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Impact of High-Performance Work Systems on Individual- and Branch-Level Performance: Test of a Multilevel Model of Intermediate Linkages

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We proposed and tested a multilevel model, underpinned by empowerment theory, that examines the processes linking high-performance work systems (HPWS) and performance outcomes at the individual and organizational levels of analyses. Data were obtained from 37 branches of 2 banking institutions in Ghana. Results of hierarchical regression analysis revealed that branch-level HPWS relates to empowerment climate. Additionally, results of hierarchical linear modeling that examined the hypothesized cross-level relationships revealed 3 salient findings. First, experienced HPWS and empowerment climate partially mediate the influence of branch-level HPWS on psychological empowerment. Second, psychological empowerment partially mediates the influence of empowerment climate and experienced HPWS on service performance. Third, service orientation moderates the psychological empowerment–service performance relationship such that the relationship is stronger for those high rather than low in service orientation. Last, ordinary least squares regression results revealed that branch-level HPWS influences branch-level market performance through cross-level and individual-level influences on service performance that emerges at the branch level as aggregated service performance.

Keywords: high-performance work systems, empowerment climate, psychological empowerment, service orientation, service performance

The competitive global marketplace and the ease with which sources of competitive advantage such as product and technological innovations can be imitated have highlighted the importance of employee contributions as a critical resource in creating and sustaining competitive advantage. Accordingly, much research has focused on the strategic management of employees in order to unleash their productive potential (Batt, 2002). Predicated on the assumption that adoption of a specific organizational strategy aligned with a system of internally coherent human resource practices rather than individual isolated practices impacts organizational performance (Lepak, Liao, Chung, & Harden, 2006), research in strategic human resource management (SHRM) has examined the influence of the use of high-performance work systems (HPWS) on organizational performance. HPWS describes a "system of HR practices designed to enhance employees' skills, commitment, and productivity in such a way that employees become a source of sustainable competitive advantage" (Datta, Guthrie, & Wright, 2005, p. 136). Given the documented influence of the use of HPWS on performance (Combs, Liu, Hall, & Ketchen, 2006; Delery & Shaw, 2001), there is an increasing focus on explicating the intermediate linkages in this relationship (Chuang & Liao, 2010; Evans & Davis, 2005; Gong, Law, Chang, & Xin, 2009; Liao, Toya, Lepak, & Hong, 2009; Sun, Aryee, & Law, 2007; Takeuchi, Lepak, Wang, & Takeuchi, 2007). For example, research has examined collective human capital and social exchange climate (Takeuchi et al., 2007), organizational commitment (Gong et al., 2009), and service-oriented citizenship behavior (Sun et al., 2007) as underlying mechanisms of the influence of the use of HPWS on organizational performance.

Although much is now known about these intermediate linkages, the extant literature has yielded only limited insights into the influence of the use of HPWS on employee outcomes. This is particularly unfortunate, as human resource (HR) practices have been argued to influence performance through employee attitudes and behavior (Bowen & Ostroff, 2004). Although recent research has started to address this gap, it has focused exclusively on individual-level attitudinal and behavioral outcomes (Kehoe & Wright, 2010; Liao et al., 2009; Snape & Redman, 2010; Takeuchi, Chen, & Lepak, 2009). Consequently, there is a need for "multilevel research to examine simultaneously the impact and influence processes of HPWSs on performance outcomes at both the individual and unit levels of analysis" (Liao et al., 2009, p. 388). This is particularly important if we are to more accurately understand how and why individual and organizational influences shape the performance effects of the use of HPWS and thereby provide organizations and their managers with actionable knowledge about how to use HR practices effectively to create and sustain competitive advantage. Further, although the relative dearth of HPWS

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research in the service relative to the manufacturing sector has increasingly been addressed (Batt, 2002; Chuang & Liao, 2010; Liao et al., 2009; Sun et al., 2007), much of this research has examined social exchange theory and the resource-based view (human capital) to account for the demonstrated influence of HPWS on performance (Batt, 2002; Chuang & Liao, 2010; Takeuchi et al., 2007). This has resulted in a neglect to model the influence of empowerment in the intermediate linkages between the use of HPWS and its performance outcomes (Liao et al., 2009). This is an important oversight, especially given the critical role of empowerment in theorizations of the HPWS–performance relationship (Applebaum, Bailey, Berg, & Kalleberg, 2000; Delery & Shaw, 2001) as well as in the performance of customer contact employees (Bowen & Schneider, 1988; Peccei & Rosenthal, 2001).

Based on data obtained from the banking sector in Ghana, an emerging economy, this study aimed to further this stream of research by simultaneously examining multilevel intermediate linkages between the use of and employee experience of HPWS and individual- and branch-level performance outcomes. Informed by Bowen and Ostroff's (2004) recommendation that HR management practices should be driven by an organization's strategy focus, Liao et al. (2009) developed an HPWS for service quality, which we employed in this study. Although the constituent dimensions of HPWS for service quality reflect those used in the extant HPWS research, they are driven by a focus on enhancing service quality. We examined a cross-level model (shown in Figure 1) comprising branch-level variables (use of HPWS, empowerment climate, and branch-level market performance) and individual-level variables (experienced HPWS, psychological empowerment, service orientation, and service performance). We posit the use of HPWS (hereafter called branch-level HPWS) to influence empowerment climate. We further posit experienced HPWS and empowerment climate to mediate the influence of branch-level HPWS on psychological empowerment, psychological empowerment to mediate the influence of empowerment climate and experienced HPWS on service performance, and service orientation to moderate the influence of psychological empowerment on service performance. We also posit the emergence of individual-level service performance at the branch level or aggregated service performance to influence branch-level market performance.

By pursuing these objectives, this study contributes to the literature in three ways. First, we add to the limited research (e.g., Gittell, Seidner, & Wimbush, 2010; Liao et al., 2009; Takeuchi et al., 2009) that has responded to Ostroff and Bowen's (2000) call for a multilevel approach to understanding the HPWS–performance relationship. By adopting a multilevel perspective, our study explicitly recognizes the integrated nature of organizations such that individual and organizational characteristics combine to influence individual and organizational outcomes (Kozlowski & Klein, 2000).

Second, although we did not examine a homologous model of the effects of psychological empowerment on performance (Chen, Kirkman, Kanfer, Allen, & Rosen, 2007; Seibert, Wang, & Courtright, 2011), we extend research on empowerment in a number of ways. We examined the cross-level mediating influence of empowerment climate on the relationship between branch-level HPWS and psychological empowerment. Additionally, by examining the moderating influence of service orientation on the psychological empowerment–service performance relationship, we extend the limited research on the boundary conditions of psychological empowerment to the individual level. Previous research examined the contextual boundary conditions of team empowerment (Chen et al., 2007) and industry differences (Seibert et al., 2011). Understanding the boundary conditions of this relationship should provide valuable knowledge for managers in enhancing the effectiveness of empowerment practices.

Last, theorizing in SHRM has suggested employee behavior as a mediator of the climate–performance relationship (Ostroff & Bowen, 2000). Yet research that adopts a macro-level perspective has failed to examine why climate relates to organizational performance (Chuang & Liao, 2010; Sun et al., 2007; Takeuchi et al., 2007). By examining the cross-level processes through which branch-level HPWS influences individual service performance, which emerges at the branch level as aggregated service performance, we provide a more complete test of theorizing in SHRM

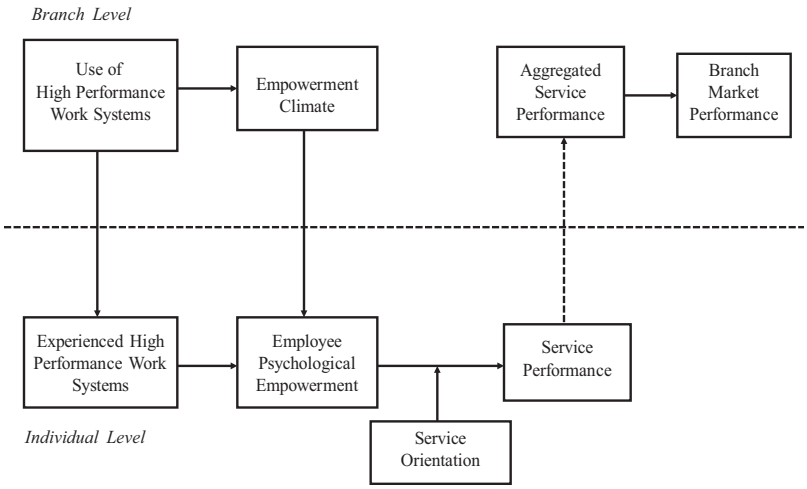

Figure 1. Hypothesized model.

research that conceptualizes aggregated employee behavior as an antecedent of organizational performance (Wang & Walumbwa, 2007).

