perform behaviors focused on engendering customer satisfaction (Deshpande, Farley, & Webster, 1993; Kohli & Jaworski, 1990; Narver & Slater, 1990). Within this domain, marketing scholars have investigated the influence of customer orientation (CO), a state-like individual difference variable, on service workers’ performance (e.g., Brown et al., 2002; Donavan, Brown, & Mowen, 2004). Likewise, management psychology researchers have investigated the service worker performance implications of service orientation, a personality-based individual difference variable (e.g., Hogan, Hogan, & Busch, 1984; Liao & Chuang, 2004). To differing extents, both perspectives suggest that individual differences are important determinants of service workers’ on-the-job performance.

Regardless of the specific nature of the individual difference variables considered, person–situation interaction theories (e.g., Endler & Magnusson, 1976; Magnusson, 1999) have suggested that the effects of service workers’ individual differences on their performance are likely contingent on the nature of the work environment. Within service organizations, a particularly critical element of this environment is the unit’s climate for service (e.g., Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolly, 2005; Schneider, Salvaggio, & Subirats, 2002). Surprisingly, prior research has largely failed to empirically investigate the cross-level influence of unit climate for service on the relationship between individual difference variables and service worker performance. This is an important omission because service workers do not operate in a vacuum. Instead, they act within their particular situational contexts, perhaps altering their intended actions on the basis of unit-level policies. Our study begins to address this important knowl-
edge gap by empirically examining the moderating effects of unit CO climate (a dimension of climate for service) and the strength of this climate on the relationship between service worker CO and service workers’ performance of customer-oriented behaviors (COBs).

In addition, our study investigated the relationship between unit-level COB performance and unit profitability. Although prior research has (directly or indirectly) linked different measures of unit-level COB performance to customer satisfaction (e.g., Liao & Chuang, 2004) and unit sales (e.g., Schneider et al., 2005), there is no evidence to suggest that unit COB performance ultimately influences a unit’s profitability. This is an important oversight because COB performance has associated benefits (e.g., improved customer satisfaction) and costs (e.g., higher service worker wages). Whereas unit COB performance may result in greater revenues, these revenues may be counterbalanced by increased costs. Thus, examination of the unit COB–financial performance relationship is vital to understanding the profit implications of investing in the hiring, training, and retention of customer-oriented employees.

Our research addresses these gaps in the literature by developing and testing a multilevel conceptual model that links service employee CO to unit profitability. Our model posits that employee CO influences employee COB performance and that when aggregated to the unit level, COBs influence unit profitability. Importantly, our model also considers the cross-level effects of unit CO climate and climate strength. In particular, we build on complementary views in the literature to propose and test whether the relationship between employee CO and COBs is strengthened when unit CO climate is high (as opposed to low) and whether it is weakened when unit CO climate is strong (as opposed to weak).

The balance of this article is organized as follows. In the next section, we review the relevant literatures and develop our conceptual model and hypotheses. In the subsequent sections, we present the results of our multilevel analyses and conclude with a discussion of implications for theory and practice.

Conceptual Development

**Employee Customer Orientation Influences Employee Customer-Oriented Behavior Performance**

In their seminal work on CO, Saxe and Weitz (1982) introduced CO as the application of the marketing concept—that is, a focus on customer needs. The primary contributions of their research with salespeople were the conceptual development of individual CO as an important construct related to employee performance and the introduction of the selling orientation/customer orientation (SOCO) scale. More recently, researchers (Brown et al., 2002; Donavan, Brown, & Mowen, 2004) have examined the role of CO in service contexts, often among frontline service workers. Research in marketing has demonstrated that CO, conceptualized as a state-like psychological variable, is related to a number of important individual-level outcomes, including the performance of COBs (Stock & Hoyer, 2005), service worker overall performance (Brown et al., 2002), and service worker job attitudes such as commitment and satisfaction (Donavan et al., 2004).

Management psychology researchers investigate the performance effects of service orientation, a construct related to CO but with a broader focus and a distinct personality-based theoretical underpinning. For example, Hogan et al. (1984) conceptualized service orientation as a combination of the basic personality traits of likeability, adjustment, and sociability. Similarly, Liao and Chuang (2004) modeled four of the Big Five (Goldberg, 1992) personality traits (agreeableness, neuroticism, extraversion, and conscientiousness) as predictors of service worker performance. The results of such analyses (see also Hurley, 1998) typically have shown that one or more of these basic personality traits are predictive of service worker performance.

Thus, researchers in both disciplines argue that important individual differences within service workers influence the degree to which they behave in a manner likely to satisfy their customers’ needs. We follow the marketing tradition in defining *employee customer orientation* as a state-like individual difference variable reflecting a worker’s posture toward satisfying customers’ needs. Furthermore, we adopt the Brown et al. (2002) two-dimensional conceptualization of CO. In this conceptualization, the first facet reflects the degree to which the individual has the ability to focus on customer need satisfaction, and the second reflects the enjoyment received from such a focus. Consistent with prior research, we posit that CO leads to the performance of customer-oriented behaviors because customer-oriented service workers are motivated to act upon their desires to satisfy their customers. As such, the underlying causal mechanism is not unlike the influence of attitudes on behaviors (e.g., Ajzen & Fishbein, 1980). We refer to worker behaviors that are focused on engendering customer satisfaction as *customer-oriented behaviors*. Stock and Hoyer (2005) provided empirical evidence for the likely influence of CO on the performance of COBs. In their research, a salesperson’s customer-oriented attitude is positively related to the performance of COBs as assessed by customers. We anticipate a similar relationship in a services context.

Importantly, although customer-oriented service workers may be motivated to engage in COBs, they do not act independently of the situational environment within which they operate. That is, a service worker’s situation operates to encourage or constrain his or her behaviors (Cantor, 1994; Pervin, 1989). Building on this view and on a person–situation interaction framework, we next explore how elements of a situation can either strengthen or weaken the relationship between employee CO and COB performance. As previously indicated, our emphasis is on two key environmental variables that are likely to affect the CO–COB relationship: the unit’s CO climate and the strength of this climate within the unit.

**General Person–Situation Interaction Framework**

The notion that individuals’ behaviors are guided by both personal and situational considerations is not new (e.g., Lewin’s, 1951, famous \( B = f(P,E) \)), although the differences between researchers who have tended to adopt either a personal factors or a situational factors perspective as the dominant driver of human behavior have been many and heated over the decades (Mischel & Shoda, 1998). To develop predictions about the interactive roles of individual (CO) and situational variables (unit CO climate; strength of unit CO climate) in producing COBs in service contexts, we adopted the interactionist framework presented by Endler and Magnusson (1976; see also Magnusson, 1990, 1999). The model of these theorists rests on the following features:
(1) Actual behavior is a function of a continuous process or multidirectional interaction (feedback) between the individual and the situation that he or she encounters. (2) The individual is an intentional active agent in this interaction process. (3) On the person side of the interaction, cognitive factors are the essential determinants of behavior, although emotional factors do play a role. (4) On the situation side, the psychological meaning of the situation for the individual is the important determining factor. (Endler & Magnusson, 1976, p. 968)

Several aspects of this interactionist framework make it relevant to the current application. The model posits roles for person variables that interact with situation variables in the production of behavior. As noted, we argue that individual CO is a psychological aspect of the individual. In addition, the model regards individuals as active agents capable of choosing, responding to, and even changing their situations. Service workers may select firms from which to seek employment, perform behaviors that are jointly influenced by person and situation, and attempt to influence the situation (or leave for another job).

