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How Leaders' Motivation Transfers to Customer Service Representatives

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How Leaders' Motivation Transfers to Customer Service Representatives

ABSTRACT

Motivating customer service representatives (CSRs) to their highest performance levels is a major task of service unit managers. However, previous studies focused on the impact of leader behavior on follower motivation, while the influence of leader motivation on follower motivation has not been investigated yet. Thus, the authors develop and test a multilevel framework for the *motivation spillover principle*, which holds that the three components of Vroom's motivation theory transfer from managers to CSRs. The authors apply this framework to the context of service technology adoption and test it with a matched multilevel sample of 387 service unit managers, 1,018 CSRs, and objective company records. The results support the notion of a motivation spillover from managers to CSRs which exists incrementally beyond the direct effect of manager's adoption behavior on CSR's adoption. However, not all motivation components transfer unconditionally, but are contingent on charismatic leadership and manager-CSR similarity - a finding that implies for researchers that an undifferentiated view of motivation in multi-level settings might not suffice. For organizations our findings suggest that managers are important multipliers of motivation and thus organizations should direct their motivation efforts toward middle-level managers as they might turn into serious roadblocks to CSR motivation.

What you wish to kindle in others must burn within yourself. ~Augustine of Hippo

As organizations increasingly experience the deleterious effects of employee disengagement, employee motivation has become a topic of paramount importance. In 2009 in the U.S. economy, an estimated 18% of all workers (24.7 million) were disengaged, reducing employee performance and costing the U.S. economy a total of $300 billion annually (Gallup 2010). These figures make the investigation of levers for employee motivation a high priority.

For service companies, motivation of customer service representatives (CSRs) is critical because CSRs work at the boundary between organizations and their customers, where oversight and supervision are difficult. Since "customer contact employees are the first and only representatives of a service firm" (Hartline, Maxham III, and McKee 2000, p. 35), service providers constantly face the challenge of finding ways to improve the performance of service personnel (de Jong, de Ruyter, and Lemmink 2003). As it impels action, motivation is a major factor in achieving CSR performance (Locke and Latham 2004).

Consider a typical CSR in a service unit, who experiences his/her service unit manager as highly motivated to adopt a new service technology. Would the CSR's motivation to adopt the service technology be lower if s/he worked with a manager who is not at all motivated to adopt the new technology, all else being equal? And what are the implications for the CSR's motivation in that scenario, when s/he is very similar to his/her service unit manager or when the service unit manager is very charismatic? The transfer of motivation from service unit managers to CSRs and the factors on which this transfer depends are not yet well understood in leadership research.

Motivating CSRs to their highest performance levels is a major task of service unit managers, and "motivation is a core competency of leadership" (Latham 2007, p. 4). Previous studies emphasize the importance of leaders' behavior for their followers' behavior (Hartline and Ferrell 1996; Berry and Parasuraman 1992), since "leader behaviors result in follower

heightened motivation to attain designated outcome(s) which then leads to performance" (Ilies, Judge, and Wagner 2006, p. 1). Given these strong links between leader behavior, follower motivation, and performance, quite unsurprisingly a plethora of research exists that investigates the effect of leader behavior on follower motivation (Lord and Maher 1991; Lord and Brown 2001). The impact of leader behavior on follower motivation has been focus of several leadership and work motivation theories, including the path-goal theory of leadership (House 1971), self-concept based leadership (Shamir, House and Arthur 1993), transformational and transactional leadership (Bass 1985), organizational behavior modification (Luthans and Kreitner 1975), goal-setting theory (Locke 1968), self-determination theory (Deci and Ryan 1990), and expectancy theory (Vroom 1964).

However, while a number of investigations have explored the impact of leader behavior on follower motivation, no study yet has analyzed the impact of leader motivation on follower motivation. Therefore, this paper investigates the transfer of motivation from leader to follower. We explore the potentially powerful *motivation spillover* between service unit manager and CSR, focusing on task-specific motivation of managers and CSRs to adopt a new service technology.

Drawing on the literature of charismatic leadership, social learning theory, and expectancy theory, we derive a multilevel framework of motivation spillover. We define motivation spillover as the transfer of different components of motivation from the service unit manager to the CSR. Specifically, we argue that the three components of Vroom's well known motivation theory transfer from service unit managers to CSRs. To investigate contingency factors of motivation spillover, we analyze whether the motivation transfer from managers to CSRs is contingent on charismatic leadership style and manager–CSR similarity.

A key asset of our research is the testing of motivation spillover and its consequences for the adoption of a completely new service technology. We employ a large-scale multilevel data set of 387 managers and 1,018 subordinates, which links data from three levels (service

unit managers, CSRs, and objective company data on service technology use). This investigation thus answers the call in leadership research to consider multiple levels of analysis (Avolio et al. 2009), especially as "relatively few studies in any of the areas of leadership research have addressed levels-of-analysis issues appropriately in theory, measurement, data analysis, and inference drawing" (Yammarino et al. 2005, p. 879). By developing a multi-level conceptual model, collecting data from different organizational levels, and applying multi-level data analysis techniques, we hope to provide a more complete understanding of CSR motivation. This effort is particularly important because, "even though [leader-follower] dyads are ubiquitous to organizational settings, they are the least studied level of analysis relative to individuals, groups, or organizations" (Gooty and Yammarino 2011, p. 1). To account for level-of-analysis issues, such as the nesting of CSRs in managers, we explicitly include an effect of co-worker motivation on CSR motivation as a control to account for motivational spillover effects of co-workers and thus isolate the motivation spillover effect between leader and employees.

Our study contributes to the leadership literature in several ways. Primarily, our examination broadens current understanding of employee motivation by identifying an effect that describes how leaders motivate employees. Further, motivation spillover is moderated by manager–CSR similarity and charismatic leadership style. In fact, we find that the transfer of one motivation component (valence) requires either charismatic leadership or high manager–CSR similarity.

Our results thus have far-reaching implications for service firms. For example, when implementing a new service technology, organizations should direct their motivation efforts toward middle-level managers instead of targeting primarily CSRs. Middle managers may be important multipliers of motivation, and in the absence of this attention, they may become serious roadblocks to the service technology implementation.

The remainder of the article proceeds as follows. We begin by developing a conceptual model of motivation transfer from manager to CSR. We then present an empirical study that tests the hypotheses proposed in the conceptual model. We conclude with a detailed discussion of the research findings, implications for service marketing practices, and future research directions.

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

The core of our research framework is motivation spillover between service managers and CSRs, which proposes a vertical cascade of manager motivation to CSR motivation. As stated above, the model considers motivation with respect to the adoption of service technology. Specifically, the framework encompasses three categories of constructs: (1) motivation to adopt service technology on both the manager and CSR levels, (2) service technology adoption behavior on the manager and CSR levels to account for the behavioral consequences of motivation, and (3) charismatic leadership style and manager–CSR similarity as contingency factors for the motivation transfer. Figure 1 presents our conceptual framework.

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To conceptualize motivation, we rely on expectancy theory (Vroom 1964). In brief, expectancy theory postulates that an individual's motivation depends on his or her expectancy, instrumentality, and valence estimates, and that higher motivation leads to increased effort (Vroom 1964). According to Vroom (1964) motivation is a multiplicative function of an individual's expectancy that a certain effort will lead to the intended performance, the instrumentality of this performance to achieving a certain result, and the desirability of this result for the individual, i.e. valence.

The theory posits that motivation increases to the extent that an individual experiences enhanced expectancy and instrumentality estimates, along with valence for job-related outcomes. *Expectancy* refers to an individual's estimate of an action or effort leading

to an outcome or performance (Vroom 1964). *Instrumentality* is an individual's belief about the degree to which a specific performance level will result in favored job-related outcomes, such as pay or the success of one's company, or to the blocking of undesirable outcomes, such as stress or extra work (Sanchez, Truxillo, and Bauer 2000). *Valence* refers to an affective orientation toward outcomes, and is interpreted as desirability or anticipated satisfaction with outcomes (Vroom 1964).

Expectancy theory is appropriate for measurement of motivation for three reasons. First, expectancy theory has achieved wide acknowledgment by a broad array of researchers (Bartol and Locke 2000; Ambrose and Kulik 1999; van Eerde and Thierry 1996; Miner 2005). Second, expectancy theory produces valid results within a context that establishes performance–reward contingencies in an unambiguous, concrete manner (Wanous, Keon, and Latack 1983; Graen 1969). The service technology adoption context of our research should meet this boundary condition, since the relationship between performance and rewards is distinct and unambiguous. Third, previous studies show that with sufficient attention to the selection and initial conceptualization of the constructs, expectancy theory fulfills measurement requirements (Klein 1991; Ilgen, Nebeker, and Pritchard 1981; Mitchell 1974). For our study, we put extensive effort into item generation, as we explain below in the Measures section.

The theoretical framework described above provides a basis for our hypotheses development. We start by introducing our theoretical reasoning for the transfer of managers' expectancies, instrumentalities, and valences to CSRs, and subsequently postulate hypotheses regarding the moderating effect of charismatic leadership and manager–CSR similarity on motivation transfer. Finally, we develop hypotheses on the consequences of motivation.