Theoretical Framework and Hypotheses

Branch-Level HPWS and Empowerment Climate

Empowerment theory draws its conceptual heritage from organizational, societal, and cultural forces that render individuals powerless at the workplace (Liden, Wayne, & Sparrowe, 2000). Consequently, it focuses on the restructuring of work environments to deemphasize top-down control systems and move decision-making authority to lower levels of the organizational hierarchy. Implicit in this heritage is a social structural perspective on empowerment that focuses on organizational structures, policies, and practices that enable employees at lower levels of the organizational hierarchy to experience self-control at work (Bowen & Lawler, 1995; Kanter, 1977). Although Kanter initially conceptualized empowerment in terms of these organizational structures and policies, research now considers them as contextual antecedents of empowerment (Seibert et al., 2011). Although a number of contextual antecedents of empowerment have been identified in the literature (Kirkman & Rosen, 1999; Seibert et al., 2011), we focused in this study on branch-level HPWS. This is because the constituent dimensions of HPWS, such as participatory decision making, high levels of training, decentralization, and information sharing collectively, reflect an empowering structure and describe some of the social structural sources of empowerment identified in the literature (Liden et al., 2000; Seibert et al., 2011; Spreitzer, 2008).

Climate reflects the meaning employees ascribe to the general pattern of organizational activities and therefore constitutes the tone and atmosphere in which employees work (Schneider, White, & Paul, 1998). As multiple climates oftentimes coexist in an organization, Schneider (1990) was among the earliest to note that different climates can be formed in an organization, depending on its strategic foci. Given the increasing focus on empowerment as a foundational construct in motivating customer contact employees (Bowen & Lawler, 1995), it is surprising that research has not examined the role of empowerment climate in the HPWS–performance relationship.

Empowerment climate has been defined as "a shared perception regarding the extent to which an organization makes use of structures, policies, and practices supporting employee empowerment" (Seibert, Silver, & Randolph, 2004, p. 334). Although much research has examined antecedents of psychological empowerment (Liden et al., 2000; Seibert et al., 2011), there is a paucity of research on empowerment climate and, to the best of our knowledge, only limited research has examined the influence of the use and employee experience of HPWS on psychological empowerment (Liao et al., 2009; Seibert et al., 2011). Consistent with the predictions of Salancik and Pfeffer's (1978) social information processing theory, Bowen and Ostroff (2004) noted that the use of HPWS can serve a signaling function by communicating messages to employees about a particular strategic focus, which in this context is empowerment of employees. The dimensions of HPWS, such as extensive training, performance-based compensation, and decentralized decision making, provide an opportunity to experience a sense of choice in initiating and regulating one's own actions. Employees' shared perception of these practices and the inherent messages as facilitating empowerment will come to define or set the tone for their work environment.

On the basis of previous research that linked HPWS to other types of climate, such as concern for employees (Chuang & Liao, 2010) and social exchange (Takeuchi et al., 2009), we expect branch-level HPWS to relate to empowerment climate. Thus, we propose the following:

> *Hypothesis 1:* Branch-level HPWS positively relates to empowerment climate.

Branch-Level HPWS, Empowerment Climate, and Psychological Empowerment

As noted earlier, a social structural perspective of empowerment focuses on structures, practices, and policies that provide employees opportunity, support, and resources to participate in work-related decisions. This perspective, however, describes facilitating conditions but does not address employees' experience of empowerment (Spreitzer, 2008; Thomas & Velthouse, 1990). Building on this theoretical foundation, Spreitzer (1995) conceptualized empowerment as a psychological state characterized by feelings of competence (an individual's belief in his or her capacity to perform activities with skill), self-determination or autonomy (an individual's sense of having or initiating and regulating actions), meaning (value of a work goal or purpose), and impact (degree to which an individual can influence outcomes at work). Delegation and compensation contingent on service quality will enable employees to experience self-determination at work. Extensive training will enhance the competence of employees, leading them to feel they are making an impact on the organization. Service discretion and team participation will enable employees to experience control, find meaning in their work, and feel they are making an impact in their organization. Although Liao et al. (2009) reported the use of HPWS or management-HPWS to be unrelated to psychological empowerment, we expect branch-level HPWS, as a form of social structural empowerment and consistent with the macro and micro views of empowerment (Seibert et al., 2004; Spreitzer, 2008), to influence the four cognitions of empowerment leading to psychological empowerment. We, however, posit this relationship to be indirect through empowerment climate.

Empowerment climate rests on three key pillars of information sharing, autonomy through boundaries, and accountability (Blanchard, Carlos, & Randolph, 1995). These dimensions should lead employees to interpret their work context as providing a sense of meaning in terms of their work role, the competence to discharge their task responsibilities, and a sense of making an impact on the organization (Kirkman & Rosen, 1999; Seibert et al., 2004). From a social information processing perspective, Salancik and Pfeffer (1978) argued that climate should influence how employees think and feel about aspects of their work environment. Specifically, employees rely on cues from the work environment to interpret organizational events, develop appropriate attitudes, and understand behavior-outcome expectancies. An empowerment climate provides a context in which employees can assume an active rather than a passive role, thereby fostering feelings of empowerment. Seibert et al. (2004) reported empowerment climate to relate

to psychological empowerment. It follows from the preceding discussion that empowerment climate is a key mechanism that potentially links branch-level HPWS with psychological empowerment. However, as previous research has shown a climate of concern for employees (Takeuchi et al., 2009) to influence attitudinal reactions to the use of HPWS, we posit empowerment climate to partially mediate the relationship between branch-level HPWS and psychological empowerment.

Hypothesis 2: Empowerment climate partially mediates the relationship between branch-level HPWS and psychological empowerment.

Branch-Level HPWS, Experienced HPWS, and Psychological Empowerment

Although research has predominantly focused on macro-level HPWS, recent theory and empirical findings suggest that macro-level HR practices are not applied uniformly across employee groups (Lepak, Taylor, Tekleab, Marrone, & Cohen, 2007; Wright & Boswell, 2002). This implies a potential disconnection between the use of HPWS and employees' actual experience of HPWS. Consequently, experienced HPWS may constitute a pathway through which the use of HPWS influences employees' attitudinal and behavioral reactions. Although Liao et al. (2009) reported a nonsignificant relationship between management-HPWS and experienced HPWS, a social information perspective (Salancik & Pfeffer, 1978) provides a theoretical justification to expect the two constructs to be related. Branch-level HPWS provides a contextual cue for employees that enables them to psychologically interpret their work environment. Consequently, we expect branch-level HPWS to relate to experienced HPWS.

The experience of the dimensions of HPWS for service quality, such as decentralized decision making, service quality-focused performance feedback, extensive service training, and performance contingent compensation, will lead employees to view their work environment as providing opportunities for self-direction at work that lead to feelings of psychological empowerment. Research has shown experienced or perceived HPWS to relate to psychological empowerment (Liao et al., 2009; Seibert et al., 2011). The preceding discussion suggests that branch-level HPWS relates to experienced HPWS and both relate to psychological empowerment. As the experience of an organizational practice is more likely to influence an employee's attitudinal and behavioral reactions than is the mere adoption of a practice, we expect experienced HPWS to mediate the influence of branch-level HPWS on psychological empowerment. Despite the plausibility of our arguments linking branch-level HPWS to psychological empowerment through experienced HPWS, the lack of empirical support for these relationships leads us to predict partial rather than full mediation. Recall that Liao et al. (2009) reported branch-level (management-HPWS) to be unrelated to both experienced (employee) HPWS and psychological empowerment.

Hypothesis 3: Experienced HPWS partially mediates the influence of branch-level HPWS on psychological empowerment.

Experienced HPWS, Empowerment Climate, and Service Performance: The Mediating Role of Psychological Empowerment

In this section, we examine the mediating role of psychological empowerment in the relationship between (a) the individual-level influence of experienced HPWS and (b) the cross-level influence of empowerment climate on service performance. Liao et al. (2009) defined service performance as "the overall professional appearance and the reliability, responsiveness, assurance, and empathy displayed by employees in serving customers" (p. 378).

The constituent HR practices that define HPWS for service quality include such practices as a performance appraisal system based on service quality, a compensation system that is contingent on service quality, service discretion, and extensive training in the provision of quality service. Collectively, the experience of these practices (or experienced HPWS) provides employees the knowledge, skills, abilities, motivation, and opportunity to adapt the service delivery to meet the unique demands of customers, leading to enhanced levels of service performance (Liao et al., 2009). Additionally, we predict empowerment climate to relate to service performance. The dimensions of empowerment climate (information sharing, autonomy through boundaries, and accountability) will collectively communicate to employees the organization's emphasis on providing employees the resources and support to provide quality service. Although research has yet to examine the influence of empowerment climate on service performance, other types of climate, such as service climate, have been shown to relate to service performance (Liao & Chuang, 2004) and empowerment climate has been reported to relate to task performance (Seibert et al., 2004). However, we expect the influence of these antecedents on service performance to be indirect through psychological empowerment.

Bowen and Lawler's (1995) distinction between a production-line and an empowerment approach in service contexts underscores the criticality of empowerment to employee performance in these contexts. Bowen and Lawler described the former as making customer-service interactions uniform and giving the organization control over these interactions. Although this approach may lead to efficiency and reliability, it does not provide the flexibility and sense of genuine concern expected by customers. In contrast, the empowerment approach looks to the performer of the tasks for solutions to service problems and is more consistent with contemporary definitions of service quality and prescriptions for its achievement (Peccei & Rosenthal, 2001). Empowerment theory is predicated on the assumption that empowered employees should perform better than those who are relatively less empowered (Thomas & Velthouse, 1990). As psychological empowerment suggests an active orientation toward one's work (Spreitzer, 2008), empowered employees will persist in the face of difficulties and demonstrate resourcefulness in responding to customer needs. Although Liao et al. (2009) reported a nonsignificant relationship between psychological empowerment and service performance, research has consistently reported psychological empowerment to relate to task performance (Kirkman & Rosen, 1999; Liden et al., 2000; Seibert et al., 2004, Seibert et al., 2011).