We note that Magnusson’s (1990, 1999) interactionist model, especially in its later incarnations, emphasizes both the holistic nature of persons operating in situations and the developmental aspects of organisms learning to interact with situations over time. By focusing on a specific person construct and a specific aspect of the person’s situation along with the resulting behaviors over a specific time frame, we recognize that we are working within only a small slice of the interactionist system and that many important insights about our service workers, their environments, and their behaviors (and, importantly, the holistic nature of the interactions therein over time) will be missed. Our research, however, begins to develop understanding of how service workers interact with their environments (and vice versa) and the behaviors that result; later work may expand the scope of this research to more fully incorporate this interactionist model.

Moderating Influences of Unit Customer Orientation Climate and Climate Strength

Unit CO climate. Service organizations differ—sometimes as a matter of policy and sometimes through differences in policy implementation—in the degree to which they focus on customer need satisfaction. We define unit CO climate as employees’ shared perceptions of the unit’s focus on customer need satisfaction as implemented by managers. As such, unit CO climate is a dimension of the broader climate for service construct, defined as “employees’ shared perceptions of the policies, practices, and procedures that are rewarded, supported, and expected concerning customer service” (Schneider et al., 2002, p. 222; see also Liao & Chuang, 2004; Schneider, Gunnnarson, & Niles-Jolly, 1994; and Schneider, White, & Paul, 1998).

Person–situation theory suggests an important moderating role for unit CO climate. Higher degrees of unit CO climate provide customer-oriented employees with the opportunity to act on their positive posture toward satisfying customer needs, thus resulting in the performance of COBs at greater frequency. That is, when the situation signals that COBs are encouraged (i.e., unit CO climate is high), individual levels of CO should have a stronger effect on the performance of COBs because the environment does not constrain the performance of such behaviors. This proposition is consistent with Pervin’s (1983, 1989) goals model, in which individuals are viewed as driven to accomplish various goals and the environment is seen as offering reinforcement, opportunities, and/or barriers to the accomplishment of those goals.

In contrast, when the situation signals that COBs are discouraged (unit CO climate is low), individual levels of CO should have less effect on the performance of COBs because the environment constrains the performance of such behaviors. These ideas lead us to predict a positive cross-level interaction between individual CO and unit CO climate. This form of person–situation interaction has been termed synergistic, in that the environment reinforces and magnifies the effect of a focal individual variable (see Schmitt, Eid, & Maes, 2003, and Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004, for recent examples of synergistic person–situation interactions). Thus, we proposed the following:

Hypothesis 1: The positive influence of employee CO on the performance frequency of COBs will be stronger when unit CO climate is higher than when unit CO climate is lower.

Four additional issues related to Hypothesis 1 are worth highlighting. First, unit CO climate is conceptualized as a situational property of the units within which service workers are embedded. We assessed unit CO climate from the perspective of individual service workers because there is no objective basis on which to gauge how managers implement policy with respect to customers. From a multilevel perspective, we therefore account for the emergence of a higher level construct from a lower level one. To do so, we rely on the commonly used (e.g., Schneider et al., 2002) direct consensus composition model (Chan, 1998), which “uses within-group consensus of the lower level units as the functional relationship to specify how the construct conceptualized and operationalized at the lower level is functionally isomorphic to another form of the construct at the higher level” (p. 237). We argue that perceived unit CO climate can be operationalized at the individual level and that the individual measures can be aggregated to form a measure of the unit-level construct. This approach is justified theoretically because all of the workers in a particular unit are responding to explicit or implicit workplace policies implemented by unit managers as well as to the specific behaviors relevant to customer need satisfaction performed by those managers. Such policies and accompanying actions reside at the unit level and are on display, although likely to varying degrees, to all of the workers in the unit. Individual-level measurement and aggregation to the unit level are also supported by precedent in both the marketing (Kohli, Jaworski, & Kumar, 1993; Narver & Slater, 1990) and management psychology (Schneider et al., 2005) literatures. We provide statistical evidence in support of the proposed direct consensus composition model of unit CO climate in the Results section.

Second, although a few existing empirical studies include both unit-level and employee CO-type variables in their analyses (Hartline et al., 2000; Jones, Busch, & Dacin, 2003; Mengiç, 1996; Piercy, Harris, & Lane, 2002; Siguaw, Brown, & Widing, 1994), we were able to find only one study that considers the potential moderating role of the unit-level environment on the relationship between individual difference variables and employee service performance (Liao & Chuang,
Unfortunately, these researchers were unable to test a majority of their proposed cross-level interactions because of insufficient slope variance across units in the sample. They were able to test only those cross-level interactions related to the effects of neuroticism on service performance and did not identify a significant interaction.

Third, organizational researchers extensively study the influence of the workplace environment on performance. Of particular relevance to our study is the work of Schneider et al. (2005), who investigated the influence of service leadership in producing unit-level service climate and, ultimately, customer satisfaction and unit sales in a retail environment. Consistent with Schneider’s earlier work on service climate (Schneider et al., 1998, 2002), our study indirectly incorporates the important role of unit-level leadership through our measure of unit CO climate, which focuses on employee shared perceptions of the degree to which unit managers attend to and implement plans emphasizing customer need satisfaction.

Finally, empirical findings from the employee CO literature offer several hints that a synergistic person–situation interaction may be appropriate. In their tests of the nomological validity of the SOC0 measure, Saxe and Weitz (1982) found a positive correlation between CO and individual-level sales performance only when two “situational factors (quality of salesperson–customer relations and ability to help)” (p. 351) are both high. The “ability to help” factor especially seemed to reflect elements in the workplace environment, with items such as “I can count on company support in reasonable efforts to look out for my customers’ interests” (p. 351) loading highly on this dimension (Table 3 of Saxe & Weitz, 1982, p. 349). In addition, Donavan et al. (2004) found that the influence of CO on job satisfaction and commitment is stronger when service workers spend more time in contact with customers.

Climate strength. Our first hypothesis posits that the unit CO climate moderates the relationship between employee CO and COB performance. In contrast, our second hypothesis considers the moderating role of the degree of variation or dispersion across service workers’ perceptions of their environments with respect to unit CO climate. The theory of situation strength (Mischel, 1977) recognizes that the influence of the psychological situation can range from weak to strong.

Psychological “situations” . . . are powerful to the degree that they lead everyone to construe the particular events the same way, induce uniform expectancies regarding the most appropriate response pattern, provide adequate incentives for the performance of that response pattern, and require skills that everyone has to the same extent . . . .

Conversely, situations are weak to the degree that they are not uniformly encoded, do not generate uniform expectancies concerning the desired behavior, do not offer sufficient incentives for its performance, or fail to provide the learning conditions required for successful genesis of the behavior. (p. 347)

Strong situations limit the influence of person variables. For example, Barrick and Mount (1993) found that the conscientiousness, extraversion, and agreeableness (inverse relationship) of managers are more strongly correlated with job performance when job autonomy (a situational variable) is relatively high than when it is lower. These authors reasoned that in low-autonomy jobs, the strength of the situational environment constrains the potential influence of individual difference variables. Following a similar logic, Liao and Chuang (2004) argued that in strong situations the environment dominates person variables by exerting pressure to induce conformity, in effect limiting the potential behavioral response of the individual and weakening the influence of individual-based variables. These authors further theorized that in firms with a clear emphasis on implementing a strong service climate, the strong situation constrains the influence of service worker individual difference variables on service performance. As noted earlier, however, Liao and Chuang (2004) are unable to test most aspects of their predictions because of insufficient slope variance across units in their sample.