Motivation Transfer from Service Unit Manager to CSR

Transfer of Expectancies. We argue that a manager's expectancies with respect to service technology adoption will transfer to the CSR through social learning. Social learning

theory posits that individuals learn from significant others by observing their behavior (Bandura 1977). In particular, seeing or even visualizing significant others performing successfully can raise perceptions of efficacy, because observers infer that they may be able to master comparable tasks (Bandura et al. 1980). In organizational contexts, expectancies and instrumentalities are particularly susceptible to adoption through social learning as they are important for workers' orientation in the workplace. Moreover, owing to their status and competence, leaders are usually highly potent role models (Manz and Sims 1981).

Researchers have applied social learning theory to the organizational context and found that a manager can be a powerful behavior model for subordinates (Davis and Luthans 1980; Luthans and Kreitner 1984; Rich 1997; Weiss 1977; Sims and Manz 1982). Davis and Luthans's (1980) social learning framework for organizational behavior explicitly incorporates cognitions that are acquired by social learning (also Luthans and Kreitner 1984). Therefore, managers might represent role models to subordinates, who adopt managers' cognitions in addition to their behavior. For example, work values transfer from leaders to subordinates (Weiss 1978).

This notion is supported by researchers who embrace the cognitive interpretation of leadership, which posits that cognitions in organizations transfer by means of behavioral scripts that individuals observe and then model (Gioia and Manz 1985; Wofford, Goodwin, and Whittington 1998; Wofford and Goodwin 1994). Thus, we argue that CSRs should follow the example of their managers and take on the manager's expectancies as cognitive representations of confidence in the service technology adoption.

When managers express their expectancies through verbal or nonverbal behavior, CSRs can emulate the manager's expectancies through social learning. Therefore, CSRs should be aware of their manager's expectancies, which are reflected in self-confident problem-solving, and evidence them through confidence in their own abilities to solve a given task or through high expressed expectations for success (Riggs and Knight 1994; De Cremer

and Van Knippenberg 2004) in task-solving situations, task feedback situations (Shea and Howell 1999), situations of crisis (Mumford et al. 2007), or situations of self-disclosure (Gardner et al. 2005). For example, managers might exhibit confidence in using the new service technology in a coaching session with their CSRs.

We thus argue that in striving to equal their managers, CSRs will emulate expectancies through social learning, since managers "engage in behaviors designed to create impressions of competence and effectiveness" (Sosik and Dworakivsky 1998, p. 504).

H1a: Managers' expectancies have a positive effect on CSRs' expectancies.

Transfer of instrumentalities. In line with our argument that expectancies spill over, we contend that social learning will likewise transfer the manager's instrumentalities concerning the service technology adoption to the CSR. In accordance with social learning theory, we argue that CSRs should adopt their manager's instrumentalities with respect to service technology adoption.

Managers often employ symbolic behaviors to express their inherent beliefs (Shamir et al. 1998) and engage in self-presentation and self-disclosure behaviors that CSRs perceive (Gardner and Avolio 1998). In particular, managers should express their instrumentality beliefs in social interactions with their CSRs, informing them about connections between work performance and contingent rewards. Typical situations would include providing incentives or encouragement to CSRs toward goal achievement or articulating a future vision (House 1996). For example, a service unit manager might indicate to a CSR that success in adopting a new service standard commonly results in job promotions, thus expressing an inherent belief that goal achievement (a first-order outcome) leads to career advances (a second-order outcome).

To summarize, we argue that in striving to model their manager, CSRs will observe their manager's expressions of instrumentality beliefs. Therefore,

H1b: Managers' instrumentalities have a positive effect on CSRs' instrumentalities.

Transfer of valences. Social learning theory proposes that, apart from observational learning, people actively adopt their behavior as a consequence of rewards and punishments, which they experience either directly or vicariously (Bandura 1977; Manz and Sims 1981). We suggest that in addition to observational learning, reinforcement by rewards and punishments plays a role in the transfer of manager's valences to CSR's valences.

First, in line with H1a and H1b, we suggest that CSRs adopt their superior's valences through social learning, as CSRs strive to imitate the manager (Rich 1997; Weiss 1997; Luthans and Kreitner 1984). Typically, managers engage in verbal behavior when conveying their assessment of task-specific outcomes (i.e., their valences). Communicating these assessments to CSRs is an essential function of the manager, since it serves an important guiding purpose for the CSR (House 1996).

Second, we contend that CSRs' valences concerning a service technology adoption align with their superior's valences as a result of conditioning through reward and punishment. Fundamental to this reasoning is the assumption that managers are hierarchically superior to their CSRs and thus may legitimately reward or punish them. If CSRs express a valence that deviates from their manager's valence, the manager should sanction the CSR to produce conformity with the manager's valence. For example, if a CSR states that the increase in customer satisfaction entailing the implementation of a new service technology in a service unit is unimportant (low valence), while the superior considers the implementation to be crucial for the success of the service unit (high valence), the manager might give the CSR negative feedback (punishment) to achieve compliance with the manager's valence. In contrast, if the expressed valence is congruent with the leader's valence, the manager should reinforce the CSR's behavior (Mawhinney and Ford 1977; Stajkovic and Luthans 2003).

To summarize, we propose that managers express their valences, which CSRs adopt through social learning. Reinforcement and punishment further enhance the adoption of

managers' valences by CSRs, providing incentives to CSRs to conform to their superior's valences. Thus:

H1c: Managers' valences have a positive effect on CSRs' valences.

The Influence of Charismatic Leadership and Manager–CSR Similarity on Motivation Transfer from Manager to CSR

Charismatic leadership. We contend that charismatic leadership reinforces the transfer of expectancies, instrumentalities, and valences from service unit manager to CSR for two reasons: (1) charismatic managers engage in symbolic behaviors that foster strong follower identification, resulting in a higher likelihood of imitating the manager, and (2) charismatic managers are more prone to self expression.

Charismatic leadership is an attribution resulting from CSRs' perceptions of their manager's behavior. Therefore, subordinates do not commit themselves to their managers because of their legitimate authority, but "out of perceptions of their leader's extraordinary character" (Conger, Kanungo, and Menon 2000, p. 748). Charismatic managers exhibit a plurality of behaviors that foster strong follower identification, such as individual consideration and empowerment of employees, creating a compelling vision of the future and exemplary acts involving personal risk and self sacrifice (Bass 1985; Conger, Kanungo, and Menon 2000; De Cremer and Van Knippenberg 2004). Prior investigations show that charismatic leadership results in a personal identification with the manager (Kark, Shamir, and Chen 2003). When followers admire and identify with a manager, they are more likely to emulate the manager's beliefs and values (Yukl 1994).

Second, prior studies show that charismatic managers are particularly expressive of feelings, aesthetic values, and self-concepts (Shamir, House, and Arthur 1993). Specifically, charismatic managers display self confidence (Gardner et al. 2005; Shamir, House, and Arthur 1993; Shea and Howell 1999; Sosik and Dworakivsky 1998); project beliefs such as hope,

faith, and optimism (Gardner et al. 2005; Sosik and Dworakivsky 1998); and express their values by creating a "value laden vision of the future" (Sosik 2005, p. 224).

In sum, charismatic managers are more likely to be the object of strong personal identification for CSRs and are more inclined to reveal their expectancies, instrumentalities, and valences. Thus, CSRs are more likely to model charismatic managers and are more likely to adopt charismatic managers' expectancies, instrumentalities, and valences through social learning. Therefore:

H2a: Charismatic leadership enhances the positive relationship between managers' and CSRs' expectancies.

H2b: Charismatic leadership enhances the positive relationship between managers' and CSRs' instrumentalities.

H2c: Charismatic leadership enhances the positive relationship between managers' and CSRs' valences.

Manager–CSR similarity. Research on charismatic leadership has regarded similarity between leader and follower as an important antecedent of interaction outcomes in the leader–follower dyad (Ehrhart and Klein 2001). We suggest that manager–CSR similarity enhances the transfer of expectancies, instrumentalities, and valences from service unit manager to CSR for two reasons. The more similar a manager is to his or her CSR, (1) the more likely the CSR is to regard the manager as a role model and (2) the more likely the manager is to express his or her expectancies, instrumentalities, and valences to the CSR.

Similarity–attraction theory suggests that individuals have self-based schemata which lead to a positively biased evaluation of others who are similar to themselves (Byrne 1971). Investigators have broadly applied this notion to the organizational context and verified it in the leader–follower dyad (Ashkanasy and O'Connor 1997; Schyns and Sanders 2007; Felfe and Schyns 2006; Keller 1999; Ehrhart and Klein 2001). In line with similarity–attraction theory, the more similar a CSR is to the manager, the more attractive the CSR will find the manager. "When individuals perceive themselves to be similar to their leaders, they are more

attracted to the leaders than are those who do not feel similar to their leaders" (Schyns and Sanders 2007, p. 2346). A higher attraction to the manager increases the probability that the CSR will develop a strong personal identification with the manager and regard the manager as a role model (Gardner and Avolio 1998).