Taken together, the preceding discussion suggests that both experienced HPWS and empowerment climate relate to psychological empowerment. Moreover, because employee attitudinal

and behavioral reactions are influenced by organizational practices and employees' actual experience of these practices, we argue that psychological empowerment acts as an important mechanism through which empowerment climate as well as experienced HPWS influence service performance. However, as experienced HPWS has been shown to influence service performance through other mechanisms such as perceived organizational support and human capital (Liao et al., 2009), we propose a partial rather than a complete mediation.

Hypothesis 4a: Psychological empowerment partially mediates the influence of experienced HPWS on service performance.

Hypothesis 4b: Psychological empowerment partially mediates the influence of empowerment climate on service performance.

Moderating Influence of Service Orientation

As psychological empowerment has been noted to influence different types of performance (Seibert et al., 2011), Liao et al.'s (2009) finding of a nonsignificant relationship between psychological empowerment and service performance reinforces the call to examine boundary conditions of the psychological empowerment–performance relationship (Seibert et al., 2011; Spreitzer, 2008). Service orientation describes an individual's predisposition to provide superior service through responsiveness, courtesy, and a genuine desire to satisfy customer needs (Cran, 1994; Hogan, Hogan, & Busch, 1984).

The defining attributes of service, such as customer involvement, intangibility, and simultaneous production and consumption (Bowen & Schneider, 1988), suggest a critical role for individual differences in attending to customer needs. As the intangibility of service makes it difficult to control the customer experience, service orientation constitutes an internal control mechanism that enables customer contact employees to respond to this uncertainty. This is particularly important in the transition from a mass market to a molecular market requiring customer contact employees to have the ability to target individuals, engage in a dialogue with them, and personalize an offering that meets their requirements (Day & Montgomery, 1999).

Although customer contact employees who feel empowered will have the authority and resources to adapt their behavior to meet the unique demands or needs of each customer, we expect this relationship to be moderated by service orientation. Individuals high in service orientation will have the internal control to regulate their actions by way of anticipating customer needs and customizing the service delivery to meet these needs. Kennedy, Lassk, and Goolsby (2002) observed that customer contact employees who consider understanding customer needs and acting to satisfy these needs to be central to their job performance tend to perform better than those who do not have such beliefs. High service orientation individuals will be better able to identify customer preferences, adapt their behavior to different types of customers, and generally be more effective in influencing customer attitudes and behavior (Gwinner, Bitner, Brown, & Kumar, 2005). For high service orientation individuals, psychological empowerment will lead to service performance because they are more predisposed and able to customize the service offering to meet customer expectations. In contrast, for low service orientation individuals, psychological empowerment will be less strongly related to service performance. This is because they are less adequately attuned to the needs and preferences of customers and do not have the internal control to customize service in response to the uncertainty that the intangibility of service entails. Thus, we propose the following:

Hypothesis 5: Service orientation moderates the relationship between psychological empowerment and service performance in such a way that the relationship is more positive when service orientation is high than when it is low.

Aggregated Individual Service Performance and Branch-Level Performance

Although we examine processes through which branch-level HPWS influences individual service performance, service performance has also been shown to have branch-level properties (Chuang & Liao, 2010). Consequently, we also examine the possibility that branch-level and individual-level influences on individual service performance impact branch-level outcomes through the emergence of service performance at the branch level (aggregated individual service performance) leading to branch-level market performance. As used in this study, branch-level market performance is a perceptual measure that describes the performance of the branch in terms of economic outcomes such as profitability and market share (Delaney & Huselid, 1996).

We propose, grounded in the attraction, selection, and attrition framework (Schneider, 1987), that bank branches will tend to attract, select, and retain employees who are similar to each other and, as a consequence, demonstrate similar behavioral tendencies. As a branch's customer contact employees interact frequently, they learn from each other and develop strategies for accomplishing their shared task-related goals. From these interactions and learning processes, they develop behavioral norms regarding acceptable ways of serving customer needs. The process of learning behavioral norms can also be accomplished through socialization. As George (1990) noted, "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).

As conceptualized in this study, aggregated service performance stems from individual customer contact employee behaviors fostered by the behavioral norms surrounding serving customer needs. From a resource-based perspective (Barney, 1991), aggregated service performance is not only valuable but also difficult to imitate and therefore constitutes a source of competitive advantage leading to organizational performance. In support of our arguments, aggregated service performance has been shown to relate to customer satisfaction (Liao & Chuang, 2004) and market performance (Chuang & Liao, 2010), and the related construct of unit customer-oriented behaviors has been shown to influence unit financial performance (Grizzle, Zablah, Brown, Mowen, & Lee, 2009). Although branch-level HPWS and climate have been shown to relate to branch-level performance (Chuang & Liao, 2010; Takeuchi et al., 2007), Schneider, Ehrhart, Mayer, Saltz, and Niles-Jolly (2005) suggested that it is employee behavior that

directly relates to branch-level performance or outcomes. Consequently, we expect aggregated individual service performance to relate to branch-level performance above and beyond branch-level HPWS and empowerment climate. The preceding discussion leads us to hypothesize the following:

> *Hypothesis 6:* Aggregated individual service performance positively relates to branch-level market performance above and beyond branch-level HPWS and empowerment climate.

Method

Sample and Procedure

Economic liberalization in Ghana has entailed among other measures privatization of state-owned enterprises, removal of barriers to foreign trade, and monetary and banking reforms (Debrah, 2002). The success of these measures has led to that country's recognition as one of only seven emerging economies in sub-Saharan Africa (Hoskisson, Eden, Lau, & Wright, 2000). The financial services sector has witnessed considerable improvements since that sector's reforms in 1989 culminated in the establishment of a stock market. A mix of commercial banks, merchant banks, and development banks, both locally and foreign owned, is now operating in Ghana. Not surprisingly, the growth in the number of banks has led to an intense competition in retail banking. In this increasingly competitive financial services sector, creating and sustaining competitive advantage depends not only on technological improvements but, crucially, on the provision of services that meet customer expectations and needs. Consequently, adoption of HR practices with a strategic focus on empowering customer contact employees in order to enhance the customer experience may well constitute a source of competitive advantage in Ghana's increasingly competitive financial services sector, just as in the developed economies.

Data for this study were obtained from 37 branches of two banks, 19 from one and 18 from the other, drawn from nine of the 10 regions of Ghana. Initial contact with the banks was made with their respective HR directors, who worked closely with one of the authors to identify participating branches in the nine regions based on length of operation, size, and location. The HR directors subsequently sent letters to their branch managers informing them of the survey, and they were also informed that the survey had the support of the top management (CEO). The author then contacted these branches by phone to arrange meetings attended by the branch manager and his or her management team. At these meetings, the objectives of the survey and the role of the management team in facilitating the survey were explained. A member of the management team with responsibility for HR was designated as a contact person. He or she compiled a list of junior customer contact employees and senior customer contact employees who work with them.

The junior customer contact employees (respondents) were randomly selected from this list, and survey packages were sent separately to them and their senior customer contact colleagues. Packages for the senior customer contact employees contained questionnaires for the junior customer contact employees they worked with who participated in the study and a self-addressed envelope for returning completed questionnaires. The senior customer contact employees' questionnaires were completed on site and were returned to the said author two days after they were distributed. We requested that senior customer contact employees rate the service performance of respondents because they worked closely with them (respondents) and were therefore in a better position relative to the branch manager and the other members of the management team to observe their performance. Each senior customer service employee rated only one junior customer employee. The packages for the junior customer contact employees contained a questionnaire and a stamped self-addressed envelope for returning completed questionnaires directly to the said author in Accra, the administrative and commercial capital of Ghana.

Questionnaires were also distributed to the branch managers at each of the participating branches relating to the characteristics of the branch, its HR practices, and performance. The branch managers' responses were cross-checked with a relevant member of the branch management team. In particular, we conducted telephone interviews with the relevant member of the management team to ascertain the accuracy of the branch managers' responses. There were only minor discrepancies in the responses. In such instances we went back to the branch managers, who agreed with the responses of the relevant member of the management team. As both junior and senior customer contact employees report to the branch manager, we treated the branch as our Level 2 unit of analysis although individual-level performance data were collected from a different source (i.e., the senior customer employees).