Our treatment of climate strength, which we define as the degree of dispersion in employees’ shared perceptions of the unit’s focus on customer need satisfaction as implemented by managers (dispersion in unit CO climate), closely parallels that of Schneider et al. (2002) in their development of service climate strength. It is important to note that the level of unit CO climate (high or low) is not captured by climate strength, as the construct focuses only on the degree of dispersion in employee perceptions. As such, we assume that in strong situations, the unit’s policies toward customer need satisfaction are unambiguously portrayed through manager attitudes and actions. As a result, there is less variation among individual workers about the intended degree of unit CO, leading to an attenuation of the potential influence of individual difference variables in effecting performance. In weak situations (lower climate strength), policies are less clear, resulting in greater variation in employee perceptions and thus greater potential influence of individual difference variables on performance.

On the basis of Mischel’s (1977) situation strength theory, we propose that when climate strength is high (less dispersion among employee perceptions of unit CO climate), the influence of individual CO on the performance of COBs will be less than when climate strength is lower (greater variation in employee perceptions of unit CO climate). In short, stronger situations limit the influence of person variables, such as individual CO. Thus, we proposed the following:

Hypothesis 2: The positive influence of employee CO on the performance frequency of COBs will be stronger when unit CO climate is weak than when unit CO climate is strong.

Finally, we used a dispersion model (Chan, 1998) to specify the relationship between our individual-level construct (and measure) of unit CO climate and the climate strength construct. Consistent with this view and the work of Schneider et al. (2002), we used the standard deviation in employees’ perception of their unit’s level of CO climate as our measure of climate strength.

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1 Siguaw et al. (1994) and Mengüç (1996) calculated the absolute difference between individual- and unit-level CO and included this difference score as a predictor of salesperson job attitudes in their models. Although this approach might partially represent the interaction between the two variables, the results are significant only in the Mengüç (1996) study, the use of the absolute difference score precludes clear understanding of the nature of the moderation effect, and the use of difference scores in research is less than ideal on statistical and theoretical grounds (Peter, Churchill, & Brown, 1993).
The Influence of Unit Customer-Oriented Behaviors on Unit Financial Performance

The literature on CO traditionally views and models COB performance as an employee-level outcome (e.g., Stock & Hoyer, 2005). This approach to modeling COB performance is not surprising given that it is the individual employee who engages in such behaviors when serving customers. However, as detailed in the paragraphs that follow, we propose that COB performance also has unit-level properties that may help explain differences in inter-unit performance.

In one of the earliest works on the group-level properties of individual worker behaviors, George (1990) proposed and found that a certain level of commonality exists in the performance of prosocial behaviors by employees within workgroups. Furthermore, she argued that this commonality is theoretically predicted by both attraction–selection–attrition processes (ASA; Schneider, 1975, 1987) and organizational socialization processes. Broadly speaking, the ASA model suggests that workgroups will attract, select, and retain individuals with similar personalities. Thus, George (1990) proposed that this personality-based commonality results in workgroups that exhibit relatively homogenous affective reactions and, as a consequence, relatively homogenous behaviors.

Socialization theories complement the preceding ASA-based perspective on the group-level attributes of individual worker performance. Socialization is the process through which individual workers learn, among other things, the behaviors expected of them within an organization and as a performer of a particular organizational role (Louis, 1980). The theoretical case for socialization-driven uniformity within group worker behaviors is best made by George (1990), who proposed the following:

Peers are often key agents of socialization; they possess reward power, are very available, are similar to the newcomer, and may be perceived as experts (Fisher, 1986; Rakestraw & Weiss, 1981; Weiss & Nowicki, 1981). Learning about the norms and culture of one’s group is a key aspect of the socialization process because these may be different from the culture of the wider organization (Louis, 1983). Hence, socialization is basically an influence process whereby newcomers learn what is appropriate in a setting; one of the outcomes of socialization is some degree of consistency within that setting. Thus, one would expect consistency in affect and behaviors, such as prosocial behavior and absenteeism due to group socialization processes. In line with this reasoning, it has been suggested that group norms influence the incidence of absenteeism (Johns & Nicholson, 1982) and prosocial behavior (Brief & Motowidlo, 1986). It is likely that during the socialization process, group members learn an overall positive or negative orientation to the work situation that will be manifested in characteristic affect at work and the display of positive or negative behaviors. (p. 108)

Consistent with George’s (1990) arguments, a meta-analysis of the socialization literature found that organizational socialization influences workers’ performance, in part, by improving their level of role clarity, which involves workers’ understanding of the tasks to be performed, task priorities, and appropriate time allocation across tasks (Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007). Thus, within a group of workers who perform essentially the same role, improved role clarity perceptions should lead to greater uniformity in responses to different work situations and, consequently, in behaviors across workers in the group.

Liao and Chuang (2004) also proposed and found empirical support for the proposition that worker behaviors have aggregate-level properties. Much like George (1990), Liao and Chuang have based their arguments on the ASA framework and socialization theories. Building on the collective efforts of these researchers, we propose that service units will tend to attract, select, and retain individuals who are similar to each other and thus tend to exhibit similar behaviors. Moreover, we propose that service workers embedded within units work together as part of a team. As such, they interact frequently, learn from each other, develop joint codes for acceptable behavior, and learn to work together to achieve shared on-the-job goals. The result of this iterative team socialization process is a common core of behaviors that are deemed acceptable and thus commonly practiced by members of the unit. Thus, we view unit COBs as emerging from individual employee behaviors (Bliese, 2000) and formally define the construct as a unit’s collective performance of behaviors aimed at engendering customer satisfaction. In the remainder of this section, we offer our rationale for why unit COB performance is likely to influence unit profitability.

The Rust, Zahori, and Keiningham (1995) “return on quality” (ROQ) model offers a framework that is useful for explaining the expected relationship between unit COB performance and unit profitability. Broadly speaking, the model posits that service quality investments (e.g., COBs) lead to enhanced customer satisfaction, customer retention, and the attraction of new customers via word-of-mouth. Customer retention and the addition of new customers, in turn, lead to increased revenues and market share. Finally, enhanced revenues and market share, combined with possible cost reductions associated with service quality improvements (e.g., reduced complaint management costs), lead to greater profits for the firm.

Prior research empirically supports many of the individual linkages proposed in the ROQ model. For example, different measures of unit COB performance have been positively associated with customer satisfaction (Liao & Chuang, 2004) and unit sales (Schneider et al., 2005). In addition, an extensive literature documents the positive revenue implications of customer satisfaction. Specifically, customer satisfaction is associated with customer retention (LaBarbera & Mazursky, 1983; Mittal & Kamakura, 2001), positive word-of-mouth behaviors (Brown, Barry, Dacin, & Gunst, 2005), and greater share of wallet (Cooil, Keiningham, Aksoy, & Hsu, 2007). (See Luo & Homburg, 2007, for a detailed summary of the performance implications of customer satisfaction.) Collectively, this evidence is consistent with the ROQ model and strongly indicates that COB performance affects customer satisfaction, which ultimately enhances firms’ revenue streams through several different mechanisms. However, there are also important costs associated with COB performance that might counterbalance its positive revenue effects. Although empirical work investigating the cost implications of COB performance is limited, several researchers directly or indirectly have argued that higher levels of unit COB performance may lead to lowered unit productivity and increased costs (Anderson, Fornell, & Rust, 1997). In their meta-analytic work on the effects of CO, Franke and Park (2006) posited that among frontline employees, customer-oriented selling behaviors may result in decreased productivity because of the expenditure of a disproportionate amount of time understanding customer problems and identi-
fying potential solutions (as opposed to engaging in actual selling behaviors), increased costs from the added effort needed to realize customer satisfaction (see also Beatty, Mayer, Coleman, Reynolds, & Lee, 1996), and lost sales stemming from less than aggressive sales approaches. In addition, units higher on COB performance are more likely to experience higher recovery costs stemming from customer overcompensation following service failures. (See Maxham & Netemeyer, 2003, for a related discussion on customer-directed extra-role behaviors.) Finally, COB performance requires that service workers develop a personalized approach toward individual customers, which also involves added costs (Surprenant & Solomon, 1987).