Further, increased interpersonal attraction resulting from high similarity leads to a closer, more confidential relationship between manager and CSR (Ashkanasy and O'Connor 1997; Boyd and Taylor 1998) and an increase in the quality and frequency of the dyadic interaction (Phillips and Bedeian 1994; Engle and Lord 1997). For example, to elevate the CSR's career prospects, the manager might engage in coaching and mentoring the CSR. Not only does this social interaction enhance the manager's opportunity to express expectancies, instrumentalities, and valences, but the greater exposure to the manager raises the likelihood that the CSR will adopt the manager's motivational components through social learning.

To summarize, the more similar a CSR is to the manager, the stronger the probability that the CSR will regard the manager as a role model and the greater the propensity of the manager to express expectancies, instrumentalities, and valences to the CSR. Thus:

H3a: Manager–CSR similarity enhances the positive relationship between managers' and CSRs' expectancies.

H3b: Manager–CSR similarity enhances the positive relationship between managers' and CSRs' instrumentalities.

H3c: Manager–CSR similarity enhances the positive relationship between managers' and CSRs' valences.

The Influence of Motivation on Service Technology Adoption

The three components of expectancy theory can explain the cognitive process by which individuals initiate, direct, and sustain behavior (Campbell et al. 1970), especially as expectancy theory "was developed to explain virtually all work-related behavior ranging from occupational choice to performance on the job" (Latham 2007, p. 45). Thus, CSRs'

motivation, as well as managers' motivation, should have a positive effect on their service technology adoption:

H4a: The higher the CSR's motivation, the higher the CSR's service technology adoption.

H4b: The higher the manager's motivation, the higher the manager's service technology adoption.

METHODOLOGY

We tested the hypotheses in a service context, in cooperation with a large-scale travel agency franchise organization. The firm consists of a large number of homogeneous service units with a low span of control and close interaction between service unit managers and CSRs (on average each manager leads three customer-contact employees). We chose a franchise context because it presents a typical service organization structure, exhibiting a sales-laden service environment that spans a sizeable geographic area.

At the outset of our study, the travel agency franchise system introduced a completely new service technology tool that facilitates customer contact by creating custom-tailored travel offers, providing travel information aligned to the individual customer's needs, and proposing additional services based on the customer's account history. In this travel agency organization, both the customer service representatives and the service unit managers have direct customer contact and therefore also use the new service technology.[1]

Collection of Multilevel Data

We distributed questionnaires to the manager of each agency (N=1,080) and all CSRs (N=3,410), providing separate return envelopes for each respondent, and questionnaires came back to the researchers via mail. We collected data on manager motivation and CSR motivation at two different points in time, distributing the manager survey first and the CSR survey two months later. The use of such a time lag in data collection is consistent with expectancy theory, and the temporal order should provide a first test of our theory of a motivation spillover from managers to followers.

We received usable questionnaires from 552 managers (response rate: 51.1%) and 1,598 CSRs (response rate: 45.7%). To construct a three-level data set, we used data from 387 managers and 1,018 CSRs that were connectable via code numbers. In this data set, 64.5% of the managers were female, with a mean age of 41 years (SD=9.1 years). On the CSR level, 86% were female, with a mean age of 31.9 years (SD=9.6 years). While a high proportion of female employees is normal in the travel industry, we controlled for gender, operationalized as a dummy variable, and results show that gender did not exert any significant impact on the relationships we examined. Additionally, six months after the collection of the CSRs' self-reported technology adoption data, the travel company recorded information on objective service technology use (generated sales with new service technology) over a six-month period.

We assessed nonresponse bias using time-trend extrapolation (Armstrong and Overton 1977), and we detected no differences between early and late responders on any of the constructs of interest or demographic variables within the two samples. To control for multicollinearity, we inspected the variance inflation factors of the variables. The variables yielded values between 1.0 and 1.9, indicating that no problems exist with multicollinearity (Kleinbaum et al. 1998).

Measurement

Measurement sources. We measured the constructs in this study with items we adapted from well established operationalizations, making modifications on the basis of an extensive qualitative pre-study as needed to fit the study's context. We took several steps to acquire a thorough understanding of the CSRs' and service managers' motivational components with respect to the adoption of the new service technology and thus ensure the validity and reliability of our motivation measurements. Drawing on a review of the relevant literature that addresses conceptualization issues in expectancy theory (Van Eerde and Thierry 1996; Klein 1991; Ilgen, Nebeker, and Pritchard 1981; Mitchell 1974), we followed the

approach of Sanchez, Truxillo, and Bauer (2000) and Teas (1981) in measuring valence, instrumentality, and expectancy. We assessed the CSRs' and managers' perceived importance of job-related outcomes, their perceived probability of mastering the system after putting some effort into using it, and their belief that using the system would lead to obtaining the desired outcomes.

Further, we conducted an extensive qualitative study with in-depth interviews to validate a pool of items that measure the motivation of CSRs and managers regarding the adoption of a new service technology. Focus group discussions among CSRs, service unit managers, and marketing faculty prior to the survey provided an intimate understanding of CSRs' and managers' confidence in using the technology and favorable and unfavorable work outcomes and goals related to the service technology adoption. We conceptualized the survey items on the basis of the insights we gained in this qualitative study. Finally, we conducted interviews with five marketing scholars to validate and supplement the items previously developed. We are thus confident that our scales have high validity and reliability.

Validity and reliability of the measurement. All variables used in our study are based on well established scales. Appendix A provides a complete list of all items we used to measure the constructs in the study, and Table 1 presents descriptive statistics, internal consistency reliabilities, and intercorrelations of all study variables. As Table 1 shows, all the measurement scales have reliability indexes that exceed the .70 threshold (Nunnally 1978) and an average variance extracted that is greater than .50 (Fornell and Larcker 1981).

We assessed the discriminant validity of all construct measures using the criterion proposed by Fornell and Larcker (1981), which suggests that discriminant validity is present if the average variance extracted exceeds the squared correlations between all pairs of constructs. All constructs passed this test.

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Validation of service technology adoption. Furthermore, we validated the CSRs' self-reported responses concerning their service technology adoption with objective use data (i.e., sales generated with the new service technology). To do so, we aggregated the self-reported data on CSR service technology adoption per travel agency before correlating these scores with the objective service technology use data from the company database. Both measures show a high correlation ($r = .59$; $p < .01$), indicating the CSRs' self-reported service technology adoption evaluations had a significant validity in that they were not potentially influenced by answers to other questions in the survey or by social desirability. Thus, in our analysis we use the self-reported service technology adoption to assess H4a and H4b.

Motivation construct. To test the dimensionality of the motivation construct, we conducted both an exploratory and a confirmatory factor analysis. We identified three distinct dimensions with a good data fit. Following established approaches in the literature, we multiplied the scores of each of the three components to compute a global score of motivation, which we used to test H4a and H4b (Le Bon and Merunka 2006; Ingram et al. 1989; Kohli 1985; Tyagi 1985).

Contingency factors. To capture *charismatic leadership,* we use the measure of Conger and Kanungo (1998). To measure *manager–CSR age similarity,* we calculated the absolute age difference between each manager and CSR and then recoded this variable to simplify the interpretation (i.e., a higher value reflects greater similarity). The second aspect of similarity, *manager–CSR gender similarity,* is a dummy variable, coded "1" if the manager and CSR have the same gender and otherwise as "0."

Control variables. In addition, we calculated co-workers' influence by the average expectancy, instrumentality, and valence of the other CSRs within a travel agency, that is, as an average of all members' expectancy, instrumentality, and valence in the service unit, excluding the focal employee's motivational components. Thus, because we exclude the expectancy, instrumentality, and valence score of each focal employee in our calculation, co-

workers' expectancy, instrumentality, and valence are three individual-level constructs varying with each focal employee of our sample.

Further, as all CSRs work under the same manager, to take the average CSR's motivation into account we added the mean level of CSRs' motivational components per service unit led by a manager (varying between the agencies in our sample) as a control for the *motivational climate* because it might also influence the spillover effects. In other words, we averaged each of the three motivational components per service unit, and then included this aggregated variable as a level 2 (the service unit level) control.

The measurement of the control variables for the service technology adoption, namely organizational training and support, job satisfaction, commitment, and service experience, is based on well established scales (see Appendix A for sources and specific items).

Model

Analytical approach. Because the CSRs were nested in managers, we used hierarchical linear modeling (HLM). In contrast to the ordinary least squares approach, HLM accounts for the fact that, in our hierarchically nested data design, the measurements at the CSR level are not independent but are nested in service units supervised by a business unit manager. HLM allows the simultaneous processing of data from the two levels without losing important information. At the same time, HLM provides the opportunity to model cross-level effects such as the transfer of managers' motivation components to CSRs.

Finally, to analyze the single-level effects of CSRs' and managers' motivation on their service technology adoption (H4a, H4b), we employed ordinary least squares regression.

For the HLM, we conducted three steps. First, we estimated null models (with no predictors at level 1 and an intercept only at level 2) to test whether significant variations occurred across service units with respect to the dependent variables (CSRs' motivation components). The results of those null models showed that CSRs who worked under different managers exhibited significant between-group variance in their expectancy, instrumentality,

and valence. The null model also provides information for computing the intraclass correlation coefficient (ICC[1]), which indicates the proportion of between-groups variance relative to the total variance exhibited by a variable. This statistic represents the maximum amount of variance in a level 1 variable that can potentially be explained by a level 2 predictor variable. Our calculations show that 28–36% of the variances in CSRs' expectancy, instrumentality, and valence (i.e., their ICC[1]) resides between managers (Raudenbush and Bryk 2002). In addition, we calculated the ICC[2] values, which were slightly higher than their corresponding ICC[1] values, ranging between 38–46% (Schneider et al. 1998). The values for the ICC[1] and ICC[2] indicate that HLM is required.

