Optimising HRM system strength in nurturing affective commitment:

Do all meta-features matter?

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ABSTRACT

This paper aims to examine three propositions of how HR system strength meta-features - distinctiveness, consistency and consensus – operate together to better understand how they relate to affective commitment. We test a continuum proposition based on an *additive* (the sum of all features) and a *compensatory* model (the features as counteractive), a precursor proposition based on a *mediation* model, and an equifinality proposition based on a *configurational* model (distinguishing between different profiles of the features). The findings, drawn from a survey of 2,844 part-time employees from a Dutch home care organisation, demonstrate that all three meta-features are important for generating HRM system strength and affective commitment among employees, but not to the same extent. We also find evidence that consistency is positively and directly related, whereas distinctiveness and consensus are positively and indirectly related to affective commitment via consistency.

Keywords: HR system strength, HR systems, affective commitment, part-time workers

PRACTITIONER NOTES

What is currently known

- The process of how HR messages are communicated is as important as the content of HR practices.
- A HR system is strong when it is perceived as distinctive, consistent and consensual.
- The meta-features of HR system strength can be combined through various combination models.

What this paper adds

- An understanding of whether employees can be affectively committed to the organisation when they perceive a weaker HR system and are managed by a "low-road" HR system based on a part-time sample in a home-care organisation.
- An assessment of HR system strength as a continuum (from low to high levels of HR system strength), where the presence of some meta-features act as precursors for the development of other meta-features, and configurations of HR system strength that are equally effective for desired outcomes based on tests of additive, compensatory, mediation and configurational models.

The implications for practitioners

- Organisations need to ensure that all three meta-features are present in the design of and operation of their HR systems, but it is consistency that leads to higher levels of affective commitment, whereas distinctiveness and consensus are indirectly related to affective commitment via consistency.

- Ensuring that HR systems are distinctive and consensual will lead to the development of consistency in HR signals, which is needed for high levels of affective commitment.

INTRODUCTION

Since the seminal work of Bowen and Ostroff (2004), which identified the concept of Human Resource (HR) system strength, research focusing on the *process* of sending signals to employees through HR systems (i.e. the mechanisms that explain "how" the system operates) has grown substantially. Our study builds on a growing body of research that adopts a HR process over content approach to examine how HR system strength is related to outcomes (e.g. Alfes et al., 2019; Cafferkey et al., 2019; Farndale & Sanders, 2017). By doing so, we follow the stance taken by Farndale and Sanders (2017), which is not "to deny the relevance of HR system content, as this has been well-established as important" (p. 136), but instead to allow for a more thorough understanding of the concept and operation of the features of HR system strength and their combination in influencing outcomes.

A strong HR system combines three meta-features – distinctiveness, consistency and consensus - to develop a shared interpretation among employees about which attitudes and behaviours are valued, expected and rewarded. *Distinctiveness* refers to the extent to which employees perceive the HR system as visible, understandable, legitimate and relevant. *Consistency* relates to the internally coherent implementation of HR practices over time, people and context. *Consensus* refers to the extent to which there is agreement about what behaviours and responses lead to desired outcomes.

The notion of HR system strength is largely rooted in attribution theory, which describes how people process information to make attributions about a situation or event (Kelley, 1973; Fiske &

Taylor, 1984). Inspired by Kelley's (1973) covariation principle, Bowen and Ostroff (2004) determine that attributions about HR systems as high in distinctiveness, consistency and consensus can create a "strong situation" in which interpretations of the system are widely shared. In a strong situation, organisational agents send unambiguous messages and clear signals regarding the values and priorities of the organisation (Ostroff & Bowen, 2016) and by doing so ensure that the HR system is robustly communicated and implemented (Hauff, Alewell & Hansen, 2017; Katou, Budhwar & Patel, 2014). While research to date has considered the relationship between the three meta-features of system strength and a range of employee outcomes (Aksoy & Bayazit, 2014; Cafferkey, Heffernan, Harney, Dundon & Townsend, 2019; Hauff et al., 2017; Katou et al., 2014; Li, Frenkel & Sanders, 2011; Sanders, Dorenbosch & De Reuver, 2008), there is little consensus regarding the relative importance of the three meta-features and little understanding about how they should be combined to yield optimum outcomes.