Of the 500 questionnaires distributed to customer contact employees, 280 were returned but only 258 could be matched to supervisor questionnaires (i.e., each senior customer service employee rated only one junior customer service employee). Consequently, our sample was based on 258 junior–senior customer employee dyads, representing a response rate of 51.6%. Of the 258 respondents, 57% (147) were female. Respondents reported an average age of 33.86 years ($SD = 9.02$), an average organizational tenure of 8.30 years ($SD = 2.41$), and an average junior–senior customer employee dyad tenure of 3 years ($SD = 1.86$). Respondents worked an average of 51.55 hr ($SD = 9.17$) a week. In terms of education, 77.5% (200) had received at least an undergraduate or a first degree. Of the 37 branch managers, 78% (29) were male. Branch managers reported an average age of 43.27 years ($SD = 8.18$) and an average tenure of 25.49 years ($SD = 20.11$). The branch managers were relatively well educated, with 32 (86%) having received at least an undergraduate or first degree.

Measures

English is the language of commerce and administration in Ghana, so the questionnaires were administered in English. We pretested the respondents' questionnaires using a sample of 40 customer contact employees drawn from two branches of a multinational bank (neither this bank nor its branches participated in this study) located in Accra. Based on the feedback obtained from the pretest, a few items were rephrased to ensure clarity and reduce the length of some of the scales to motivate participation in the survey. Unless otherwise indicated, response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*).

Branch-level HPWS. We used the 37-item HPWS for service quality scale developed by Liao et al. (2009) but based on measures reported in Zacharatos, Barling, and Iverson's (2005)

Study 1, Delery and Doty (1996), and Schneider et al. (1998). This HPWS scale has eight HR practice dimensions geared to enhancing employee skills and knowledge, empowerment, information sharing, and delivery of high-quality service. The branch manager was requested to rate the extent to which each of these items was used to manage customer contact employees. Because of the potential overlap with the information-sharing dimension of empowerment climate, we deleted the eight items that measure this dimension, resulting in a 29-item scale. Sample items are "The formal orientation programs of new customer contact employees are helpful for them to perform their job," "Customer contact employees have the authority to resolve customer complaints on their own," and "The performance appraisal of customer contact employees is based on a track record of courteous service to customers." We followed prior research and used the dimensions to create an index of HPWS (Chuang & Liao, 2010; Sun et al., 2007; Takeuchi et al., 2007). The alpha reliability in this study was .90.

Employee-experienced HWPS. We used the 44-item scale that Liao et al. (2009) derived from the extant literature to measure customer contact employees' experience of HPWS. The scale has eight dimensions: extensive service training, information sharing, self-management service teams and participation, compensation contingent on service quality, job design for quality, service-quality-based performance appraisal, internal service, and service discretion As with the branch-level HPWS, the eight items that measure the information-sharing dimension were deleted, resulting in a 36-item scale. We used the dimensions to form an index of HPWS. Sample items are "Employees in my job category normally go through training programs every few years to improve our customer service skills," "I have the authority to resolve customer complaints on my own," and "My pay is tied to the quality of service I deliver to customers." The alpha reliability in this study was .89.

Empowerment climate. On the basis of feedback from the pilot test (concerning the length of questionnaire), we used a 15-item abridged version of the 30-item scale reported in Seibert et al. (2004) but developed by Blanchard et al. (1995) to measure customer contact employees' shared perception of empowerment in their branch. Response options ranged from 1 (*almost never*) to 6 (*always*). Sample items are "I receive the information needed to help me understand the performance of our branch," "We have a shared set of values that guide our actions at this branch," and "We work together in our branch to make everyone accountable for their actions and for results in the branch." To provide justification for aggregation of empowerment climate to the branch level, we calculated both within-group agreement ($r_{wg(j)}$; James, Demaree, & Wolf, 1984) and two intraclass correlations (ICCs) to assess agreement among branch members. ICC1 indicates the proportion of variance due to branch membership, whereas ICC2 indicates the reliability of branch mean differences (Bliese, 2000). The median $r_{wg(j)}$ was .84, the ICC1 was .24, and the ICC2 was .72, $F(36, 221) = 3.59$, $p < .001$, providing good support for aggregating empowerment. The average branch mean was eight employees. The alpha reliability in this study was .92.

Psychological empowerment. We used Spreitzer's (1995) 12-item scale to measure psychological empowerment. Sample items are "The work I do is very important to me," 'I am confident about my ability to do my job," "I have significant autonomy in determining how I do my job," and "My impact on what happens in my branch is large." Following previous research (Liden et al., 2000; Seibert et al., 2011; Spreitzer, 1995), we added the four dimensions to form a composite measure of psychological empowerment. The alpha reliability in this study was .89.

Service orientation. We used a five-item scale developed by Bettencourt, Gwinner, and Meuter (2001) to measure customer contact employees' service orientation. Sample items are "I enjoy helping others," "The best job I can imagine would involve assisting others in solving their problems," and "I pride myself in providing courteous service." The alpha reliability in this study was .90.

Service performance. We used a 20-item version of the 23-item scale reported in Liao et al. (2009) but originally developed by Parasuraman, Zeithaml, and Berry (1994) to measure service performance. Senior customer contact employees who worked closely with our respondents rated the performance level of the junior employee using a 7-point scale ranging from 1 (*Highly unsatisfactory*) to 7 (*Highly satisfactory*). Sample items are "Providing services as promised," "Performing services right the first time," "Readiness to respond to customers' requests," and "Making customers feel safe in their transactions." The alpha reliability in this study was .91.

Aggregated service performance. To assess the overall level of service performance for the branch as a whole, we averaged across branches ratings of the individuals to form branch-level service performance. This approach is consistent with prior research (e.g., Liao & Chuang, 2004). We also calculated both within-group agreement and ICCs to provide empirical justification for aggregating service performance to the branch level. The median $r_{wg(j)}$ was .89, the ICC1 was .34, and the ICC2 was .80, $F(36, 221) = 5.09$, $p < .001$, providing support for aggregating to the branch level.

Branch-level market performance. We used a four-item scale by Delaney and Huselid (1996) to measure branch-level market performance. These items focused on marketing, sales, growth, and market share. Branch managers were asked to rate the performance of their branch relative to that of their competitors in the past 12 months. Response options ranged from 1 (*Much worse*) to 5 (*Much better*). Although an objective measure would have been preferred, there is precedent in the literature for using subjective measures of organizational performance (Chuang & Liao, 2010; Delaney & Huselid, 1996; Takeuchi et al., 2007). Indeed, Wall et al. (2004) reported evidence for the convergent, discriminant, and construct validity of subjective and objective measures of company performance. The alpha reliability in this study is .66.

Controls. We controlled for respondent age and sex (Female = 0 and Male = 1) because they have been shown to relate to psychological empowerment (Liao et al., 2009; Seibert et al., 2011) and for sex because it has been shown to relate to experienced HPWS (Liao et al., 2009). We controlled for branch size at the branch level because larger organizations are more likely to use HPWS (Liao et al., 2009; Sun et al., 2007), and size may also influence performance because of economies of scale and market power (Shepherd, 1975). Branch size was defined in terms of number of employees and was measured with a single item ("What is the current estimated number of employees in this branch?"), which was obtained from the senior manager in the branch. Fi-

nally, because our sample came from two banks, we also controlled for bank type.

Data Analyses

Our model is multilevel in nature, consisting of variables at both the branch level (i.e., HPWS, empowerment climate, aggregated service performance, and branch-level market performance) and individual level (i.e., experienced HPWS, psychological empowerment, service orientation, and service performance). We used hierarchical regression to test Hypotheses 1 and 6, because these hypotheses concern only group-level (branch) predictions, and hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002) to test Hypotheses 2–5, because these are cross-level and moderating effect predictions. We tested all cross-level hypotheses using intercepts-as-outcomes.

Results

Measurement Issues

We conducted a series of confirmatory factor analyses to examine whether experienced HPWS, empowerment climate, psychological empowerment, and service orientation captured distinct constructs at the individual level of analysis. To do this, we first examined a measurement model that included all the four measures (i.e., experienced HPWS, empowerment climate, psychological empowerment, and service orientation). We then compared the four-factor measurement model to more parsimonious models that set two of the hypothesized four factors to correlate at 1.0 to keep the basic measurement model structure equivalent, allowing for meaningful chi-square difference tests. To maintain favorable indicator-to-sample-size ratio, we randomly created four parcels of items for experienced HPWS, three parcels of items for empowerment climate and psychological empowerment, and two parcels of items for service orientation.

Results showed that the hypothesized four-factor measurement model fit the data well, $\chi^2(48) = 114.76$, $p < .01$, Tucker–Lewis index (TLI) = .92, comparative fit index (CFI) = .95, root mean residual (RMR) = .05, root-mean-square error of approximation (RMSEA) = .06. Relative to the hypothesized model, the fit for an alternative model in which we set the covariance between the HPWS and empowerment climate factors to be equal to 1.0 was significantly worse, $\chi^2(49) = 347.90$, $\Delta\chi^2(1) = 233.14$, $p < .01$, TLI = .77, CFI = .83, RMR = .41, RMSEA = .14; so was that for a second alternative model, in which we set the covariance between the HPWS and psychological empowerment factors to be equal to 1.0, $\chi^2(49) = 374.32$, $\Delta\chi^2(1) = 259.56$, $p < .01$, TLI = .75, CFI = .81, RMR = .56, RMSEA = .15. Similarly, the hypothesized four-factor model had a superior fit to a model in which we set the covariance between the empowerment climate and psychological empowerment factors to be equal to 1.0, $\chi^2(49) = 311.47$, $\Delta\chi^2(1) = 196.71$, $p < .01$, TLI = .80, CFI = .85, RMR = .36, RMSEA = .13. These results provide support for the discriminant validity of our employee self-rated constructs.