Thus, critically important to our study is an understanding of when revenues stemming from unit COB performance are likely to exceed associated costs and thus lead to improved unit profitability. Although there is some empirical evidence linking unit-level satisfaction to profits (Anderson, Fornell, & Lehmann, 1994; Rust, Moorman, & Dickson, 2002), theoretical explanations for this effect are limited and usually focus on the enhanced revenue implications of activities aimed at achieving customer satisfaction. An exception is the work of Anderson et al. (1997), which offers a theoretical framework suggesting that the profit implications of activities aimed at generating customer satisfaction (in our case, COB performance) are context dependent and driven by the extent to which the activities require customization at the expense of standardization. Specifically, Anderson et al. argued that if efforts aimed at producing customer satisfaction require that the offer be fully customized and preclude standardization of offer elements, the result will be decreased profitability because fixed costs will rise at an increasing rate (the loss in efficiency will outweigh potential gains in revenue from increased satisfaction). In contrast, if efforts aimed at achieving customer satisfaction allow for some level of standardization, efficiency will likely not be diminished (could be improved) and consequently should result in improved profitability. Whereas COB performance requires that service workers customize—a certain extent—their approach toward individual customers, it does not preclude the standardization of other elements of the offer (e.g., the good itself). This is particularly true in the context of our study, in which the product involves a mixture of goods and services. Thus, in Hypothesis 3, we propose that unit COB performance will lead to improved unit profitability through an increase in revenues that exceeds accompanying increases in costs:

Hypothesis 3: Unit COBs exert a positive influence on unit profitability.

Model Summary

Figure 1 depicts a multilevel representation of the proposed conceptual model. The figure shows that the CO—COB relationship is moderated by unit CO climate and climate strength (while controlling for the effects of tenure). Furthermore, the figure also demonstrates how service worker COBs are aggregated to predict unit profitability (while controlling for market demographics).

Method

To test our hypotheses, we collected information from four distinct sources: service workers at a chain of full-service restaur-

ants, the workers' managers (the primary manager at each unit), financial records for each restaurant, and census data for the cities in which the restaurants were located. Sampling workers in the hospitality industry is consistent with prior research on employee CO (Brown et al., 2002) and provides a context within which all study constructs are meaningful and relevant. Workers at 38 (out of a total of 46) company-owned locations of a restaurant chain headquartered in the southwestern United States completed paper-and-pencil surveys, which included measures of the constructs of interest. All employees at each location were encouraged to participate in the study; the company routinely surveys its employees, so completing a survey was not a new event. We distributed 1,443 surveys; after removing cases with excessive missing information on study variables, we were able to use responses from 671 employees, for a response rate of 47%. All 38 units were represented in the final sample, with an average of 17.7 employees (SD = 6.7) completing the survey per unit. At each unit, the manager completed a separate confidential performance evaluation survey for each employee. We matched employee responses and manager evaluations by name. Corporate headquarters provided financial performance records for each restaurant. Finally, we used available census data for measures of population and median incomes for the cities in which the restaurants operated.

Measures and Data Collection Procedures

Service worker data collection. Each unit held an employee meeting in which the manager explained the nature and purpose of the survey and then showed a video in which one of the authors provided instructions and assured employees that their specific responses would be held in confidence and could not be traced back to them by unit managers or corporate executives. In addition, they were informed that participation was voluntary, with no penalty if they chose not to participate. Next, the unit manager appointed an employee to administer the questionnaire to those who chose to participate; the manager then left the room. That employee opened a sealed package containing the employee surveys and distributed them. Employees completed the questionnaires and sealed them inside an envelope. The designated employee placed the individually sealed envelopes inside a larger, pre-addressed, postage-paid envelope and mailed the surveys to one of the authors. In this way, neither unit-level management nor

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2 We included tenure as a control variable at the individual level for two reasons. First, prior research has shown that job tenure is, under certain circumstances, negatively related to CO among frontline employees (O'Hara, Boles, & Johnston, 1991; Widmier, 2002). Hence, we wanted to account for the potential influence of this variable on the performance frequency of COBs (potential decline in COBs with an increase in tenure). Second, managers’ knowledge of employees’ behaviors is likely to increase over time (as job tenure increases) and thus may be reflected in their COB behavior evaluations. (A manager unfamiliar with a relatively new hire’s behavior might provide a very favorable or a very unfavorable assessment of their COB performance.) Hence, although we cannot make a prediction about job tenure’s effect on COB performance, we posit that it is important to control for its potential effects on COB performance.

3 One employee survey could not be matched to a manager’s evaluation because the employee was new and the manager was not yet in a position to evaluate performance. In addition, we received a number of employee surveys that could not be matched because of the (apparent) use of false names.
corporate management was involved in any phase of the actual process of collecting the survey data or mailing the completed surveys.

To measure employee CO, we employed the measure used by Brown et al. (2002). This measure includes two dimensions, a needs facet (e.g., “I try to help customers achieve their goals”) and an enjoyment facet (e.g., “I find it easy to smile at each of my customers”), each with six items assessed on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The Needs and Enjoyment dimensions each exhibited acceptable levels of internal consistency reliability (α = .80 and α = .83, respectively). All measurement items are included in the Appendix.

We asked employees to assess unit CO climate using 10 items adapted from the Narver and Slater (1990) firm-level CO scale. In order to obtain a valid measure of the construct, it was important that the service workers gauge the degree of CO of their particular units rather than the restaurant chain as a whole. We accomplished this by having the employees use their local managers as a point of reference when they responded to the items. This is consistent with Mischel’s (2004) assertion that other people serve as part of a person’s situation or environment and with Noble and Mokwa’s (1999) research on the role of managers in implementing market-strategy. For example, we asked participants to respond to the following Likert-type statement: “Our managers . . . have focused the business objectives around customer satisfaction.” Coefficient alpha for the measure used in analyses was equal to .92. In addition, consistent with a dispersion model (Chan, 1998), we used the standard deviation in employees’ perception of their units’ CO climate as our measure of climate strength.

We obtained a measure of employees’ tenure with the organization using an open-ended question that asked how long (years and months) they had been employed by the restaurant chain. Responses were converted to a monthly scale for data analysis purposes.

Unit manager data collection. The manager at each unit completed confidential evaluation forms for all employees; sealed the evaluations in a pre-addressed, postage-paid envelope; and returned it to one of the authors. We measured employee customer-oriented behaviors by asking the unit manager to indicate how frequently employees performed COBs across seven items (e.g., “Gives courteous service to customers”) on a 5-point scale ranging from 1 (never) to 5 (always). The coefficient alpha for the 7-item scale was .93.

It is important to note that whereas the CO and COB scales are relatively similar in terms of their content (both have items that reference customer need satisfaction), they differ in conceptual content being assessed as well as in how the scales are anchored. The CO scale asks service workers for self-reflective assessments of an internal psychological state using strongly disagree and strongly agree anchors. The COB scale, in contrast, asks supervisors to report on the frequency with which the workers perform various behaviors that should lead to customer satisfaction using behavioral frequency (never and always) anchors. These differences in conceptual content and scale endpoints are important because they relate directly to the core arguments advanced in this study: Employees may be customer-oriented (as indicated by the agreement scale), but they are only likely to engage in COBs (as indicated by the frequency scale) when the situation encourages it. That is, the scale endpoints (and thus the measures) reflect the fact that the CO → COB relationship is contingent on situational influences even within narrow content domains.