In their original contribution, Bowen and Ostroff (2004) outline four different ways to model the combined effects of the meta-features: *additive* (i.e. the sum across all features), *compensatory* (i.e. a high level of one feature compensates for a low level of another feature), *configural* (i.e. different profiles of features), and *multiplicative* (i.e. interactions among all the features). There has been a good deal of critique directed at multiplicative models, mainly because empirical evidence is inconclusive, and interactions are difficult to interpret, can be inflated or explain little additional variance in the outcomes investigated (Hauff, 2019; Iddekinge et al., 2018). In the HR system strength literature, the multiplicative model has also been criticised for having weak theoretical underpinnings (Aksoy & Bayazit, 2014), which might explain why Ostroff and Bowen (2016) no longer explicitly call for this model to be tested. Instead, they suggest that consensus may be a precursor for the manifestation of other meta-features of HR system strength, implying

that either distinctiveness or consistency mediate the relationship between consensus and outcomes.

Comparing the results of HR system strength models is difficult, since some studies distinguish between the meta-features while others do not. For example, the compensatory model does not distinguish between the meta-features, which makes it impossible to understand which meta-features compensate for others. Meanwhile, the additive model does not yield insights into how the meta-features may (inter)relate. Bowen and Ostroff (2004) called for research "to determine the most appropriate means for "combining" the meta-features of the HR system" (p. 215). However, such an understanding has yet to be reached and, more than a decade later, Ostroff and Bowen (2016) renew their call for research to investigate how the meta-features operate together. They identify three propositions for future research to examine: (1) whether HR system strength operates as a continuum; (2) whether some features represent precursors for other features; and (3) whether there is equifinality where configurations of features may be equally effective in achieving desired outcomes. They note that "in particular, comparisons of the three approaches, as opposed to simple additive or compensatory models with HRM viewed as a linear composite, are needed" (p. 209). Consequently, we test four approaches of HR system strength *to understand how the meta-features of HR system strength should be combined to nurture affective commitment among employees.* We explore the continuum proposition by investigating whether high levels of affective commitment can be achieved through lower levels of HR system strength. We do this by testing additive and compensatory models of HR system strength. We next explore the question of whether certain meta-features represent precursors for others by examining the presence of mediated relationships between the meta-features. Finally, we consider the question of equifinality in configurations by exploring how different profiles of the meta-features operate together in yielding interdependent effects.

Ostroff and Bowen (2016) further suggest that HR systems may not need to be perceived as strong by all employees and argue that "developing HR system strength may be more important for some types of systems than for others" (Ostroff & Bowen, 2016, p. 203). They consider strong systems as being especially important for core employees and "high road" systems, which would suggest lower levels of HR system strength may be sufficient for non-traditional employees who are managed by "low-road" HR systems. We explore the propositions developed by Ostroff and Bowen (2016) using a non-traditional employee sample working mainly part-time and managed by a "low-road" HR system, such as cost-reduction (Ostroff & Bowen, 2016) or productivity-based (Lepak & Snell, 2002) HR systems that are developed to control and monitor employees. Ostroff and Bowen (2016) suggest that non-traditional workers typically experience fewer HR practices and they note the lack of focus on experiences of these "low road" HR systems as unfortunate. At the interpersonal level, part-timers may be treated differently and may therefore have different interpretations of HR practices compared to their full-time counterparts. It is suggested that the employment relationship among part-time workers is more tenuous and less relational (McLean, Kidder & Gallagher, 1998). Previous studies have found, for example, that part-time workers experience poorer communication, poorer terms and conditions of employment, and a lack of continuity in workplace relationships (e.g., Rubery, Keizer & Grimshaw, 2016). Reduced communication and discontinuity of interaction may affect the visibility of HR practices and the sending of strong signals as indicators of HR system strength (Haggerty & Wright, 2010). For these reasons, the capacity for part-time workers to perceive HR system strength may be more difficult than for full-time employees.