Hypothesis Tests

Table 1 shows the descriptive statistics among the study variables at the individual level.

Hypothesis 1 suggested that branch-level HPWS would be related to empowerment climate. As previously noted, we used hierarchical regression to test this hypothesis because the variables are at the same (branch) level. We regressed empowerment climate on branch-level HPWS, controlling for bank type and branch size. The results reveal that branch-level HPWS significantly relates to empowerment climate ($\beta = .32$, $p < .05$), controlling for bank type ($\beta = .19$, *ns*) and bank size ($\beta = -.32$, $p < .01$). Together, this block of variables including the two controls accounted for 35% of the variance in empowerment climate. Hypothesis 1 is supported.

We drew on the work of Baron and colleagues (e.g., Baron & Kenny, 1986; Kenny, Kashy, & Bolger, 1998) and Shrout and Bolger (2002) to test Hypotheses 1–4 and 6. According to Baron and Kenny (1986), mediation is demonstrated if the (a) independent variable is related to the dependent variable, (b) independent variable is related to the mediator, (c) the mediator is related to the dependent variable, and (d) the strength of the relationship between the independent variable on the dependent is reduced (partial mediation) or disappears (full mediation). However, Kenny et al. (1998) and Shrout and Bolger (2002) have more recently noted that if there is a significant relationship between independent and

Table 1
Means, Standard Deviations, and Correlations

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. Employee age	33.87	8.89											
2. Employee sex	1.57	0.50	−.03										
3. Branch size	21.47	14.48	.17**	.11									
4. Bank type	1.48	0.50	−.33**	−.06	.25**								
5. Branch-level HPWS	3.71	0.46	−.38**	.03	−.23**	.27**	(.90)						
6. Employee-experienced HPWS	3.35	0.47	−.15**	−.06	−.28**	.23**	.19**	(.89)					
7. Empowerment climate	3.75	0.84	−.14*	−.11	−.32**	.19**	.22**	.64**	(.92)				
8. Service orientation	3.92	0.49	−.08	−.08	.02	.04	.18**	.16**	.28**	(.90)			
9. Psychological empowerment	5.40	0.92	−.03	−.02	−.19**	.14*	.16**	.46**	.45**	.23**	(.89)		
10. Service performance	5.19	0.74	−.14*	−.11	−.13*	.20**	.23**	.45**	.42**	.27**	.41**	(.91)	
11. Branch market performance	3.15	0.42	.04	.03	.15**	.07	.10	.08	.13*	.07	.06	.17**	(.66)

Note. High-performance work systems (HPWS) and branch performance are assigned to individual level. Branch size is represented by number of employees. Reliability coefficients are shown in parentheses on the diagonal.
* $p < .05$, two tailed. ** $p < .01$, two tailed.

mediator variables and a significant relationship between mediator and dependent variables, then even if the independent variable is not related to the dependent variable, an indirect effect of the independent variable on the dependent variable is implied (see Kenny et al., 1998, p. 260).

Before conducting our HLM analyses, we examined the degree of between-group variance in psychological empowerment and senior customer contact employee-rated service performance. Results of null models revealed that 23% of the variance in psychological empowerment and 34% of the variance in service performance reside between branches (the grouping variable), respectively. The chi-square tests revealed that the between-branch variances were significant; that is, the intercept terms significantly varied across branches.

Hypotheses 2 and 3 suggested that empowerment climate (H2) and experienced HPWS (H3), respectively, would partially mediate the influence of branch-level HPWS on psychological empowerment. We used HLM to test these hypotheses, controlling for bank type, employees' age, and employees' sex as Level 1 effects and branch size as Level 2 effects in our analyses. Table 2 shows that branch-level HPWS significantly relates to experienced HPWS ($\hat{\gamma} = .11$, $p < .05$; Model 1) and psychological empowerment ($\hat{\gamma} = .26$, $p < .01$; Model 2). To test Hypotheses 2 and 3, we included all controls, experienced HPWS as Level 1 predictor, empowerment climate as Level 2 predictor, and branch-level HPWS (Level 2) as specified in Model 3. The results reveal that experienced HPWS ($\hat{\gamma} = .69$, $p < .01$) and empowerment climate ($\hat{\gamma} = .30$, $p < .01$) significantly relate to psychological empowerment and that the positive relationship between branch-level HPWS and psychological empowerment remains significant but is reduced in magnitude ($\hat{\gamma} = .23$, $p < .05$). These results suggest that experienced HPWS and empowerment climate, respectively, partially mediate the influence of branch-level HPWS on psychological empowerment, providing support for Hypotheses 2 and 3.

To provide a more rigorous test of these mediated effects, we followed Preacher and Hayes' (2008) bootstrapping procedure for assessing and comparing indirect effects in multiple mediator models. Results suggest that the 95% bootstrapping confidence interval for experienced HPWS lies between .04 and .74, whereas the 95% bootstrapping confidence interval for empowerment climate lies between .01 and .52. Because zero is not in the 95% confidence intervals, we conclude that the indirect effect is indeed significantly different from zero ($p < .05$, two-tailed). We estimated the variance explained by each variable following the procedure described by Bliese (2002). To compute R^2 for experienced HPWS, we used the variance component of the null model ($\sigma^2_{\text{psychological empowerment}}$) and the Level 1 residual variance (i.e., $R^2 = \sigma^2_{\text{null}} -$ the Level 1 residual variance, or $\sigma^2/\sigma^2_{\text{null}}$). Results suggest that experienced HPWS explained 23% of the variance in psychological empowerment. We then computed the R^2 for branch-level HPWS and empowerment climate using the variance in the intercept term when both individual- and group-level predictors are included in the same HLM equation. Results suggest that branch-level HPWS and empowerment climate explained 6% and 14%, respectively, of the variance in psychological empowerment.[1]

Hypothesis 4a posited that psychological empowerment would mediate the influence of experienced HPWS on service performance, whereas Hypothesis 4b suggested that psychological empowerment would mediate the influence of empowerment climate on service performance. We followed the same procedure in testing Hypotheses 2 and 3 above and included bank type, employees' age and sex as Level 1 controls, and branch size and branch-level HPWS as Level 2 controls. These results are also shown in Table 2. In Step 1, we found that experienced HPWS ($\hat{\gamma} = .29$, $p < .01$; Model 4) and empowerment climate ($\hat{\gamma} = .36$, $p < .01$; Model 4) both significantly relate to service performance. As a second step, both experienced HPWS and empowerment climate need to be related to psychological empowerment, which are supported in our testing of Hypotheses 2 and 3 above. In testing Steps 3 and 4, we included all controls, psychological empowerment as Level 1 predictor together with experienced HPWS as Level 1 predictor and empowerment climate as Level 2 predictor (see Model 5). In support of Hypothesis 4, the HLM results reveal that psychological empowerment significantly relates to service performance ($\hat{\gamma} = .23$, $p < .01$), and the relationship between experienced HPWS and service performance ($\hat{\gamma} = .25$, $p < .01$) as well as the relationship between empowerment climate and service performance ($\hat{\gamma} = .29$, $p < .01$) remains significant but is reduced in magnitude, providing support for Hypotheses 4a and 4b. Using the same procedure for estimating cross-level effects in Hypotheses 2 and 3 above, we determined that employee psychological empowerment explained 21% of the variance in service performance, whereas experienced HPWS and empowerment climate explained 16% and 15%, respectively, of the variance in service performance. Finally, following Preacher and Hayes' (2004) bootstrapping procedure for estimating indirect effects in simple mediation models, we found that 95% bootstrapping confidence interval for psychological empowerment for experienced HPWS lies between .06 and .59, whereas the 95% bootstrapping confidence interval for empowerment climate lies between .02 and .47. Because zero is not in the 95% confidence intervals, we conclude that the indirect effect is indeed significantly different from zero ($p < .05$, two-tailed).

Hypothesis 5 suggested that service orientation would moderate the psychological empowerment–individual service performance relationship. Results for testing Hypothesis 5 are also shown in Table 2 (Model 6). As shown in Model 6, the interaction between psychological empowerment and service orientation is significant ($\hat{\gamma} = .30$, $p < .01$), controlling for employee age, sex, bank type, and experienced HPWS as Level 1 predictors and branch size, empowerment climate, and branch-level HPWS as Level 2 predictors. Using the procedure described by Bliese (2002), we determined that the interaction term of psychological empowerment and service orientation explained 10% of the variance in individual service performance.

We plotted this significant interaction graphically using values of one standard deviation below the mean and one standard deviation above the mean on service orientation (Aiken & West, 1991). As shown in Figure 2, the plot revealed that the positive effect of psychological empowerment on service performance is stronger when service orientation is high than when it is low. In addition, we performed a simple slope analysis, and the results revealed that the simple slope under conditions of high service orientation was significantly greater than zero, simple slope = .17(.06), $t = 2.95$,

[1] Each of these R^2 values explains different portions of variance (i.e., the within and the between and not the total variance).