Second, we then added the focal predictors and motivational climate of the service unit and co-workers' motivation as control variables. Third, to estimate whether the inclusion of interaction effects is empirically meaningful, we followed Ganzach's (1997) hierarchical procedure. Ganzach's simulation study shows that misleading effects are obtained when interaction effects are present but not modeled. We therefore entered the interaction terms (i.e. manager's expectancy, instrumentality and valence each with 1) charismatic leadership, 2) manager-CSR age similarity and 3) manager-CSR gender similarity) after the other predictors and controls in our models. The inclusion of the interaction terms yields significant model improvements (all $\Delta\chi^2$ were above 630, with d.f. = 6, $p < .01$). Thus, hierarchical linear models along with the interaction terms appear to be appropriate. Moreover, the pseudo-R squares (Snijders and Bosker 1999) in Table 2 show that the variances explained in our models were equal to or above 20%, which indicates a sufficient goodness-of-fit of the model.

Model description. To test the transfer of the three different motivational facets, we ran three separate two-level models in which, at level 1 (the CSR level), the CSRs' expectancy, instrumentality, or valence were the dependent variables. The independent variables at level 1 are manager–CSR age and gender similarity (see line (1) in the following model specification).

We added co-workers' expectancy, instrumentality, and valence as controls in the level 1 equation. The intercept (i.e., β_{0j} , see also line (2) in the following model specification) is a function of managers' expectancy, instrumentality, valence, and charismatic leadership as well as the interactions between those motivational facets and charismatic leadership at level 2 (the manager level). Moreover, the intercept is determined by the aggregated CSRs' expectancy, instrumentality, and valence per service unit, which were added as controls for the motivational climate at level 2. To test the proposed cross-level interactions, the slopes of manager–CSR age and gender similarity at level 1 were functions of the manager's expectancy, instrumentality, and valence at level 2 (see lines 3 and 4 in the following model specification). The final multilevel models were as follows:

Level 1 (CSR level)

(1) $DV_{ij} = \beta_{0j} + \beta_{1j}(MCAS_{ij}) + \beta_{2j}(MCGS_{ij}) + \beta_{3j}(CEXP_{ij}) + \beta_{4j}(CINS_{ij}) + \beta_{5j}(CVAL_{ij}) + r_{ij}$

Level 2 (Manager level)

(2) $\beta_{0j} = \gamma_{00} + \gamma_{01}(MEXP_j) + \gamma_{02}(MINS_j) + \gamma_{03}(MVAL_j) + \gamma_{04}(MCHAR_j) + \gamma_{05}(MEXP_j \times MCHAR_j) + \gamma_{06}(MINS_j \times MCHAR_j) + \gamma_{07}(MVAL_j \times MCHAR_j) + \gamma_{08}(MIEXP_j) + \gamma_{09}(MIINS_j) + \gamma_{10}(MIVAL_j) + u_{0j}$

(3) $\beta_{1j} = \gamma_{10} + \gamma_{11}(MEXP_j) + \gamma_{11}(MINS_j) + \gamma_{11}(MVAL_j)$

(4) $\beta_{2j} = \gamma_{20} + \gamma_{21}(MEXP_j) + \gamma_{21}(MINS_j) + \gamma_{21}(MVAL_j)$

(5) $\beta_{3j} = \gamma_{30}$

(6) $\beta_{4j} = \gamma_{40}$

(7) $\beta_{5j} = \gamma_{50}$

where

DV = CSR's expectancy, CSR's instrumentality or CSR's valence
MCAS = manager–CSR age similarity
MCGS = manager–CSR gender similarity
CEXP = co-workers' expectancy
CINS = co-workers' instrumentality
CVAL = co-workers' valence
MEXP = manager's expectancy

MINS = manager's instrumentality
MVAL = manager's valence
MCHAR = manager's charismatic leadership
MIEXP = mean of individual-level CSR's expectancy per service unit
MIINS = mean of individual-level CSR's instrumentality per service unit
MIVAL = mean of individual-level CSR's valence per service unit, $r_{ij} \sim N(0,\sigma^2)$

RESULTS

We start by presenting the results for the main effects and contingency factors of the motivation transfer and follow with the results for the control variables, thereby addressing the model's robustness. Eventually, in an additional analysis, we provide evidence for the external validity of our model and test the validity of the motivation spillover effect. Table 2 shows the estimation results for the multilevel regression model.

---------- Insert Table 2 ----------

Results for Main Effects of Motivation and Motivation Transfer

We found support for spillover effects of the motivational components suggested by H1a and H1b, but not for H1c. Specifically, results show a significant effect of managers' expectancy on their subordinates' expectancy (H1a: $\gamma = .161$, $p < .01$). We also found a significant positive effect of managers' instrumentality on their subordinate's instrumentality (H1b: $\gamma = .247$, $p < .01$). Surprisingly, managers' valence had no impact on their CSRs' valence (H1c: $\gamma = .023$, n.s.).

H4a and H4b predicted a direct effect of CSRs' (H4a) and managers' (H4b) motivation on the respective self-reported service technology adoption. In line with H4a and H4b, we found support for the direct effects of CSRs' motivation (H4a: $\beta = .195$, $p < .01$) and manager's motivation (H4b: $\beta = .263$, $p < .01$) on their self-reported service technology adoption.

Results for Contingency Factors of Motivation Transfer

In H2 and H3, we predicted various interaction effects between managers' charismatic leadership and manager–CSR similarity and the spillover of the motivational factors. We illustrate the patterns of the moderating effects of managers' charismatic leadership and manager–CSR similarity in Figures 2 and 3.

---------- Insert Figures 2 and 3 about here ----------

Charismatic leadership. The results show that managers' charismatic leadership positively moderates the spillover effect of managers' expectancy on their employees' expectancy, as H2a proposes (H2a: $\gamma = .134$, $p < .01$). Managers' charismatic leadership also amplifies the instrumentality spillover from managers to their subordinates, as is evident from its positive coefficient (H2b: $\gamma = .181$, $p < .01$). Finally, we found support for the moderating effect of managers' charismatic leadership on the valence spillover (H2c: $\gamma = .122$, $p < .01$).

Manager–CSR similarity. The analyses of the cross-level interaction effect between managers' expectancy, instrumentality, and valence and manager–CSR similarity showed split results. Manager–CSR age similarity strengthened the spillover of all three motivational components from managers to their followers, whereas manager–CSR gender similarity had no moderating effects. The coefficients of the interaction effects of manager–CSR age similarity with manager's expectancy ($\gamma = .121$, $p < .01$; Figure 3A), manager's instrumentality ($\gamma = .142$, $p < .01$; Figure 3B), and manager's valence ($\gamma = .130$, $p < .01$; Figure 3C) were all positive and significant.

Furthermore, we found interesting moderating effects of charismatic leadership and age similarity for the valence spillover. We observed significant downward-sloping patterns for the valence transfer of managers to their CSRs (i.e., the manager's valence negatively influences the CSRs' valence) in cases where the managers are are uncharismatic (see Figure 2C) or for low age similarity (Figure 3C). We discuss this very interesting "backfiring effect" for the valence spillover in the discussion section.

Results for Controls

In the multilevel models we also controlled for the influence of co-workers' expectancy, instrumentality, and valence on an individual CSR's expectancy, instrumentality, and valence. Our results show that co-workers' motivational components positively affect the focal CSR motivational counterparts. We found a similar pattern of results for the cross-level influences of the motivational climate (i.e. mean level of CSRs' motivational components per travel agency) in the service unit.

In the ordinary least squares regressions to test H4a and H4b, the within-level control variables, training and support provided by the organization as well as commitment on both levels had positive effects on service technology adoption. These findings are largely consistent with results of previous studies in the service technology literature. However, the mere effect sizes of motivation on service technology adoption behavior on both levels compared to the effect sizes of the control variables underline the incremental predictive power of the motivation construct as evidenced by the standardized regression coefficient of CSR motivation (β_{CSR}=0,20) in comparison to the standardized regression coefficients of the respective controls ($\beta_{\text{Organizational Support \& Training}}$=0,09; $\beta_{\text{JobSatisfaction}}$ =0,14; $\beta_{\text{Commitment}}$ =0,08; $\beta_{\text{ServiceExperience}}$ =-0,08).

Model Robustness Checks

To test the robustness of our results, we repeated the multilevel regression analyses for less complex base models without the above-mentioned control variables to validate our results regarding the hypothesized effects (Cohen et al. 2003). The results are stable regardless of whether control variables are included and thus confirm the robustness of our findings.

Mean centering. We assessed whether the type of mean centering (group or grand mean centering) influenced our results. For cross-level interactions, group mean centering of level 1 is recommended (Raudenbush and Bryk 2002). Our conceptual framework included both within-level interactions and cross-level interactions. We therefore used grand mean centering to standardize the predictors within their respective level (Chen, Bliese, and

Mathieu 2005), and conducted additional tests with group mean centering. All of the cross-level interactions remained significant. Those results show that our results are robust and that the way we centered our variables did not change our findings.