Objective unit measures. Data on the unit’s financial performance and size were furnished by corporate headquarters. The unit profit (total unit revenues minus total unit costs) measure represents cumulative profits for the 12-month period immediately following data collection from employees and managers. Number of seats in the restaurant was used as a proxy for unit size.

Market characteristics. The 2000 U.S. Census served as a source for data on two important unit-level control variables, the population and the median household income of the cities in which the units were located.
Results

Measurement Model

Given the multilevel nature of our data, we evaluated the constructs’ measurement properties using two different procedures. First, we specified a conventional (one-level) confirmatory factor analysis (CFA), using Mplus 5.1, that included the study’s three multi-item constructs: employee CO, unit CO climate, and COBs. The one-level CFA was utilized to establish a measurement adequacy baseline and estimate traditional fit statistics (composite reliability, average variance extracted, etc.). Then we estimated a two-level measurement model using Mplus 5.1 for each of the constructs separately (see Hox, 2002; Muthén, 1994, for a review). 5 Although multilevel measurement model validation efforts are not frequently reported in the literature, multilevel CFAs are useful in that they provide an indication of the sources of variance for each item in a measure and can be utilized to identify problematic items at the individual or group level. In addition, multilevel CFAs can be used to determine whether constructs conform to their theoretically implied levels of measurement while controlling for measurement errors at both the individual and group levels.

One-level confirmatory factor analysis. Despite a relatively good fit of the initial model, an evaluation of the CFA residuals and modification indexes reveals that several of the items for the unit CO climate construct have more variance in common than allowed for by the specified model (see Rigdon, 1998). We sequentially removed offending items from the measure until the problem was corrected. Removal of the offending items did not have an impact on the construct’s face validity (see Appendix). The resulting measurement model fits the data well, \( \chi^2(87) = 274.50, p < .05 \); comparative fit index (CFI) = .97; standardized root mean squares residual (SRMR) = .025; Hu & Bentler, 1999). The good fit of the measurement model is indicative of measures that are unidimensional in nature (Anderson & Gerbing, 1988).

Moreover, as is summarized in Table 1, the resulting measures appear to be both reliable and valid. More specifically, the relatively high composite reliabilities (ranging from .84 to .93) and average variances extracted (ranging from .65 to .72) provide evidence in support of the measures’ reliability (Fornell & Larcker, 1981; Gerbing & Anderson, 1988). Furthermore, confirmation of the measures’ factor structure is provided by the fact that all factor loadings are significant and that the scales exhibit high levels of internal consistency (Anderson & Gerbing, 1988; Fornell & Larcker, 1981). Evidence of the measures’ discriminant validity is provided by a significant \( p < .05 \) chi-square difference test in which a measurement model with construct correlations constrained to unity is compared with a measurement model in which construct correlations are specified as free and allowed to be less than 1 (Anderson & Gerbing, 1988). In addition, the average variance extracted for each of the constructs is greater than its shared variance with any of the other constructs in the measurement model. (The largest shared variance for any construct in the model is 13%; Fornell & Larcker, 1981.) Individual- and unit-level construct statistics and correlations are presented in Table 1.

Two-level confirmatory factor analysis. As detailed in the opening paragraph of this Measurement Model section, one multilevel CFA was specified and estimated for each of the three multi-item constructs. Figure 2 provides a graphical representation of the multilevel CFA estimated for the employee COBs construct.

As the figure illustrates, the two-level CFA identifies four sources of variance for each observed variable: the within-group variability common to the items measured by the same construct (represented by the loading of the item on the employee-level construct), the measure’s unique variance at the within level (i.e., its employee-level residual), the between-group variability common to the items measured by the same construct (represented by the loading of the item on the unit-level construct), and the measure’s unique variance at the between level (i.e., its unit-level residual). Hence, the multilevel CFA makes it possible to estimate construct variances at the individual and group levels after accounting for measurement error at both levels and provides evidence of the individual-level properties and unit-level properties (or lack thereof) of each of the multi-item constructs employed in the model.

The fit indexes for the three multilevel CFAs indicate that the models fit the data well at both the employee and unit levels: employee CO, \( \chi^2(4) = 2.03, p > .05 \); CFI = .99; root mean square error of approximation (RMSEA) = 0.00; standardized root mean square residual (SRMR) = 0.001; between-level SRMR = 0.034; unit CO climate: \( \chi^2(18) = 70.01, p < .05 \); CFI = .97; RMSEA = 0.07; SRMR = 0.022; between-level SRMR = 0.025; employee COBs, \( \chi^2(18) = 70.01, p < .05 \); CFI = .97; RMSEA = 0.07; SRMR = 0.022; between-level SRMR = 0.025; Hu & Bentler, 1999). Factor loadings for all items in the multilevel CFAs were significant \( p < .05 \) and comparable in magnitude at both levels (see Table 2). In addition, the multilevel CFAs offer important insights regarding the compositional nature of each of the constructs. More precisely, the CFAs revealed that after correcting for measurement error, variance in the employee CO construct is primarily due to individual employee differences and variance in the unit CO climate and employee COBs measures are due to both individual- and unit-level factors. More specifically, the error-corrected intraclass correlation coefficient, ICC(1), values for the constructs were as follows: employee CO (Needs dimension) = 3.8%; employee CO (Enjoys dimension) = 4.2%; unit CO climate = 11.4%; employee COBs = 34.9%. Overall, the multilevel CFA suggests that the measures behave as expected at the individual and aggregate levels.

Aggregation of Unit-Level Constructs

Several indexes were computed to determine whether creating aggregate scores of unit CO climate and unit COBs from individual-level data was empirically justifiable. First, we assessed interrater agreement by computing \( r_{ag} \) scores for a rectangular distribution (James, Demaree, & Wolf, 1984) and obtained an average value of .91 \( (SD = .04) \) for unit CO climate and of .94 \( (SD = .04) \) for unit COBs. These values exceed conventional standards \( r_{ag} > .60 \) and are supportive of aggregation (James, 1982). In addition, we assessed between-group variance and group

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4 Because the items used to measure the multidimensional employee CO construct were previously validated in an identical context (Brown et al., 2002), we used a single aggregate item to represent each of the construct’s two dimensions in the CFA.

5 To ensure parameter stability, multilevel structural equation models should not exceed the number of between-level units in the sample. Unfortunately, even the simplest of multilevel measurement models is parameter intensive. For example, 30 parameters need to be estimated in a six-item, single-construct multilevel CFA.
mean reliability by estimating the ICC(1) and ICC(2) coefficients. The values for unit CO climate, ICC(1) = .09, ICC(2) = .61, F(37, 633) = 2.56, p < .05, and unit COBs, ICC(1) = .26, ICC(2) = .84, F(37, 633) = 6.17, p < .05, are comparable to or exceed median values reported in the literature (see Glick, 1985; Schneider, White, & Paul, 1998) and are generally supportive of aggregation. However, it is important to note that the ICC(2) value for unit CO climate is moderately low; thus, it might be difficult to identify relationships with other study variables using the aggregate score (Bliese, 2000). The relatively low ICC(2) value for unit CO climate does not preclude aggregation because aggregation is theoretically supported and the measure displays significant between-groups variance and relatively high inter-rater agreement (see, e.g., Chen & Bliese, 2002).