Table 2
Hierarchical Linear Modeling Results

Level and variable	Employee HPWS (Model 1)	Psychological empowerment (Model 2)	Psychological empowerment (Model 3)	Service performance (Model 4)	Service performance (Model 5)	Service performance (Model 6)
Level 1 (n = 258)[a]						
Intercept	3.81 (0.21)**	4.24 (0.33)**	3.49 (0.49)**	4.49 (0.43)**	4.41 (0.41)**	4.19 (0.39)**
Employee age (control)	−0.01 (0.01)	0.01 (0.01)	0.00 (0.00)	−0.01 (0.01)	−0.01 (0.01)	−0.01 (0.01)
Employee sex (control)	−0.02 (0.06)	0.01 (0.07)	0.03 (0.07)	−0.10 (0.09)	−0.10 (0.09)	−0.07 (0.08)
Bank type (control)	0.01 (0.00)*	0.01 (0.00)*	−0.01 (0.00)*	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Experienced HPWS			0.69 (0.15)**	0.29 (0.08)**	0.25 (0.09)**	0.20 (0.07)**
Psychological empowerment (PE)					0.23 (0.06)**	0.19 (0.05)**
Service orientation (SO)						0.58 (0.08)**
PE × SO						0.30 (0.08)**
Level 2 (n = 37)						
Branch size (control)	−0.01 (0.00)*	−0.01 (0.01)	−0.00 (0.00)*	0.01 (0.01)	0.01 (0.01)	−0.01 (0.02)
Branch-level HPWS	0.11 (0.05)*	0.26 (0.09)**	0.23 (0.11)*	0.17 (0.08)*	0.13 (0.07)	0.10 (0.07)
Empowerment climate			0.30 (0.10)**	0.36 (0.12)**	0.29 (0.11)**	0.18 (0.06)**

Note. Branch size represented by number of employees. HPWS= high-performance work systems.
[a] Values in parentheses are standard errors; entries are unstandardized coefficients.
* $p < .05$, two-tailed. ** $p < .01$, two-tailed.

$p < .01$. Under conditions of low service orientation, the relationship between psychological empowerment and service performance is not significant, simple slope = .11(.09), $t = 1.34$, $p > .10$. Taken together, these results provide further support for Hypothesis 5.

Hypothesis 6 posited that aggregated individual service performance would positively influence branch-level market performance above and beyond branch-level HPWS and empowerment climate. Because we used average individual service performance to form branch-level service performance and because the relationship between empowerment climate and the branch-level portion of service performance has already been established in our cross-level analyses, we assessed this hypothesis using ordinary least squares regression analysis and controlled for branch size and bank type.

Results showed that when branch size ($\beta = .11$, $p > .10$), bank type ($\beta = .02$), branch-level HPWS ($\beta = .05$, $p > .10$), empowerment climate ($\beta = .11$, $p > .10$), and individual aggregated service performance are included in the same regression equation, only aggregated service performance significantly relates to branch-level market performance ($\beta = .22$, $p < .05$). This block of variables accounted for 20% of the variance in branch-level market performance. Therefore, Hypothesis 6 is supported.

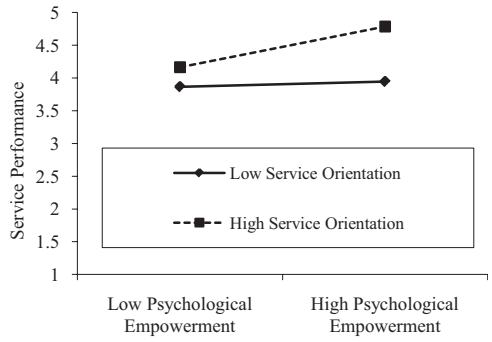

Figure 2. Psychological Empowerment × Service Orientation effect on service performance.

Discussion

Our primary goal in this study, underpinned by empowerment theory, was to extend prior research in SHRM by simultaneously examining the underlying mechanisms through which branch-level HPWS influences individual service performance and branch-level market performance. At the most general level, our findings revealed that branch-level HPWS indirectly influences branch-level market performance through cross-level and individual-level influences on individual service performance that emerge at the branch level as aggregated service performance. Further, branch-level HPWS partially relates to psychological empowerment through the pathways of experienced HPWS and empowerment climate, which then lead to individual service performance. Additionally, service orientation moderates the psychological empowerment–service performance relationship such that the relationship is stronger for those high rather than low in service orientation. We discuss the implications of these findings below.

Theoretical Implications

Our findings not only revealed the generality of the performance implications of HPWS to the sub-Saharan Africa context but also showed this relationship to be indirect through cross-level (empowerment climate) and individual-level (experienced HPWS, psychological empowerment, service orientation) influences on individual service performance that emerge at the branch level as aggregated service performance. We therefore add to SHRM research by adopting a cross-level perspective in examining the role of climate and behavior in accounting for the performance effects of branch-level HPWS. However, in view of Schneider et al.'s (2005) observation that research should examine the behavior and messages that climate conveys and the outcomes to which behavior is more likely related, we urge researchers to adopt a macro-

level perspective to directly examine climate and collective behavior as intervening mechanisms through which branch-level HPWS influences branch-level market performance.

Although empowerment is considered a central construct in conceptual discussions of SHRM (Applebaum et al., 2000; Delery & Shaw, 2001) and in the performance of customer contact employees (Bowen & Lawler, 1995; Chebat & Kollias, 2000; Peccei & Rosenthal, 2001), there is a dearth of research on an integrated view of the construct (Chen et al., 2007; Kirkman & Rosen, 1999; Seibert et al., 2004, Seibert et al., 2011). Consistent with the call for a multilevel approach to SHRM research (Ostroff & Bowen, 2000), our findings revealed a cross-level and an individual-level mechanism through which branch-level HPWS exerts its motivational influence. As a structural source of empowerment, our findings revealed, branch-level HPWS drives psychological empowerment through empowerment climate (Seibert et al., 2004) and experienced HPWS (Seibert et al., 2011). The influence of branch-level HPWS on empowerment climate we uncovered adds to the sparse literature on the antecedents of empowerment climate.

Consistent with its strategic orientation, the performance implications of the use of HPWS have been examined primarily at the organizational or unit level. Recognition that organizations do not perform but rather that the performance of individual employees enables organizations to achieve their goals (Kozlowski & Klein, 2000) has, however, led to a focus on the individual-level performance implications of HPWS (Kehoe & Wright, 2010; Liao et al., 2009; Snape & Redman, 2010). Our finding that branch-level HPWS drives individual performance through micro and macro processes that enhance psychological empowerment leading to service performance adds to this stream of research. However, our findings revealed the psychological empowerment–service performance relationship to be moderated by service orientation. The uncovering of a moderating role for service orientation in the psychological empowerment–service performance relationship is particularly interesting because Liao et al. reported psychological empowerment to be unrelated to what they called general service performance.

As an individual difference variable, service orientation suggests a predisposition to adapt the service delivery to meeting customer needs and expectations. Thus, although psychological empowerment provides a motivational underpinning for service performance, this is only possible for individuals high rather than low in service orientation. Our finding of a moderating influence of service orientation therefore extends previous research that has reported service orientation as an antecedent of service-oriented organizational citizenship behavior (Bettencourt et al., 2001).

Practical Implications

Gaining a competitive advantage in the service sector has increasingly been defined in terms of customer service excellence, which has been shown to lead to customer satisfaction and retention (Parasuraman et al., 1994). Although research has shown these outcomes to be influenced by several factors, such as leadership style (Liao & Chuang, 2007; Schneider et al., 2005) and service climate (Liao & Chuang, 2004; Schneider et al., 2005), our findings suggest that investment in SHRM pays. However, the payoff from such an investment must have a strategic focus, such as service quality, and must therefore be tailored to specific employee groups (customer contact employees) in order to promote desirable attitudes and motivate strategic behaviors that facilitate service quality. In terms of enhancing service quality among customer contact employees, the use of HPWS may well constitute what Schneider et al. (1998) described as a set of organizational foundational issues because it supports and facilitates service delivery and excellence. Interventions to improve service quality or excellence must therefore include the adoption of an HPWS for service quality.

Although empowerment has been widely recognized as a critical element in facilitating service employees' responsiveness to customer needs and expectations, there is a dearth of actionable knowledge in terms of promoting empowerment climate. Our findings highlight the use of HPWS as one such avenue through which to promote an empowerment climate. Although research has raised doubts about the utility of empowerment in cross-cultural contexts (Robert, Probst, Martocchio, Drasgow, & Lawler, 2000), our findings highlight its applicability to an emerging economy in sub-Saharan Africa with its high power distance culture. Despite this promising finding, it is important that organizational interventions designed to promote service excellence through empowerment (Peccei & Rosenthal, 2001) are rooted in an understanding of the construct and the conditions necessary for its effectiveness.

The finding that psychological empowerment related to service performance only for individuals high but not low in service orientation has practical implications. In addition to the moderating influence of service orientation we uncovered in this study, service orientation has been shown to influence service-oriented organizational citizenship behavior (Bettencourt et al., 2001). Hogan et al. (1984) suggested that service orientation taps an important aspect of nontechnical performance that is unrelated to knowledge and skills implies that it will be difficult to train individuals in service orientation (Cran, 1994). Consequently, service sector organizations should include attributes of service orientation in the selection criteria for customer contact employees. These attributes include an inherent tendency to be pleasant, polite, cooperative, and helpful in dealing with others (Cran, 1994).