Our study contributes to the literature on HR system strength in two ways. First, while the literature suggests that strong HR systems need to exhibit high levels of distinctiveness, consistency and consensus, we explore the relative and combined strength of the relationships between

employee perceptions of these meta-features and affective commitment. Affective commitment is an employee attitude that represents a strong predictor of both employee performance (e.g. Meyer, Stanley, Herscovitch, & Topolnytsky, 2002) and employee well-being (Meyer & Maltin, 2010). We draw on attribution theory (Kelley, 1973) to theorise about how employees interpret the meta-features of HR system strength and the attitudinal consequences of those interpretations (Hewett et al., 2018). By empirically exploring the three propositions set out by Ostroff and Bowen (2016), we extend theorising on HR system strength at the individual level to consider how different combinations of its meta-features operate together in relating to affective commitment.

Our second contribution lies in the unique context of our study, which comprises Dutch home care employees who mainly work part-time at various locations. Ostroff and Bowen (2016) suggest that the effects of combinations of the meta-features may differ depending on the context and the desired outcomes. While research on HR system strength has mainly been focused on full-time workers, there has been a significant increase in part-time work worldwide (OECD, 2019). In the case of the Netherlands, part-time work accounts for almost 40 percent of the labour force, representing the highest percentage of part-time employment worldwide (OECD, 2019). A focus on part-time workers is warranted because many organisations rely heavily on such workers and what is known about HR system strength among full-time workers might not be relevant (Haggerty & Wright, 2010; Ostroff & Bowen, 2016; Wittmer & Martin, 2011). The pursuit of commitment in itself is a particularly challenging goal because the general belief is that part-time workers are less committed than full-time workers (Grimshaw & Rubery, 2015), despite evidence to the contrary (Broschak et al., 2008; Martin & Sinclair, 2007). While there is a much more limited understanding about part-time workers, it would be expected - consistent with signalling theory (Haggerty & Wright, 2010) - that strong signals sent through the HR system will clarify what behaviours are expected and rewarded. We therefore set out to explore the relationship between

employee perceptions of the meta-features of HR system strength and affective commitment in the context of these workers which, to our knowledge, have not been examined in prior research.

Our paper is structured as follows. We first provide an overview of the theoretical perspectives of the meta-features of HR system strength and present four models for testing the three propositions related to combinations of HR system strength meta-features. We then provide details of our methodology and sample, which comprised 2,844 Dutch home care workers. Lastly, we present our findings and discuss their implications for both theory on HR system strength and for practice.

THEORETICAL PERSPECTIVES OF HR SYSTEM META-FEATURES

Employee Perceptions of HR system strength and affective commitment

An important goal for many organisations is the pursuit of affective commitment among employees, which we define as "the employee's emotional attachment to, identification with, and involvement in the organization" (Meyer & Allen, 1991, p. 67). Previous studies examining HR system strength indicate that employees' perceptions of HR messages as distinctive, consistent and consensual are associated with higher levels of affective commitment (Cafferkey et al., 2019; Hauff et al., 2017; Sanders et al., 2008; Sanders et al., 2014). However, evidence also suggests that discrepancies can exist between intended HR practices and how those practices are actually implemented and perceived (Fu et al., 2018), a situation which will potentially signal confusion and destabilise the effectiveness of the HR system. For example, evidence suggests that HR "message makers", "message senders" and "message receivers" may disagree about the HR practices in use (Shipton, Sanders, Atkinson, & Frenkel, 2016; Townsend, Wilkinson, Allen & Bamber, 2012). Concerns about reliability and validity have been raised in prior research that has

relied on reports of HR system strength by HR professionals and line managers of HRM as opposed to employees (Sanders et al., 2008). Cognisant of these inconsistencies, we "privilege" employee perceptions (Cafferkey et al., 2019) on the basis that, irrespective of the intended HR content, HR practices are perceived by employees and these perceptions are related to employee outcomes. This is in keeping with Bowen and Ostroff's (2004, p. 216) view that "the appropriate unit of measurement of assessing strength is the individual, since employee attributions and perceptions reside in the individual".