**Hypothesis Tests**

In Hypotheses 1 and 2 we proposed cross-level interactions between employee CO and unit-level climate variables in prediction of the performance frequency of employee COBs. When testing for cross-level interactions, an unbiased estimate of the within-group slope is needed in order to control for the possibility of a between-groups interaction (unit CO climate interacting with mean employee CO; Hoffman & Gavin, 1998). Consistent with prior efforts in the literature, an unbiased estimate of the within-group slope was obtained by group-mean centering the employee CO construct and re-introducing the construct’s group mean as a control variable in the Level 2 intercepts model (Hoffman & Gavin, 1998).

To investigate the cross-level interaction, we specified three sequential models (A, B, and C) and tested these in Mplus 5.1 (see Table 3). Model A was specified as a random slope and intercept model in which employee COBs were regressed on the individual-level predictors (to the exclusion of unit-level predictors). The intent of Model A was to establish whether the CO→COB intercept and slope varied significantly across groups. Model B extended Model A by introducing unit-level main effect intercept predictors, including unit CO climate, climate strength, and mean employee CO (the latter for control purposes). The objective of Model B was to test for the presence of unit-level main effects and to assess the extent to which the intercept and slope variance parameters were influenced by the unit-level variables. Finally, Model C extended Model B by specifying the cross-level interaction terms (Employee CO × Unit CO Climate; Employee CO × Climate Strength). The intent of this final model was to test for the presence of the cross-level interactions.

As is summarized in Table 3, results for Model A suggest that the CO→COB intercept (τ_{00} = .12, p < .05) and slope (τ_{11} = .02, p < .05) varied significantly across units. Moreover, the results indicate that the CO→COB main effect relationship was not statistically significant (γ_{10} = .07, p > .05). Results for Model B revealed that unit CO climate (γ_{02} = .17, p > .05), climate strength (γ_{03} = .05, p > .05) and mean employee CO (γ_{01} = .00, p > .05) were not significant predictors of the COB intercept term. In addition, the results reveal that inclusion of these unit-level predictors had no measurable effect on the intercept and slope variance terms or on the significance of the CO→COB relationship.

Having established the presence of CO→COB slope variance in the preceding models, we specified Model C to formally test for the presence of cross-level interactions as predicted in Hypotheses 1 and 2. As expected (Hypothesis 1), the results suggest that employee CO interacted with unit CO climate in prediction of employee COBs (γ_{11} = .34, p < .05). Contrary to expectations (Hypothesis 2), climate strength was not found to be a significant moderator of the CO→COB relationship (γ_{12} = −.38, p > .05).

We performed a graphical analysis to further evaluate the significant interaction between employee CO and unit CO climate in prediction of employee COBs (Hypothesis 1). The analysis revealed that when unit CO climate is low, employee CO is unrelated to the performance of COBs; when unit CO climate is high, service worker CO is associated with increased performance of COBs. This result is shown graphically in Figure 3.

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**Table 1**

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Average variance extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Employee customer orientation</td>
<td>4.20</td>
<td>0.57</td>
<td>.72% (.84) 0.15 0.45* −0.11 −0.03 0.32* 0.04 −0.29 0.12</td>
</tr>
<tr>
<td>2. Customer-oriented behaviors</td>
<td>3.87</td>
<td>0.77</td>
<td>0.66% .09* (.93) 0.11 0.18 −0.07 0.29 −0.12 −0.21 0.16</td>
</tr>
<tr>
<td>3. Unit customer orientation climate</td>
<td>4.06</td>
<td>0.74</td>
<td>0.65% 0.32* 0.10* (.92) −0.25 −0.40* 0.09 −0.04 −0.07 0.14</td>
</tr>
<tr>
<td>4. Company tenure</td>
<td>17.35</td>
<td>16.66</td>
<td>0.07 0.18* −0.02 — 0.05 0.26 0.21 −0.22 −0.15</td>
</tr>
<tr>
<td>5. Climate strength</td>
<td>0.51</td>
<td>0.21</td>
<td>— — 0.03 −0.07 0.13 0.26</td>
</tr>
<tr>
<td>6. Unit profit</td>
<td>$165,774</td>
<td>$137,842</td>
<td>0.04 0.25 0.12</td>
</tr>
<tr>
<td>7. Unit size</td>
<td>190.40</td>
<td>32.30</td>
<td>0.07 0.29 0.12</td>
</tr>
<tr>
<td>8. City size</td>
<td>69,043</td>
<td>116,052</td>
<td>0.10 0.32 0.12</td>
</tr>
<tr>
<td>9. Income</td>
<td>$ 31,831</td>
<td>$ 7,392</td>
<td>— — 0.08 0.10</td>
</tr>
</tbody>
</table>

Note. Composite reliabilities of multi-item measures are reported within parentheses along the diagonal. Individual-level correlations are presented below the diagonal (n = 671). Unit-level correlations are presented above the diagonal (n = 38). Individual-level correlations were not estimated for any variable pair that involved the disaggregation of unit-level scores to individual employees within the unit.

*p < .05.

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6 Our analysis strategy closely follows that of Hoffman, Morgeson, and Gerras (2003). Cross-level interaction testing procedures in Mplus 5.1 are comparable (from an estimation standpoint) to those used in other statistical packages, including HLM (Raudenbush & Bryk, 2002) and MLwiN (Rasbash, Steele, Browne, & Prosser, 2004).
We had predicted, in Hypothesis 3, that unit-level COBs would exert a positive influence on unit profitability. To test this hypothesis, we extended the cross-level interaction model (see Model C above) to include outcome and control variables at the unit level.\footnote{Mplus 5.1 was used to estimate the models; the syntax is available from the authors upon request.}

In particular, we regressed profitability on unit COBs while controlling for the effects of city size, median household income, and unit size. The results, which are summarized in Table 4, provide strong support for our hypothesis, as they reveal that unit profitability is positively related to unit COB performance ($b = 0.87$, $p < .05$).

To provide further insights into how COBs affected unit profitability, we specified and tested a second model (see Table 4) in which the unit profitability measure was replaced by its constituent elements, unit revenues, and unit costs. The results for this model revealed that the performance of COBs was positively related to both unit revenues ($b = 1.22$, $p < .05$) and unit costs ($b = 1.30$, $p < .05$). Because costs of goods sold are a large component of total costs in this industry context, we estimated a third model (see Table 4) that accounted for the effects of revenues on costs. (Unit costs were modeled as a consequence of both COBs and unit revenues.) The results for this final model indicate that unit COBs are positively related to unit sales ($b = 1.22$, $p < .05$) and unrelated to unit costs ($b = .11$, $p > .05$) and that unit costs are positively related to unit sales ($b = .98$, $p < .05$). Finally, it is important to note that the predictors (including control variables) accounted for approximately 37% of the variance in unit profitability, with COBs explaining approximately 10% of the variance in unit profitability.

**Discussion**

We had two objectives in this study. First, we aimed to determine whether employee CO influences unit profitability by in-

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure2}
\caption{Multilevel measurement model for the customer-oriented behaviors (COB) construct. COB measurement items are depicted by squares labeled COB1, COB2, and so forth, whereas random, unit-level means for the measurement items are depicted by small circles labeled \textit{b}_{COB1}, \textit{b}_{COB2}, and so forth.}
\end{figure}
creasing the performance frequency of COBs. Second, we sought to establish whether the relationship between employee CO and the performance frequency of COBs is influenced by two important situational variables: unit CO climate and climate strength. We investigated these issues in a multilevel services context using data from four different data sources to test the proposed multilevel model. Second, we circumvent common method bias concerns by relying on four different data sources to test the proposed multilevel model.