Additional Analysis

External validity. To add additional external validity to our model, we show that managers' and CSRs' motivation is positively related to the objectively observed service technology adoption data (measured as sales generated with the new service technology).[2] Employing ordinary least squares regressions, we show that manager's and CSRs' motivation influences actual use behavior.

For the service unit level, we operationalized CSRs' motivation as the average of employees' motivation in the respective service unit. The indexes of within-group agreement (ICC[1], ICC[2]) and median within-group agreement (rwg) justified this aggregation (Bliese 2000; James, Demaree, and Wolf 1984). We first entered the aggregated CSR motivation and manager motivation. In the next step, we added the interaction term of managers' and CSRs' motivation. The manager's motivation ($\beta = .22$, $p < .01$), CSR's motivation ($\beta = .20$, $p < .01$) and their interaction term ($\beta = .15$, $p < .01$) had a strong impact on the business unit's objective service technology adoption. These results add additional external validity to our model, as managers' and CSRs' motivation significantly impacts actual use behavior. Table 3 reports these results.

----- Insert Table 3 about here -----

Indirect effect of motivational spillover. We found that under certain conditions, the manager's motivational components transfer to CSRs' motivational components, and these in turn influence CSRs' service technology adoption. However, Homburg, Wieseke, and Kuehnl (2009) show that a manager's technology adoption might have a direct influence on the CSR's technology adoption. Therefore, in an additional analysis, to explore the validity of the motivation spillover effect, we test whether the motivation spillover effect exists beyond the

direct effect of a manager's technology adoption on CSRs' technology adoption. To do that, we test whether the CSRs' motivation mediates the relationship between the manager's motivation and the CSRs' technology adoption, while, importantly, controlling for the direct effect of the manager's technology adoption on CSRs' technology adoption.

We used a mediational model that combines single-level and multilevel modeling. The model is characterized as a 2 →1 → 1 multilevel mediation model (Krull and MacKinnon 2001), in which the initial variable (managers' motivation) is measured at the macro level and both the mediator (CSR's motivation) and the outcome (CSRs' service technology adoption) are individual-level variables. We apply the parametric bootstrap method, which involves the use of parameter estimates between the independent variable and the mediator as well as the mediator and the dependent variable, while controlling for manager's service technology adoption and the covariates in our framework.[3] Following recommendations in the literature, we used 20,000 repetitions and the percentile method to create a 95% interval of the hypothesized indirect effect, relying on an SPSS macro (Hayes 2005).

Bootstrapping demonstrated that zero did indeed fall outside the confidence interval of the hypothesized effect (95% CI: lower limit = .17, upper limit = .90). Thus, managers' motivation has a positive and significant effect on CSRs' service technology adoption, which runs indirectly through CSRs' motivation while controlling for managers' service technology adoption ($p < .05$). By and large, the results of this mediation analysis confirm the existence of the significant indirect motivation effect on CSR technology adoption that extends beyond the direct effect of managers' technology adoption on CSR technology adoption. Table 4 provides an overview of the results of the study.

----- Insert Table 4 about here -----

DISCUSSION

Research Issues

The aim of this paper was to explore the motivation dissemination in the manager–CSR dyad. Despite the undisputed importance of motivating CSRs as the first representatives of a company, the effect of manager motivation on CSR motivation has not previously been investigated, especially in the area of service technology implementation.

In response to this neglect, we developed a conceptual framework based on the concept of a motivation spillover principle from manager to CSR and its consequence for service technology adoption. Using a linked multilevel sample of 387 service unit managers, 1,018 CSRs, and objective firm data, we tested our motivation spillover framework. Both the findings from the empirical analyses and the multilevel design of our study have a number of important academic and practical implications, particularly in terms of gaining a broader understanding of the means by which managers can influence employee motivation. To best of our knowledge, this study is the first to investigate motivation dissemination through the different hierarchical levels of an organization.

Our study makes several contributions to research on motivation and leadership. First, drawing on expectancy theory, social learning theory, and charismatic leadership, we find support for our hypothesis that a motivation spillover from manager to CSR exists. Our results reveal the occurrence of an indirect multilevel motivation spillover of managers' motivation to CSRs' motivation, which then leads to CSRs' service technology adoption. Importantly, this effect exists incrementally beyond the direct effect of manager service technology adoption behavior on CSRs' adoption behavior. Thus, we discover an alternative motivational effect on CSRs' task-specific behavior.

Specifically, the main effects in our hierarchical regression model show that the motivational components derived from expectancy theory, namely expectancies and instrumentalities, transfer directly from managers to CSRs, while valences do not transfer. Further, our moderation analysis shows that the spillover of expectancies, instrumentalities, and valences strongly depends on charismatic leadership and manager–CSR similarity. Under

low charismatic leadership or low manager–CSR similarity, expectancies and instrumentalities do not transfer from service unit manager to CSR. However, under high charismatic leadership or high manager–CSR similarity, we observe an enhanced transfer of expectancies and instrumentalities from manager to CSR.

Concerning the spillover of valences from manager to CSR, this transfer requires either charismatic leadership or age similarity of managers with their CSRs. However, in contrast to the transfer of expectancies and instrumentalities, under the condition of low charisma or low manager–CSR similarity, we observe a "backfiring effect," in that an increase in the manager's valence reduces the CSR's valence. This reaction of the CSR indicates that the CSR will adopt the manager's valences only under the very specific condition of a high level of identification between manager and CSR. This phenomenon can be attributed to the notion that valences, which are conceptually close to personalized values and thus integrated into the self concept, are more resistant to social pressure than expectancies and instrumentalities.

On a methodological level, another contribution of our study is to address the inadequate examination of levels-of-analysis issues by leadership research (Yammarino et al. 2005). Although the value of such work is not in question, a single level of analysis may not appropriately account for the multilevel nature of the motivation construct in the leader–follower dyad. Our use of a hierarchical study design, which accounts for CSRs being nested within managers, addresses the call in leadership research to consider multiple levels of analysis (Avolio et al. 2009).

Managerial Implications

In view of the critical role of CSRs as "first representatives" of a service firm and the relationship of this role to the high costs of employee disengagement, motivating CSRs to achieve their highest performance levels is a major challenge for service firms. Our study provides several important implications for organizations and managers.

First, we find that managers are critical multipliers of task-specific motivation for CSRs. Consequently, to motivate CSRs to perform a certain task, such as adopting a service technology, large-scale organizations must concentrate their motivation efforts to a greater extent on middle-level managers. When middle-level managers are truly convinced and motivated to perform the task, their motivation will spread quickly to their frontline employees. As middle-level managers usually have a certain span of control, directing motivation efforts at them is an efficient and resourceful way of stimulating workforce motivation concerning a given task. In contrast, if companies neglect middle-level managers and fail to involve them when aiming to motivate CSRs, middle-level managers may become serious roadblocks to employee motivation, as their disengagement spills over to their employees. This implication appears to be particularly significant, since organizations primarily target frontline employees rather than extending their focus to their managers.

Second, we find that the spillover of task-specific motivation from managers to CSRs is enhanced when leaders are charismatic and the age similarity with their employees is high. Thus, to successfully implement a new service technology, organizations should identify service units with either charismatic managers or managers that are of an age similar to their employees and use them as starting points for the service technology introduction. Identifying charismatic managers should be possible, as charismatic leaders are found to "stand out in a crowd" (De Vries, Roe, and Taillieu 1999, p. 110). In those service units selected, the manager's motivation should spill over rapidly to the employees, making those service units examples of best practices that facilitate the diffusion of the new technology in the company.

Third, manager training should sensitize managers that employees must discern their motivation concerning a given undertaking. As motivating employees is an essential managerial task, making use of motivation spillover to engender employee motivation is not only the manager's responsibility but also strongly in the manager's interest. Managers must be profoundly aware of motivation spillover and thus be motivated themselves concerning a

specific task. Providing managers with that knowledge endows them with a powerful lever to influence their employees. To make optimal use of motivation spillover, managers should distinctly exhibit their own motivation to their employees. They should (1) display confidence in solving the task and show their conviction that effort leads to the desired performance (expectancy), and (2) display confidence that achieving the desired level of performance leads to certain outcomes (instrumentality) and that those outcomes are cherished and important (valence).

Limitations, Conclusions and Directions for Future Research

As with all research, our study has some limitations that restrict its interpretation and generalizability. An ideal design to clarify a causal direction would be one in which causation across time helps to reduce the likelihood of reversed causality. Therefore, in our study, we compiled data on motivation at two separate points in time, collecting data on the CSRs' level two months after the service unit managers' survey. Although this temporal order is an indicator for a causal direction of the effects from managers' variables on service personnel's variables, analyzing longitudinal data would be the ideal way to control for reverse causality. For example, highly motivated CSRs who are adopting new technologies fast might have an influence on leaders' motivation and adoption behaviors as well, although this bottom-up influence of emerging leaders among followers might be an exception rather than the rule.