Limitations and Directions for Future Research

As with any research, our study has a number of limitations, and by discussing them, we are simultaneously highlighting some directions for future research. First, the cross-sectional design of our study precludes any inference of causality. Although our study is grounded in an empowerment perspective and the relationships we reported are consistent with our predictions and theory, future research with a longitudinal design will be better suited to addressing the directionality of the relationships we examined. In this respect, future research should control for prior service performance and other antecedents of service performance such as personality and leadership style (Liao & Chuang, 2004, Liao & Chuang, 2007) in order to more rigorously test the findings we report in this study.

Second, the branch-level HPWS data were obtained from a single person, undermining the reliability of this data (Huselid & Becker, 2000). We readily acknowledge the importance of using multiple raters and establishing interrater reliability of their ratings as a way of enhancing confidence in HPWS data. However, the

crux of the argument about the number of raters is the extent to which raters are knowledgeable about HR practices (Gerhart, Wright, & McMahan, 2000). Given the size of the branches that participated in the study and the extent of operational autonomy they enjoy, the branch managers should be knowledgeable about the HR practices used in managing customer contact employees (Wright & Boswell, 2002). As mentioned, we cross-validated the responses of the branch managers with another member of the management team responsible for HR issues.

Third, we used a subjective measure of organizational performance. Although there is a precedent for such a measure (Chuang & Liao, 2010; Takeuchi et al., 2007) and subjective performance has been shown to be significantly related to objective performance measures (Wall et al., 2004), the scale's relatively low alpha reliability in this study suggests that the branch-level performance implication of HPWS we reported should be cautiously interpreted. However, research that has reported employee behaviors such as service OCB (Schneider et al., 2005) to relate to financial performance (unit sales) gives some credence to the aggregated service performance–branch-level market performance relationship we uncovered. Future research should, however, use both subjective and objective measures of organizational performance.

Fourth, although we proposed and examined hypotheses drawn from a context-free model, the cultural context of our study may have influenced the findings we reported and therefore constrained their generality to other cultural contexts as well as economic sectors. However, this limitation is mitigated by the facts that our research was grounded in an empowerment perspective and much SHRM research has been conducted in Asian countries (Gong et al., 2009; Liao et al., 2009; Sun et al., 2007; Takeuchi et al., 2007) that share relevant cultural values (e.g., high power distance and relationship orientation) with countries in the sub-Saharan African region. Future research should replicate and extend our findings with data obtained from multiple cultural contexts.

Fifth, although we grounded our study in empowerment theory, we recognize that empowerment is only one of a number of pathways through which HPWS has been theorized to influence its demonstrated performance outcomes (Delery & Shaw, 2001). We urge future researchers to simultaneously examine relevant, theoretically informed mechanisms of the HPWS–performance relationship. Last, support for the partially mediated relationships we predicted underscores the complexity of the pathways through which branch level or the use of HPWS influences its attitudinal and behavioral outcomes. Takeuchi et al. (2009, p. 22) observed a "possibility of multiple mediators and more intricate processes and interrelationships through which HPWS influences outcomes that span multiple levels." Consequently, future research should examine multiple climates and test competing explanations of these pathways.

These limitations are counterbalanced by a number of conceptual and methodological strengths of this study. First, we proposed and tested hypotheses drawn from a multilevel model of intermediate linkages in the performance implications of HPWS as well as a multilevel model of empowerment. Second, unlike previous research, we simultaneously examined mechanisms through which HPWS influences performance at both individual and organizational levels of analysis. Last, we obtained data from multiple sources including branch managers, senior customer contact employees, and junior customer contact employees (respondents), suggesting that our findings are substantive and not methodological artifacts.

Conclusion

Excellence in service performance has become a strategic focus for enhancing the competitiveness of service organizations. Our findings suggest the use of HPWS as an intervention strategy for building the internal capability to drive organizational survival and growth through empowering customer contact employees. In particular, branch-level HPWS fosters psychological empowerment through empowerment climate and experienced HPWS, leading to service performance at the individual level. Further, branch-level HPWS indirectly influences branch-level market performance through the impact of cross-level and individual-level processes on individual service performance that emerges at the branch level as aggregated service performance.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions.* Newbury Park, CA: Sage.

Applebaum, E., Bailey, T., Berg, P., & Kalleberg, A. L. (2000). *Manufacturing advantage: Why high performance work systems pay off.* Ithaca, NY: Cornell University Press.

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17,* 99–120. doi:10.1177/014920639101700108

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51,* 1173–1182. doi:10.1037/0022-3514.51.6.1173

Batt, R. (2002). Managing customer services: Human resource practices, quit rates, and sales growth. *Academy of Management Journal, 45,* 587–597. doi:10.2307/3069383

Bettencourt, L. A., Gwinner, K. P., & Meuter, M. L. (2001). A comparison of attitude, personality, and knowledge predictors of service-oriented organizational citizenship behaviors. *Journal of Applied Psychology, 86,* 29–41.

Blanchard, K. H., Carlos, J. P., & Randolph, W. A. (1995). *The empowerment barometer and action plan.* Escondido, CA: Blanchard Training and Development.

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multi-level theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 349–381). San Francisco, CA: Jossey-Bass.

Bliese, P. D. (2002). Using multilevel random coefficient modeling in organizational research. In F. Drasgow & N. Schmitt (Eds.), *Measuring and analyzing behavior in organizations: Advances in measurement and data analysis* (pp. 401–455). San Francisco, CA: Jossey-Bass.

Bowen, D. E., & Lawler, E. E. (1995). Empowering service employees. *Sloan Management Review, 36,* 73–85.

Bowen, D. E., & Ostroff, C. (2004). Understanding HRM–firm performance linkages: The role of the "strength" of the HRM system. *Academy of Management Review, 29,* 204–221.

Bowen, D. E., & Schneider, B. (1988). Services marketing and management: Implications for organizational behaviour. *Research in Organizational Behaviour, 10,* 43–80.

Chebat, J. C., & Kollias, P. (2000). The impact of empowerment on customer contact employees' roles in service organizations. *Journal of Service Research, 3,* 66–81.

Chen, G., Kirkman, B. L., Kanfer, R., Allen, D., & Rosen, B. (2007). A

multilevel study of leadership, empowerment, and performance in teams. *Journal of Applied Psychology, 92,* 331–346. doi:10.1037/0021-9010.92.2.331

Chuang, C., & Liao, H. (2010). Strategic human resource management in service context: Taking care of business by taking care of employees and customers. *Personnel Psychology, 63,* 153–196. doi:10.1111/j.1744-6570.2009.01165.x

Combs, J., Liu, Y., Hall, A., & Ketchen, D. (2006). How much do high-performance work practices matter? A meta-analysis of their effects on organizational performance. *Personnel Psychology, 59,* 501–528. doi:10.1111/j.1744-6570.2006.00045.x

Cran, D. J. (1994). Towards validation of the service orientation construct. *Service Industries Journal, 14,* 34–44. doi:10.1080/02642069400000003

Datta, D. K., Guthrie, J. P., & Wright, P. M. (2005). Human resource management and labor productivity: Does industry matter? *Academy of Management Journal, 48,* 135–145.

Day, G. S., & Montgomery, D. B. (1999). Charting new directions for marketing. *Journal of Marketing, 63,* 3–13. doi:10.2307/1252096

Debrah, Y. (2002). Doing business in Ghana. *Thunderbird International Business Review, 44,* 495–513. doi:10.1002/tie.10028

Delaney, J. T., & Huselid, M. A. (1996). The impact of human resource management practices on perceptions of organizational performance. *Academy of Management Journal, 39,* 949–969.

Delery, J. E., & Doty, D. H. (1996). Modes of theorizing in strategic human resource management: Tests of universalistic, contingency, and configurational performance predictions. *Academy of Management Journal, 39,* 802–835. doi:10.2307/256713

Delery, J. E., & Shaw, J. D. (2001). The strategic management of people in work organizations: Review, synthesis, and extension. In G. R. Ferris (Ed.), *Research in personnel and human resources management* (Vol. 20, pp. 165–197). New York, NY: JAI Press.