Our theoretical expectations are generally confirmed by our study results, which first suggest that employee CO is related to the performance frequency of employee COBs when the unit’s climate is supportive of such behaviors (when the unit is high on CO climate; Hypothesis 1). When unit CO climate is low, however, employee CO appears to be unrelated to COB performance. This finding is consistent with the existence of a synergistic person–situation interaction between employee CO and unit CO climate. Our results also suggest that unit COBs are positively related to firm profitability (Hypothesis 3). Moreover, within the context of our study, unit COBs appear to influence unit profitability by yielding an increase in sales without a concomitant increase in costs. Hence, the results of our study provide evidence of a link between individual-level employee CO and unit profitability.

The data, however, did not support our expectation (Hypothesis 2) that the employee CO→COB relationship would be attenuated (strengthened) in strong (weak) situations. Building on situation-strength theory (Mischel, 1977), we posited that an individual difference variable, such as employee CO, would have its greatest effect when the environment does not dominate the individual (i.e., in weak situations). One possible explanation for the lack of support for Hypothesis 2 is that truly weak situations are uncommon in a hospitality context where long-term survival is predicated upon customer service and satisfaction. For instance, Liao and Subramony (2008) found support for a situation strength interaction among employees in support roles (as opposed to customer contact roles) in a manufacturing industry context. Such a context provides an opportunity to identify situations that are likely to differ significantly in terms of their strength.

Before moving forward to discuss the limitations and implications of our research, we must highlight an important feature of our study vis-à-vis the extant literature. In evaluating whether unit CO climate and climate strength moderate the relationship between employee CO and COBs, we build on prior efforts to understand how climate for service and service leadership as highly intertwined such that manager (leader) behaviors provide an opportunity to identify situations that are likely to differ significantly in terms of their strength.

Strengths, Limitations, and Future Research

This research effort has several strengths that are worth highlighting. First, this study is one of the first to trace the (moderated) influence of employee CO all the way through to unit profitability. Second, we circumvent common method bias concerns by relying on four different data sources to test the proposed multilevel model.
Third, the study adopts a truly multilevel perspective to investigate the relationships of interest. This is particularly important given that past studies that have simultaneously considered both employee and unit CO-type constructs have used measures that are inconsistent with the implied conceptual level of at least one of the two constructs (e.g., Hartline et al., 2000; Jones et al., 2003; Piercy et al., 2002).

As in all efforts, our research has limitations. For example, we collected data from multiple outlets of only one service organization. Although limiting the sample to units from a single chain allowed us to control for the influence of extraneous variables, and provided for a conservative test of our theory by diminishing between-unit variance, it is still important to test whether the results hold across different units located in diverse industries, including nonservice industries.

We also note that our statistical power to identify significant cross-level and aggregate-level effects was limited. This limitation was due to both our relatively small unit-level sample size (n = 38) and moderately low group mean reliability for our unit CO climate measure, ICC(2) = .61. The limited statistical power is most evident in our model’s inability to isolate significant predictors of the COB intercept term. Although data access constraints in field studies often limit sample sizes, researchers investigating CO climate issues should be cognizant of statistical power challenges inherent in multilevel designs and attempt to realize increased power by maximizing both their unit-level sample size and the average number of employees sampled within each unit.

Given the data available to us, our analyses focused on evaluating the long-term effects (1 year) of employee CO on unit profitability. It is possible, however, that investments in CO have different effects on unit profitability when examined at different time horizons. Future efforts should examine this possibility, as it could provide useful insights regarding the time required to realize returns from investments in CO within a services setting. We did not investigate the antecedents of CO; instead, we focused on determining the value of employee CO in producing positive outcomes for organizations. Further research efforts might investigate individual variables that are related to employee CO. For example, Brown et al. (2002) found that CO was positively related to agreeableness and need for activity but negatively associated with instability. It may be that other personality-type variables are related to CO. As another example, we anticipate that the degree to which service employees identify with the organization (Bhattacharya & Sen, 2003) and/or their customers will affect the degree to which employees are customer-oriented in a given services context. In addition, the degree to which CO can be influenced by external factors, such as training or compensation, is an open question. (We also note that the degree to which COBs are influenced by these factors is a separate issue but one that also merits attention by researchers.) Identifying personal factors (for which recruiting screens can be established) and managerial ac-

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### Table 3

<table>
<thead>
<tr>
<th>Model</th>
<th>Parameter estimates&lt;sup&gt;a,b&lt;/sup&gt;</th>
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<tbody>
<tr>
<td></td>
<td>γ₀₀</td>
</tr>
<tr>
<td>Model A: Level 1&lt;sup&gt;c&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>COB&lt;sub&gt;j&lt;/sub&gt; = β₀&lt;sub&gt;j&lt;/sub&gt; + β₁&lt;sub&gt;j&lt;/sub&gt;(CO&lt;sub&gt;i&lt;/sub&gt;)&lt;sup&gt;+&lt;/sup&gt; + β₂&lt;sub&gt;j&lt;/sub&gt;(TEN&lt;sub&gt;i&lt;/sub&gt;) + r&lt;sub&gt;ij&lt;/sub&gt;</td>
<td>3.69*</td>
</tr>
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<td>Model A: Level 2</td>
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</tr>
<tr>
<td>β₁&lt;sub&gt;j&lt;/sub&gt; = γ₁₀ + U&lt;sub&gt;1j&lt;/sub&gt;</td>
<td></td>
</tr>
<tr>
<td>β₂&lt;sub&gt;j&lt;/sub&gt; = γ₁₁</td>
<td></td>
</tr>
<tr>
<td>Model B: Level 1&lt;sup&gt;d&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>COB&lt;sub&gt;j&lt;/sub&gt; = β₀&lt;sub&gt;j&lt;/sub&gt; + β₁&lt;sub&gt;j&lt;/sub&gt;(CO&lt;sub&gt;i&lt;/sub&gt;)&lt;sup&gt;+&lt;/sup&gt; + β₂&lt;sub&gt;j&lt;/sub&gt;(TEN&lt;sub&gt;i&lt;/sub&gt;) + r&lt;sub&gt;ij&lt;/sub&gt;</td>
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<td>Model B: Level 2</td>
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<td>3.69*</td>
</tr>
<tr>
<td>Model B: Level 2</td>
<td></td>
</tr>
<tr>
<td>β₀&lt;sub&gt;j&lt;/sub&gt; = γ₀₀ + γ₁₀(Mean CO&lt;sub&gt;i&lt;/sub&gt;) + γ₁₁(U&lt;sub&gt;i&lt;/sub&gt;) + γ₁₂(γ₁₂(CS) + U&lt;sub&gt;i&lt;/sub&gt;)</td>
<td>3.69*</td>
</tr>
<tr>
<td>β₁&lt;sub&gt;j&lt;/sub&gt; = γ₁₀ + U&lt;sub&gt;1j&lt;/sub&gt;</td>
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</tr>
<tr>
<td>β₂&lt;sub&gt;j&lt;/sub&gt; = γ₁₁</td>
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</table>

<sup>a</sup> Employee customer orientation was group mean centered in all Level 1 analyses. <sup>b</sup> All Level 2 predictors were grand mean centered. <sup>c</sup> Akaike information criterion (AIC) = 1,363 (6 estimated parameters). <sup>d</sup> AIC = 1,369 (9 estimated parameters). <sup>e</sup> AIC = 1,367 (11 estimated parameters). p < .05.
tions that promote CO (and COBs) will be important for the full realization of the potential benefits of CO.

Finally, the multilevel nature of the conceptual model and available data (n_{unit-level} = 38) placed some restrictions on the extent to which competing models could be specified and tested. Hence, a highly rigorous comparison of the proposed model with competing explanations was not possible. Future efforts should focus on circumventing this limitation in order to conduct a more precise evaluation of competing, or perhaps complementary, explanations.