Running of a profound test for causation requires a fully cross-lagged model. As recommended by de Jonge et al. (2001), for a systematic evaluation a baseline model including only stability paths must be compared to more complex models incorporating cross-lagged paths. Since we surveyed the service unit managers and their CSRs at two different points in time, we could not test the model for cross-lagged effects. Further research using longitudinal data or an experimental design could address these limitations. In this regard, an examination of the stability of motivational effects might also be interesting.

Moreover, we are limited to providing a conceptual explanation for the motivation spillover mechanism based on social learning theory, but cannot offer a measurement for the mechanism. In this, we are in line with several recent works in leadership research that draw on social learning theory as a theoretical foundation without operationalizing it (Tucker et al. 2010; Chen et al. 2007; Mayer et al. 2009; Brown, Trevino, and Harrison 2005). However, future research should investigate the underlying mechanisms of motivation spillover by measuring social learning and test it as a mediator of the relationship between manager and CSR motivation.

Finally, additional research is necessary to identify other potential moderators and mediators of the relationship between managers and CSRs, such as organizational and relational identification (Hogg 2001; Kelman 1958; Sluss and Ashforth 2007) and compensation (Anderson 1985). Furthermore, additional variables should be examined to rule out effects that might result from factors related to the organizational context of the respondents, such as organizational climate (Schneider et al. 2005).

In conclusion, the model and results presented here clearly constitute an important first step in understanding the transfer of motivation in the manager–CSR dyad. The motivation spillover from manager to CSR is of high importance for service companies and leadership researchers alike, and we make an unprecedented discovery of an effect which describes how manager motivation transfers to CSRs. A deeper understanding of the process and drivers of motivation spillover from manager to CSR is certainly valuable.

TABLE 1- Means, Standard Deviations, and Intercorrelation Matrix

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Level 2: Managers																			
1. Expectancy	(.86)																		
2. Instrumentality	.34	(.75)																	
3. Valence	.29	.27	(.78)																
4. Service Technology Adoption	.29	.35	.26	(.89)															
5. Charismatic Leadership	.33	.41	.21	.37	(.90)														
6. Org. Training and Support	.09	25	.31	.28	.12	(.87)													
7. Job Satisfaction	.13	.14	.12	.26	.31	.21	(.84)												
8. Commitment	.23	.30	.26	.28	.52	.31	.42	(.72)											
9. Service Experience	.01	.02	.05	.02	.06	.07	.02	.05	_[a]										
Level 1: CSRs																			
10. Expectancy	.25	.09	.08	.05	.10	.08	.07	.15	-.09	(.82)									
11. Instrumentality	.05	.21	.06	.11	.06	.07	.03	.07	.12	-.07	(.81)								
12. Valence	.05	.02	.11	.08	.09	.03	.02	.07	.02	.06	-.05	(.72)							
13 . Service Technology Adoption	.03	.04	.05	.03	.06	.03	.03	.04	-.03	.41	.32	.29	(.87)						
14. Mgr-CSR Age Similarity	.03	.01	.03	.04	.02	.02	.05	.06	.04	.05	.06	.08	.02	_[a]					
15. Mgr-CSR Gender Similarity	.01	.02	.01	.02	.02	.02	.02	.03	.03	.04	.04	.05	.03	,05	_[a]				
16. Organizational Commitment	.06	.05	.07	.04	.04	.01	.03	.00	.04	.39	.12	.31	.35	.04	.04	(.83)			
17. Job Satisfaction	.07	.06	.08	-.01	.01	.03	-.01	-.03	-.04	.27	.16	.23	.34	.05	.02	.59	(.74)		
18. Org. Training and Support	.05	.04	.06	-.01	.09	.03	.05	.12	-.04	.15	.21	.18	.23	.02	.03	.12	.16	(.76)	
19. Service Experience	-.06	-.02	-.04	-.07	-.11	-.03	.11	-.05	.04	.09	.08	.07	.16	.04	.05	.24	.05	.02	-.02
M	4.62	4.67	4.64	5.37	5.39	3.57	5.04	5.26	12.9	4.12	4.23	4.21	5.82	18.10	.45	5.48	4.97	4.06	5.36
SD	1.24	1.03	1.09	1.32	.85	1.20	.99	.94	8.51	1.49	1.12	1.26	1.07	11.21	.49	1.31	1.19	.58	2.89
Average variance extracted	.61	.67	.53	.59	.52	.59	.66	.51	_	.67	.60	.59	.65	_	_	.70	.55	.56	_

$|r| \geq .07$ significant at $p < .05$ (two-tailed).
$|r| \geq .09$ significant at $p < .01$ (two-tailed).
[a]Constructs are measured by a single item.
Notes: Correlations based on scores disaggregated per CSR are below the diagonal (CSRs: N = 1,018), and Cronbach's (1951) internal consistency reliability coefficients appear on the diagonal. We measured service experience in years.

TABLE 2: Results of Analyses

	Dependent Variables				
	CSR's Expectancy	CSR's Instrumentality	CSR's Valence	CSR's Service Tech. Adptn	Mgr's Service Techn. Adptn
Independent Variables	γ (SE)	γ (SE)	γ (SE)	β (SE)	β (SE)
Simple Effects					
Mgr's Expectancy **[H1a]**	**.161** (.026)**	.051 (.046)	.013 (.037)		
Mgr's Instrumentality **[H1b]**	.012 (.037)	**.247** (.042)**	.034 (.027)		
Mgr's Valence **[H1c]**	.011 (.037)	.035 (.036)	**.023 (.027)**		
Mgr's Charismatic Leadership	.104** (.031)	.130** (.030)	.078** (.029)		
Mgr-CSR Age Similarity	.082 (.066)	.013 (.027)	.056 (.078)		
Mgr-CSR Gender Similarity	.050 (.043)	.041 (.029)	.052 (.048)		
CSR's Motivation **[H4a]**				**.195** (.023)**	
Mgr's Motivation **[H4b]**					**.263** (.019)**
Interaction Effects					
Mgr's Expectancy x Mgr's Charismatic Leadership **[H2a]**	**.134** (.043)**	.073 (.089)	.024 (.019)		
Mgr's Instrumentality x Mgr's Charismatic Leadership **[H2b]**	.081 (.070)	**.181** (.061)**	.019 (.023)		
Mgr's Valence x Mgr's Charismatic Leadership **[H2c]**	.055 (.057)	.104 (.93)	**.122** (.045)**		
Mgr's Expectancy x Mgr-CSR Age Similarity **[H3a]**	**.121** (.051)**	.032 (.029)	.058 (.067)		
Mgr's Instrumentality x Mgr-CSR Age Similarity **[H3b]**	.070 (.069)	**.142** (.032)**	.024 (.019)		
Mgr's Valence x Mgr-CSR Age Similarity **[H3c]**	.091 (.079)	.017 (.021)	**.130** (.039)**		
Mgr's Expectancy x Mgr-CSR Gender Similarity **[H3a]**	.071 (.068)	.059 (.047)	.080 (.092)		
Mgr's Instrumentality x Mgr-CSR Gender Similarity **[H3b]**	.041 (.057)	.103 (.99)	.073 (.092)		
Mgr's Valence x Mgr-CSR Gender Similarity **[H3c]**	.089 (.094)	.023 (.037)	.099 (.094)		
Controls					
Organizational Training and Support (CSR & Mgr)				.091** (.012)	.078** (.037)
Job Satisfaction (CSR & Mgr)				.135** (.050)	.097 (.059)
Commitment (CSR & Mgr)				.078** (.026)	.057* (.029)
Service Experience (CSR & Mgr)				-.083 (.041)	.002 (.057)
Mean of individual-level CSR's Expectancy per service unit	.201** (.060)	.094 (.078)	.023 (.036)		
Mean of individual-level CSR's Instrumentality per service unit	.056 (.042)	.251** (.069)	.072 (.070)		
Mean of individual-level CSR's Valence per service unit	.054 (.050)	.067 (.062)	.101* (.051)		
Co-worker's Expectancy	.206** (.063)	.071 (.070)	.039 (.046)		
Co-worker's Instrumentality	.042 (.037)	.260** (.078)	.085 (.079)		
Co-worker's Valence	.061 (.052)	.085 (.079)	.123* (.062)		
Pseudo R^2	.233	.271	.208		
Adj. R^2				.197	.176
F-Value				53.60	47.82

$p < .05$ ** $p < .01$.

Notes: Significance is based on one-tailed tests for proposed directional relationships. CSR = Customer Service Representative, Mgr = Manager, Service Tech. Adptn. = Service Technology Adoption.

TABLE 3:
Hierarchical Regression Results for Objective Service Technology Adoption

Predictor	OSTA = $\beta_0 + \beta_1(MMOT) + \beta_2(CMOT) + \beta_3(MMOT \times CMOT) + r_i$	
	Step 1 Standardized β (t-Value)	Step 2 Standardized β (t-Value)
Step 1		
Manager Motivation (β_1)	.23** (7.88)	.22** (7.46)
CSR Motivation (β_2)	.18** (3.29)	.20** (3.41)
Step 2		
Manager Motivation x CSR Motivation (β_3)		.15** (5.21)
F-value	19.89**	20.47**
R^2	.09	.11
Adjusted R^2	.086	.105
ΔR^2		.02**

*p < .05, **p < .01.
Notes: OSTA = Objective Service Technology Adoption, CSR = Customer Service Representative, MMOT = Manager's Motivation, CMOT = CSR's Motivation.