Continuum Models of HR System Strength and Employees' Affective Commitment

A continuum model assumes that HR system strength can range from low to high levels of system strength and is tested using an additive or compensatory approach (Ostroff & Bowen, 2016). Bowen and Ostroff's (2004) theorising regarding the *additive* model of HR system strength posits that all three meta-features have unique meanings and combine separately to form the HR system. When employees attribute the HR system as *distinctive*, they perceive HR practices as visible, understandable, legitimate and relevant. C*onsistency* refers to the internally coherent implementation and reinforcement of HR practices over time, people and context. Finally, c*onsensus* exists when there is a high level of agreement among principal "message makers" and "message senders" about the HR messages that are communicated and when these messages are perceived as fair. The additive model assumes that employees' perceptions of each meta-feature of HR system strength will independently relate to their affective commitment. Studies, however, show inconsistent results for an additive approach. While Aksoy and Bayazit (2014) found that the fit of the additive model was significantly better than other models tested regarding climate quality and goal climate strength, they only found a significant effect for distinctiveness. Testing the relationship between HR system strength and affective commitment, Cafferkey et al. (2019) found that all three meta-features of HR system strength were significant, while Sanders et al. (2008)

reported significant relationships for distinctiveness and consistency only. This mixed evidence might be explained by the continuum proposition. In such a continuum, each meta-feature of HR system strength makes unique contributions which cumulatively contribute to affective commitment. Unlike the compensatory model, the additive model can provide insights into which meta-features contribute most variance, which can determine whether all meta-features are equally important. Ostroff and Bowen (2016) suggest that among non-traditional employees, the meta-features of the HR system may not need to be particularly strong. Thus, the additive model can determine whether affective commitment among part-time employees is attainable even if the relationships with some of the meta-features are weak. We therefore explore the additive approach by examining the unique associations between employee perceptions of the meta-features - distinctiveness, consistency and consensus - and affective commitment.

The *compensatory* approach assumes that high levels of one feature can compensate for low levels of another (Bowen & Ostroff, 2004; Ostroff & Bowen, 2016). Relying on HR systems thinking (e.g., Delery, 1998), the approach posits that the combined effects of the meta-features of HR system strength operate as a "second-order reflective latent variable" (Aksoy & Bayazit, 2014, p. 512). Aksoy and Bayazit (2014) found support for the compensatory effects of the three meta-features, as indicators of MBO system strength, on goal climate quality and goal climate strength. Their findings suggest that employees need to perceive the system as highly distinctive, which will then compensate for weaker perceptions regarding consistency and consensus.

James and James (1989) suggest that while individuals can compartmentalise work experiences, these experiences can also combine to inform their overall perceptions. In the case of HR system strength, individuals may form higher order schemas or a "general" factor with regard to the meanings they attach to their overall work experiences, which is then associated with their affective commitment. A common trend in the HR system strength literature (e.g. Aksoy & Bayazit,

2014; Alfes et al., 2019) is towards combining dimensions or practices into higher-order constructs (Johnson et al., 2012). This approach is appropriate for understanding affective commitment due to the strong theoretical foundation supporting the relations between the meta-features (Petter, Straub & Rai, 2007). Thus, we explore whether the three meta-features combine to form a second-order reflective construct in which strong perceptions of some features may compensate for weaker perceptions of others in the development of affective commitment.

It should be noted that the idea of compensation is not unique to the construct of HR system strength and is reflected in the broader "lumping and splitting" arguments that have been raised in the wider literature on construct measurement in HR (Johnson et al., 2012; Klein & Delery, 2012). The advantage of the aggregate approach is that it can yield parsimony and direct comparability across different outcomes, target workers and contexts. However, it is only useful if the higher order construct can predict these outcomes *better* than examining each of its underlying features. This presents the possibility of a "jingle fallacy" (Block, 1957), where the higher order construct is used when in fact its meta-features represent quite distinct phenomena.