Evans, W. R., & Davis, W. D. (2005). High-performance work systems and organizational performance: The mediating role of internal social structure. *Journal of Management, 31,* 758–775. doi:10.1177/0149206305279370

George, J. M. (1990). Personality, affect, and behavior in groups. *Journal of Applied Psychology, 75,* 107–116. doi:10.1037/0021-9010.75.2.107

Gerhart, B., Wright, P. M., & McMahan, G. (2000). Measurement error in research on the human resources and firm performance relationship: Further evidence and analysis. *Personnel Psychology, 53,* 855–872. doi:10.1111/j.1744-6570.2000.tb02420.x

Gittell, J. H., Seidner, R., & Wimbush, J. (2010). A relational model of how high-performance work systems work. *Organization Science, 21,* 490–506. doi:10.1287/orsc.1090.0446

Gong, Y., Law, K. S., Chang, S., & Xin, K. R. (2009). Human resources management and firm performance: The differential role of managerial affective and continuance commitment. *Journal of Applied Psychology, 94,* 263–275. doi:10.1037/a0013116

Grizzle, J. W., Zablah, A. R., Brown, T. J., Mowen, J. C., & Lee, J. M. (2009). Employee customer orientation in context: How the environment moderates the influence of customer orientation on performance outcomes. *Journal of Applied Psychology, 94,* 1227–1242. doi:10.1037/a0016404

Gwinner, K. P., Bitner, M. J., Brown, S. W., & Kumar, A. (2005). Service customization through employee adaptiveness. *Journal of Service Research, 8,* 131–148. doi:10.1177/1094670505279699

Hogan, J., Hogan, R., & Busch, C. M. (1984). How to measure service orientation. *Journal of Applied Psychology, 69,* 167–173. doi:10.1037/0021-9010.69.1.167

Hoskisson, R. E., Eden, L., Lau, C. M., & Wright, M. (2000). Strategy in emerging economies. *Academy of Management Journal, 43,* 249–267. doi:10.2307/1556394

Huselid, M. E., & Becker, B. E. (2000). Comment on "Measurement error on research on human resources and firm performance: How much error is there and does it influence effect size estimates." *Personnel Psychology, 53,* 835–854.

James, L. R., Demaree, R. G., & Wolf, G. (1984). Estimating within-group interrater reliability with and without response bias. *Journal of Applied Psychology, 69,* 85–98. doi:10.1037/0021-9010.69.1.85

Kanter, R. M. (1977). *Men and women of the corporation.* New York, NY: Basic Books.

Kehoe, R., & Wright, P. M. (2010). The impact of high performance human resource practices on employees' attitudes and behaviors. *Journal of Management*. Advance online publication. doi:10.1177/0149206310365901

Kennedy, K. N., Lassk, F. G., & Goolsby, J. R. (2002). Customer mind-set of employees throughout the organization. *Journal of the Academy of Marketing Science, 30,*159–171. doi:10.1177/03079459994407

Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., Vol. 1, pp. 233–265). New York, NY: McGraw-Hill.

Kirkman, B. L., & Rosen, B. (1999). Beyond self-management: Antecedents and consequences of team empowerment. *Academy of Management Journal, 42,* 58–74. doi:10.2307/256874

Kozlowski, S. J., & Klein, K. L. (2000). A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes. In K. J. Klein & S. W. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations* (pp. 3–90). San Francisco, CA: Jossey-Bass.

Lepak, D. P., Liao, H., Chung, Y., & Harden, E. E. (2006). A conceptual review of human resource management systems in strategic human resource management research. In J. J. Martocchio (Ed.), *Research in personnel and human resources management* (Vol. 25, pp. 217–271). Greenwich, CT: JAI Press.

Lepak, D. P., Taylor, M. S., Tekleab, A., Marrone, J. A., & Cohen, D. J. (2007). An examination of the use of high-investment human resource systems for core and support employees. *Human Resource Management, 46,* 223–246. doi:10.1002/hrm.20158

Liao, H., & Chuang, A. (2004). A multilevel investigation of factors influencing employee service performance and customer outcomes. *Academy of Management Journal, 47,* 41–58. doi:10.2307/20159559

Liao, H., & Chuang, A. (2007). Transforming service employees and climate: A multilevel, multisource examination of transformational leadership in building long-term service relationships. *Journal of Applied Psychology, 92,* 1006–1019. doi:10.1037/0021-9010.92.4.1006

Liao, H., Toya, K., Lepak, D. P., & Hong, Y. (2009). Do they see eye to eye? Management and employee perspectives of high-performance work systems and influence processes on service quality. *Journal of Applied Psychology, 94,* 371–391. doi:10.1037/a0013504

Liden, R. C., Wayne, S. J., & Sparrowe, R. T. (2000). An examination of the mediating role of psychological empowerment on the relations between job, interpersonal relationships, and work outcomes. *Journal of Applied Psychology, 85,* 407–416. doi:10.1037/0021-9010.85.3.407

Ostroff, C., & Bowen, D. E. (2000). Moving HR to a higher level: HR practices and organizational effectiveness. In K. J. Klein & S. W. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 211–266). San Francisco, CA: Jossey-Bass.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1994). Reassessment of expectations as a comparison standard in measuring service quality: Implications for further research. *Journal of Marketing, 58,* 111–124. doi:10.2307/1252255

Peccei, R., & Rosenthal, P. (2001). Delivering customer-oriented behaviour through empowerment: An empirical test of HRM assumptions. *Journal of Management Studies, 38,* 831–857. doi:10.1111/1467-6486.00261

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for

estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers, 36,* 717–731. doi:10.3758/BF03206553

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40,* 879–891. doi:10.3758/BRM.40.3.879

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models* (2nd ed.). Thousand Oaks, CA: Sage.

Robert, C., Probst, T. M., Martocchio, J. J., Drasgow, F., & Lawler, J. J. (2000). Empowerment and continuous improvement in the United States, Mexico, Poland and India: Predicting fit on the basis of power distance and individualism. *Journal of Applied Psychology, 85,* 643–658. doi:10.1037/0021-9010.85.5.643

Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly, 23,* 224–253. doi:10.2307/2392563

Schneider, B. (1987). The people make the place. *Personnel Psychology, 40,* 437–453. doi:10.1111/j.1744-6570.1987.tb00609.x

Schneider, B. (1990). The climate for service: An application of the climate construct. In B. Schneider (Ed.), *Organizational climate and culture* (pp. 383–412). San Francisco, CA: Jossey-Bass.

Schneider, B., Ehrhart, M. G., Mayer, D. M., Saltz, J. L., & Niles-Jolly, K. (2005). Understanding organization–customer links in service settings. *Academy of Management Journal, 48,* 1017–1032. doi:10.5465/AMJ.2005.19573107

Schneider, B., White, S. S., & Paul, M. C. (1998). Linking service climate and customer perceptions of service quality: Test of a causal model. *Journal of Applied Psychology, 83,* 150–163. doi:10.1037/0021-9010.83.2.150

Seibert, S. E., Silver, S. R., & Randolph, W. A. (2004). Taking empowerment to the next level: A multi-level model of empowerment, performance, and satisfaction. *Academy of Management Journal, 47,* 332–349. doi:10.2307/20159585

Seibert, S. E., Wang, G., & Courtright, S. H. (2011). Antecedents and consequences of psychological and team empowerment in organizations: A meta-analytic review. *Journal of Applied Psychology, 96,* 981–1003. doi:10.1037/a0022676

Shepherd, W. G. (1975). *A treatment of market power.* New York, NY: Columbia University Press.

Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods, 7,* 422–445. doi:10.1037/1082-989X.7.4.422

Snape, E., & Redman, T. (2010). HRM practices, organizational citizenship behavior, and performance. *Journal of Management Studies, 47,* 1219–1247.

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Construct definition, measurement, and validation. *Academy of Management Journal, 38,* 1442–1465. doi:10.2307/256865

Spreitzer, G. M. (2008). Taking stock: A review of more than twenty years of research on empowerment at work. In J. Barling & C. J. Cooper (Eds.), *The Sage handbook of organizational behavior* (pp. 73–88). Newbury Park, CA: Sage.

Sun, L. Y., Aryee, S., & Law, K. S. (2007). High-performance human resource practices, citizenship behavior, and organizational performance: A relational perspective. *Academy of Management Journal, 50,* 558–577. doi:10.5465/AMJ.2007.25525821

Takeuchi, R., Chen, G., & Lepak, D. P. (2009). Through the looking glass of a social system: Cross-level effects of high-performance work systems on employees' attitudes. *Personnel Psychology, 62,* 1–29. doi:10.1111/j.1744-6570.2008.01127.x

Takeuchi, R., Lepak, D. P., Wang, H., & Takeuchi, K. (2007). An empirical examination of the mechanisms mediating between high-performance work systems and the performance of Japanese organizations. *Journal of Applied Psychology, 92,* 1069–1083. doi:10.1037/0021-9010.92.4.1069

Thomas, K. W., & Velthouse, B. A. (1990). Cognitive elements of empowerment: An "interpretive" model of intrinsic task motivation. *Academy of Management Review, 15,* 666–681.

Wall, T., Michie, J., Patterson, M. M., Wood, S., Sheehan, M., Clegg, C. W., & West, M. (2004). On the validity of subjective measures of company performance. *Personnel Psychology, 57,* 95–118. doi:10.1111/j.1744-6570.2004.tb02485.x

Wang, P., & Walumbwa, F. O. (2007). Family-friendly programs, organizational commitment, and work withdrawal: The role of transformational leadership. *Personnel Psychology, 60,* 397–427. doi:10.1111/j.1744-6570.2007.00078.x

Wright, P. M., & Boswell, W. R. (2002). Desegregating human resource management: A review and synthesis of micro and macro human resource management research. *Journal of Management, 28,* 247–276. doi:10.1177/014920630202800302

Zacharatos, A., Barling, J., & Iverson, R. (2005). High-performance work systems and occupational safety. *Journal of Applied Psychology, 90,* 77–93. doi:10.1037/0021-9010.90.1.77

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