TABLE 4:
Overview of the Results

	Independent Variable	Dependent Variable	Moderator	Hypothesized Effect	Results
Main Effects of Motivation Transfer					
H1a	Manager's Expectancy	CSR's Expectancy		+	✓
H1b	Manager's Instrumentality	CSR's Instrumentality		+	✓
H1c	Manager's Valence	CSR's Valence		+	X
H4a/b	Manager's / CSR's Motivation	Manager's / CSR's Service Technology Adoption		+	✓
Contingency Factors of Motivation Transfer					
H2a	Manager's Expectancy	CSR's Expectancy	Charismatic Leadership	+	✓
H2b	Manager's Instrumentality	CSR's Instrumentality	Charismatic Leadership	+	✓
H2c	Manager's Valence	CSR's Valence	Charismatic Leadership	+*	✓ *
H3a	Manager's Expectancy	CSR's Expectancy	Manager-CSR Similarity	+	(✓)
H3b	Manager's Instrumentality	CSR's Instrumentality	Manager-CSR Similarity	+	(✓)
H3c	Manager's Valence	CSR's Valence	Manager-CSR Similarity	+*	(✓)*

*Backfiring effect for uncharismatic managers or low Manager-CSR Similarity: Manager's valence has negative effect on CSR's valence.

(✓) Supported for Age Similarity; not supported for Gender Similarity.

FIGURE 1
Conceptual Framework
Multilevel Motivation and its Effects on Service Technology Adoption

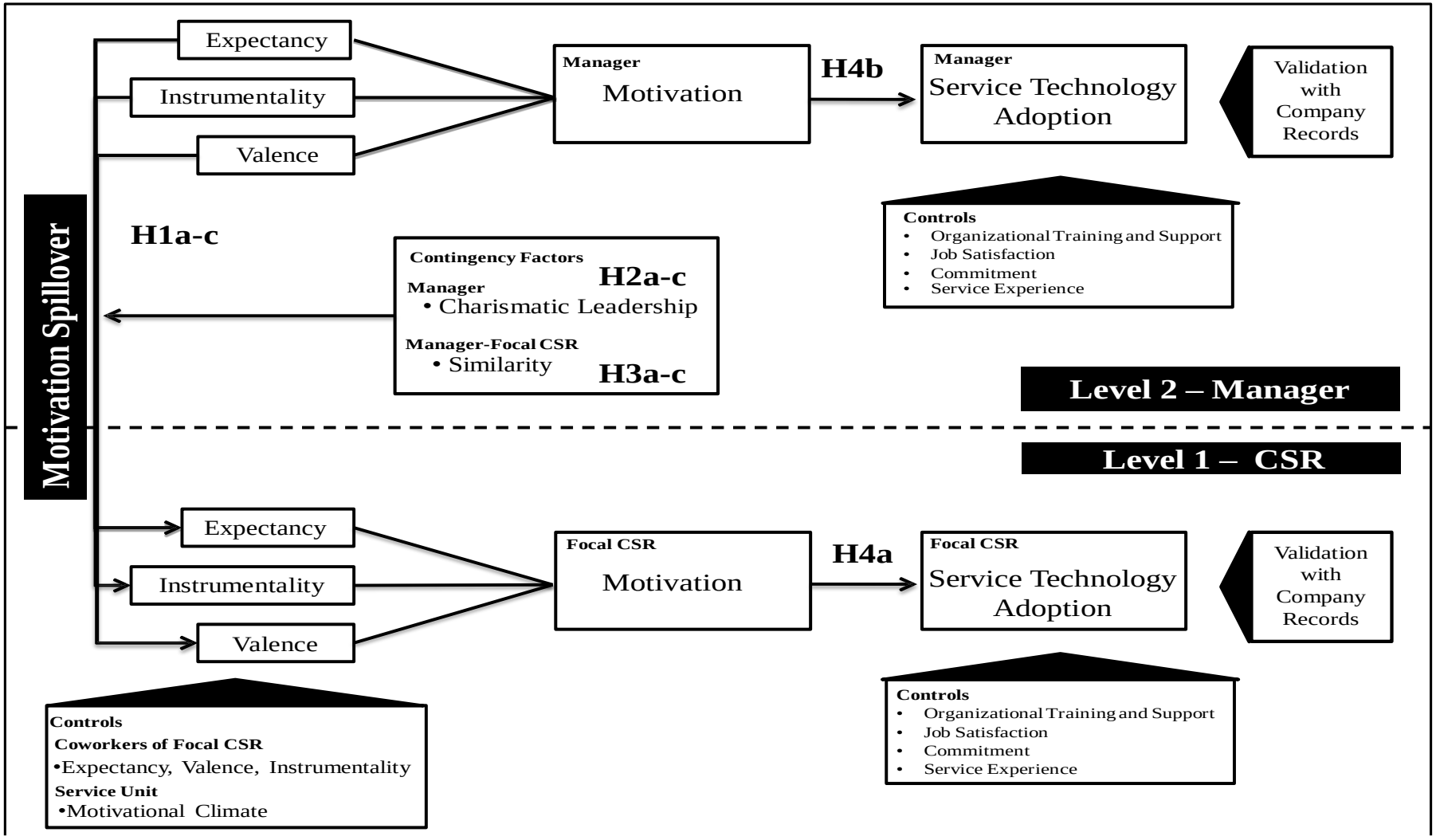
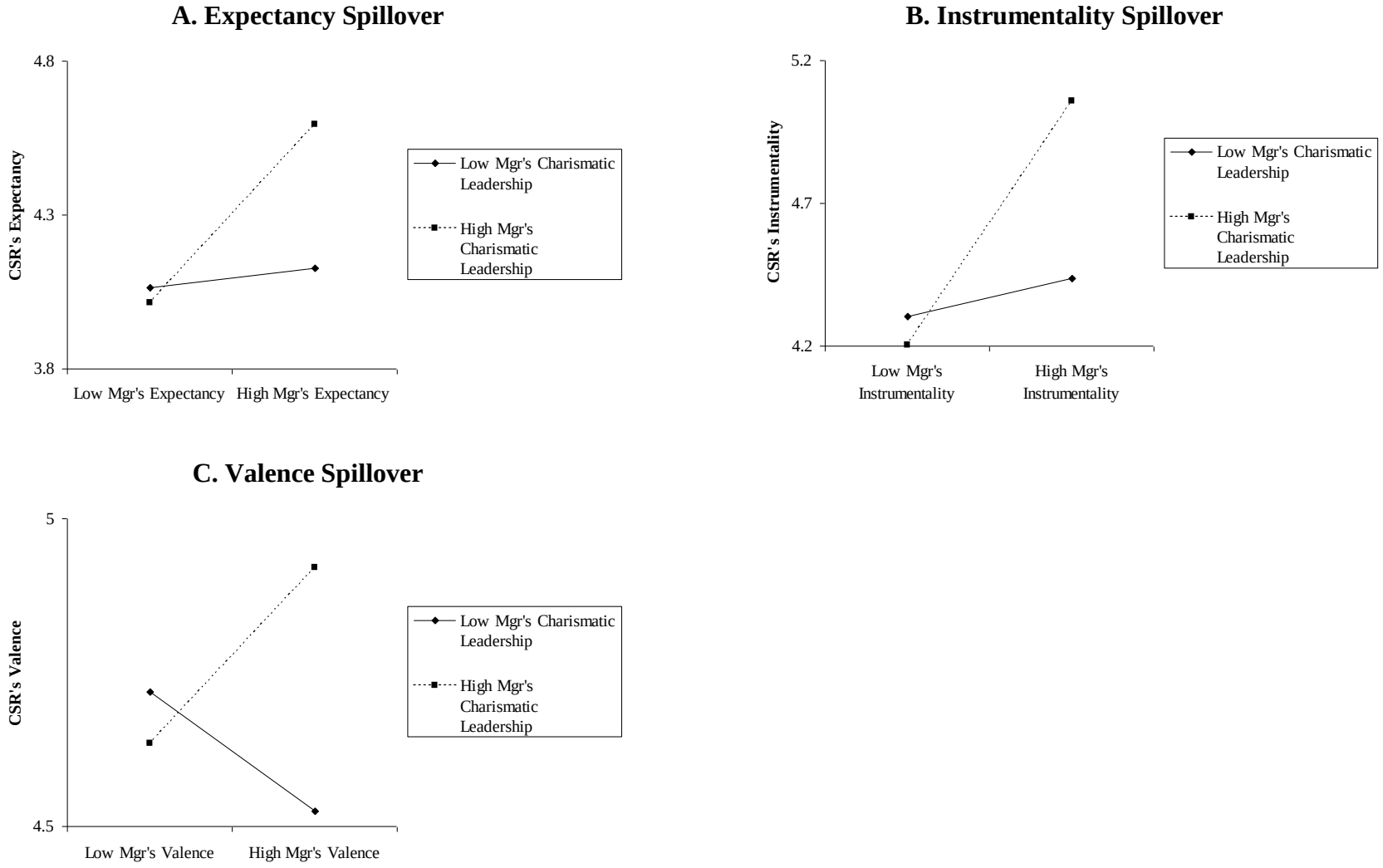
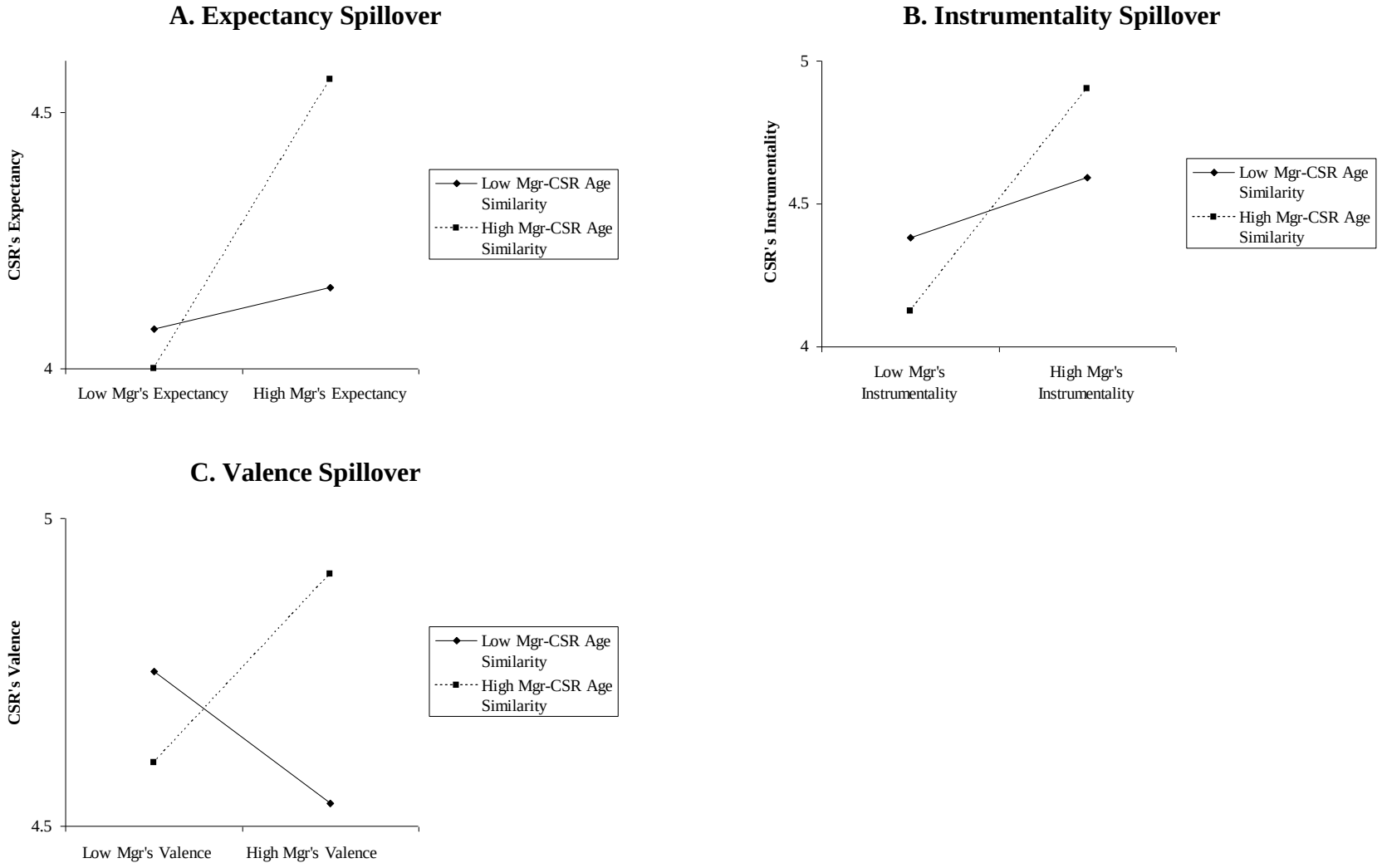