**Practical Implications**

The results of our study generally suggest that customer-oriented service workers perform COBs in greater frequency than their less customer-oriented counterparts when the unit CO climate encourages the performance of such behaviors. That is, our results suggest that hiring customer-oriented workers will not influence the performance frequency of COBs when the climate is not supportive of customer need satisfaction. As a result, there is little point in investing in hiring, training, and retaining such workers without concomitant investments in a customer-oriented climate at the unit level. Similarly, investments to develop a unit CO climate are likely to yield positive results only if employees are inherently customer oriented.

Importantly, at an aggregate level, our results provide strong indication that unit COB performance frequency influences unit profitability. Hence, at least within the hospitality industry context, managers should implement programs that directly or indirectly encourage COB performance among frontline employees. Also important to managers is the fact that the relationship between unit-level COBs and unit costs was found to be nonsignificant (after controlling for the effects of revenues on costs). This is a surprising finding given the potential for increased labor costs and lowered productivity when employing customer-oriented workers. We note, however, that the results may not be generalizable beyond the restaurant industry. The workers in our study who were higher in CO may have received higher levels of compensation in the form of enhanced tips. In other industries, it may be necessary to pay a premium to hire and retain customer-oriented workers. We leave this question for future research.

**Figure 3.** Customer-oriented behaviors (COBs) as a function of employee customer orientation (CO) and unit CO climate. Within each unit, we used a median split to categorize employees as low or high in customer orientation. We also used a median split to categorize units in the sample as either low or high on unit CO climate. We then estimated mean performance frequency of COBs for the four cells resulting from the two median splits.

**Table 4**

Test of Unit-Level Hypothesis

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Path estimate</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Model 1: Unit profits as performance outcome&lt;sup&gt;b&lt;/sup&gt;</td>
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<tr>
<td>Unit COBs → Unit profits</td>
<td>0.87</td>
<td>2.51&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>City size → Unit profits</td>
<td>−0.41</td>
<td>−4.86&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>Median household income → Unit profits</td>
<td>−0.30</td>
<td>−2.58&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>Unit size → Unit profits</td>
<td>0.11</td>
<td>1.5</td>
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<tr>
<td>Model 2: Unit revenues and costs as performance outcomes&lt;sup&gt;c,d&lt;/sup&gt;</td>
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<tr>
<td>Unit COBs → Unit revenues</td>
<td>1.22</td>
<td>3.00&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>Unit COBs → Unit costs</td>
<td>1.30</td>
<td>2.99&lt;sup&gt;*&lt;/sup&gt;</td>
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<tr>
<td>Model 3: Unit revenues and costs as performance outcomes while controlling for the effects of sales on costs&lt;sup&gt;c,d&lt;/sup&gt;</td>
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<tr>
<td>Unit COBs → Unit revenues</td>
<td>1.22</td>
<td>3.00&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>Unit COBs → Unit costs</td>
<td>0.11</td>
<td>1.10</td>
</tr>
<tr>
<td>Unit revenues → Unit costs</td>
<td>0.98</td>
<td>23.42&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Note. Reported path estimates are unstandardized.
<sup>a</sup> With the exception of unit customer-oriented behaviors (COBs), all unit-level variables were standardized and grand mean centered.  
<sup>b</sup> Akaike information criterion (AIC) = 1,471 (17 estimated parameters).  
<sup>c</sup> AIC = 1,463 (24 estimated parameters).  
<sup>d</sup> Models 2 and 3 also control for the effects of city size, median household income, and unit size on both revenues and costs (for which results are not reported to conserve space).  
<sup>*</sup> p < .05.
Finally, in a quest to better understand when employee CO influences COB performance, we investigated the potential moderating role of two climate variables: unit CO climate and climate strength. Whereas our study suggests that individual CO interacts synergistically with unit CO climate to produce COBs, much is still unknown about when hiring customer-oriented workers results in the increased performance of COBs. Thus, managers should be sensitive to recognizing other potential situational factors or individual-level characteristics that weaken and/or strengthen the relationship between employee CO and COB performance.

Concluding Remarks

Marketing managers and theorists who espouse the “marketing concept” believe that the long-run sustainability of an organization depends on its ability to deliver customer value and satisfaction (e.g., Kohl & Jaworski, 1990). Our research with service workers provides evidence that the combination of (a) customer-oriented service workers and (b) an organizational climate that supports customer need satisfaction results in greater COB performance. Furthermore, in the aggregate, these COBs lead to greater unit profitability, which is central to the long-term viability of a for-profit enterprise. Importantly, the presence of customer-oriented workers alone was not sufficient for producing COBs. Our study represents a positive step towards better understanding the conditions under which employee CO translates into enhanced individual and unit performance. However, much effort is still needed to identify individual and situational factors that weaken and strengthen the relationship between employee CO and performance.

References

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance...
Appendix

Measurement Items

Employee Customer Orientation—Needs Dimension
1. I try to help customers achieve their goals.
2. I achieve my own goals by satisfying customers.
3. I take a problem-solving approach with my customers.
4. I am able to answer a customer’s questions correctly.
5. I get customers to talk about their service needs with me.
6. I keep the best interests of the customer in mind.

Employee Customer Orientation—Enjoyment Dimension
1. I find it easy to smile at each of my customers.
2. I enjoy remembering my customers’ names.
3. It comes naturally for me to have empathy for my customers.
4. I enjoy responding quickly to my customers’ requests.
5. I get satisfaction from making my customers happy.
6. I really enjoy serving my customers.

Unit Customer Orientation Climate
To what extent do your [enter store’s name here] managers engage in the following practices?
Our managers . . .
1. . . . constantly check to make sure store policies and procedures don’t cause problems for customers.a
2. . . . constantly make sure that the employees are trying their best to satisfy customers.a
3. . . . think of customer’s point of view when making big decisions.
4. . . . really want to give good value to our customers.a
5. . . . plan to keep our store ahead of our competitors by understanding the needs of our customers.
6. . . . have focused the business objectives around customer satisfaction.
7. . . . assess customer satisfaction regularly.
8. . . . pay close attention to our customers after their orders have been delivered.
9. . . . really care about customers, even after their orders have been delivered.a
10. . . . have organized our store to serve the needs of our customers.

Employee Customer-Oriented Behaviors
1. Tries to satisfy customers.
2. Tries to get customers to discuss their needs.
3. Is empathetic to customers.
4. Takes a problem solving approach with customers.
5. Able to answer customers’ question correctly.
6. Gives courteous service to customers.
7. Gets satisfaction from making customers happy.

Note. The Employee Customer Orientation Scale is from “The Customer Orientation of Service Workers: Personality Trait Effects on Self- and Supervisor Performance Ratings,” by T. J. Brown, J. C. Mowen, T. D. Donavan, & J. W. Licata, 2002, Journal of Marketing Research, 39, p. 118. Copyright 2002 by the American Marketing Association. Reprinted with permission. The Unit Customer Orientation Climate measure was adapted from “The Effect of a Market Orientation on Business Profitability,” by J. C. Narver & S. F. Slater, 1990, Journal of Marketing, 54, p. 24. Copyright 1990 by the American Marketing Association. Reprinted with permission. The Unit Customer Orientation Climate and the Employee Customer Orientation items were rated on a scale ranging from 1 (strongly disagree) to 5 (strongly agree), with $\alpha = .80$ and $\alpha = .83$, respectively, for the Needs and Enjoyment Dimensions. Unit Customer Orientation Climate items were also rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree), with $\alpha = .92$, and Employee Customer-Oriented Behaviors items were rated on a 5-point scale ranging from 1 (never) to 5 (always), with $\alpha = .93$.

a Item was dropped from scale in the final analysis.

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