FIGURE 2
Managers' Charismatic Leadership as Moderator of Motivation Spillover



Notes: CSR = Customer Service Representative, Mgr = Manager.

FIGURE 3
Managers-CSR Age Similarity as Moderator of Motivation Spillover



Notes: CSR = Customer Service Representative, Mgr = Manager.

Appendix A

Measurement Scales

Scales

Motivation (Managers, CSRs)
Source: adapted from Sanchez, Truxillo, and Bauer 2000
(1 = "strongly disagree," and 7 = "strongly agree")
Valence: What is important to you concerning your work?
The success of our travel agency is important to me.
A sustainable customer satisfaction is important to me.
A high customer retention is important to me.
Making greater use of my skills and abilities on my job is important to me.
An interesting and diversified work is important to me.
Avoiding stress at work is important to me.
Avoiding extra work in my job is important to me.
Instrumentality: By using the new system …
our travel agency is more successful.
our customers are sustainable satisfied.
customer retention can be generated.
I can make greater use of my skills and abilities on my job.
my responsibilities are more diversified.
I have a lot more stress at work. (reverse coded)
it requires a lot of extra time. (reverse coded)
Expectany
If I try, I succeed in using the new service technology system for all my service activities.
If I put all my efforts in it, I can use the new service technology system.
Concentrating on the new service technology tool's usage, it is no problem for me to use it.

Service Technology Adoption (Managers, CSRs)
Source: adapted from Jelinek et. al. 2006
(1 = "strongly disagree," and 7 = "strongly agree")
I consider myself a frequent user of the new service automation tool.
I fully use the capabilities of the new service automation system.
I have completely integrated the new service automation system into my service process.
I utilize the new service automation tool as often as I can.
The new service automation tool is the most frequently used system, when I make flight arrangements [CSRs].

Charismatic Leadership (Managers)
Source: adapted from Conger and Kanungo 1998
(1 = "strongly disagree," and 7 = "strongly agree")
I am very successful in inspiring my employees for a shared vision.
I can inspire my employees even on bad days.
In difficult times I find it easy to convey a sound optimism to my employees.
I have a vision that I try achieve with creative ideas.
I provide inspiring strategic and organizational goals.
I permanently create new ideas to make my travel agency ready for the future.
I am an entrepreneurial person and readily take opportunities.
I recognize new opportunities in the market that may facilitate our achievement of organizational objectives.
I am able to motivate my employees by articulating effectively the importance of what they are doing.
I am a convincing representative to the external public.

Appendix A (continued)

Measurement Scales

Scales

Co-Workers' expectancy, instrumentality and valence

The average of expectancy, instrumentality and valence of all coworkers, i.e., an average of all CSRs' expectancy, instrumentality and valence in the service unit, excluding the focal CSR's motivational components.

Expectancy climate, instrumentality climate and valence climate

Mean level of CSRs' expectancy, instrumentality and valence in each service unit.

Organizational Training and Support (**Managers, CSRs)**
Source: adapted from Goodhue and Thompson 1995; Thompson and Higgings 1991
(1 = "strongly disagree," and 7 = "strongly agree")
During the implementation stage of the service technology...

I was provided with detailed training.
I was regularly provided with advice and tips for its usage.
I was provided with sufficient information by my company.
I was provided with support by my company.
there has been the possibility to receive adequate support in case of doubt.
I was provided with support by my company [Manager].
I was provided with information by my company [Manager].

Job Satisfaction (Managers, CSRs)
Source: Hackman and Oldham 1975
(1 = "strongly disagree," and 7 = "strongly agree")

Generally speaking, I am very satisfied with this job.
I am generally satisfied with the kind of work I do in this job.
I frequently think of quitting this job. (reverse coded)

Commitment (Managers, CSRs)
Source: Allen and Meyer 1990
(1 = "strongly disagree," and 7 = "strongly agree")

I would be very happy to spend the rest of my career with this travel agency.
I feel 'emotionally attached' to this travel agency.
I feel a strong sense of belonging to my travel agency.

Employee-Customer Similarity

Absolute Manager-CSR Age-Discrepancy (reverse coded)
Absolute Manager-CSR Gender-Similarity (dummy variable, same gender coded as '1', otherwise coded '0')

Managers / CSRs service experience: Number of years working that manager and CSRs works in the service context.

Objective Service Technology Adoption (Generated sales with the new service technology)

NOTES

1. This aspect appears to be common for many service firms. Also, as is commonly the case, both managers and service representatives were free to choose whether to adopt or reject the new service technology.

2. For the calculation of motivation we relied on Vroom's multiplicative approach: Motivation = Expectancy * Instrumentality * Valence.

3. We diverge from Baron and Kenny's (1986) approach and instead use the bootstrapping method, for reasons outlined by Shrout and Bolger (2002). Multiple authors in marketing (e.g. Rucker and Galinsky 2008; Ye, Marinova, and Singh 2007; De Luca and Atuahene-Gima 2007) and management (e.g. Giessner and van Knippenberg 2008; Eisenbeiss, Boerner, and van Knippenberg 2008; Smith, Collins, and Clark 2005) have applied the bootstrapping method to test for mediation. Pituch and Stapleton (2008), after comparing different methods, explicitly recommend bootstrapping over other methods for mediation analysis, and in particular for 2 →1→ 1 indirect multilevel effects like ours.

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