As studies to date have tended to mainly focus on the additive and compensatory models only, investigations of possible interrelationships between the meta-features are scarce (Aksoy & Bayazit, 2014; Bowen & Ostroff, 2004; Hewett et al., 2018). Although both theoretical and empirical support for both models is high, studies have produced inconsistent findings which inhibit a fuller understanding of how the three meta-features operate together. The additive model does not consider interrelations between the meta-features and the compensatory model does not inform us which meta-feature compensates for another. Thus, while the presence of all three meta-features may be necessary, the additive and compensatory models are insufficient to understanding how HR system strength develops, thus drawing theoretical and practical conclusions based on either model alone may obscure important knowledge about how HR systems should be designed.

Notwithstanding these limitations, tests of these combinations of the meta-features of HR system strength are still needed since the additive and compensatory model form the basis for understanding how the individual meta-features operate together and thus help in interpreting the tests of other models.

To understand whether HR system strength operates as a continuum and whether lower levels of HR system strength may be sufficient, we present our first research question: *In what way are the meta-features - distinctiveness, consistency and consensus – independently and at a higher order of HR system strength related to employees' affective commitment?*

A Precursor Model of HR system strength and employees' affective commitment

Ostroff and Bowen (2016) suggest that some of the meta-features may be necessary but insufficient for HR system strength to develop and thus propose that some meta-features may be precursors to others. Their suggestion is that consensus is a precursor of consistency and distinctiveness, implying that either distinctiveness or consistency may mediate the relationship between consensus and outcomes. This would mean that HR messages need to be understood, communicated and agreed by key decision makers to create distinctiveness and consistency. Among a sample of managers, Aksoy and Bayasit (2014) found that distinctiveness was a mediator in the relationship between consistency and consensus and the quality and strength of a goal climate. A more recent study found that consistency mediated the relationship between reputation management (a hybrid between distinctiveness and consensus) and both organisational citizenship behaviour and intention to remain (De la Rosa-Navarro et al., 2020). Both studies found support for the precursor role of consensus, but the evidence for which of the remaining two meta-features may mediate the relationship between consensus and employee outcomes is mixed. Thus, we develop a second

research question to understand *which meta-feature of HR system strength mediates the relationship between consensus and affective commitment*?

A Configurational Model of HR system strength and employees' affective commitment

Ostroff and Bowen (2016) advocate for a configurational approach which recognises that the features operate together in interdependent ways. They stress that "some configurations or patterns across dimensions may be more important for outcomes than others, and different configurations may be equally effective" (p. 203). The *configurational* model focuses on how different profiles of features operate together in yielding interdependent effects (Bowen & Ostroff, 2004) by identifying patterns across conceptually distinct variables (Ostroff & Schulte, 2014). Configurations are bundles of the meta-features and incorporate the interdependencies and interactions among them. In this way, the configural approach considers the role that each meta-feature plays in the HR system (Hauff, 2019; Ostroff & Schulte, 2014). It assumes that while some features of HR system strength may not directly relate to employees' affective commitment, patterns or combinations may be important (Ostroff & Bowen, 2016), even without the presence of a third feature.

The covariation principle (Kelley, 1973) assumes that combinations of the meta-features result in different attribution patterns. In this way, messages that are perceived as high in distinctiveness, high in consistency and high in consensus (HHH pattern) are attributed to a stimulus or entity. When applied to HR processes, a HHH pattern can be attributed to management (Sanders & Yang, 2016) and to the HR practices that are used to communicate HR messages (Hewett, Shantz, Mundy, & Alfes, 2018). Research has generally assumed a HHH pattern because according to Bowen and Ostroff (2004), a strong HR system needs all three meta-features to create a strong organisational climate where perceptions are shared about which behaviours are desired. Based on an experimental study of perceptions of high-commitment work practices, Sanders and

Yang (2016) found empirical support for the HHH pattern and affective commitment. While findings suggest that employees' affective commitment is higher when all three meta-features are strong, there remains too little theoretical and empirical support to disregard alternative patterns. Ostroff and Bowen (2016) raise the possibility that alternative configurations of HR system strength may be possible, particularly among non-traditional employees. Thus, we propose the third research question to explore the configurational model and ask *what is the relationship between configurations of all possible eight patterns of HR system strength and affective commitment?*

All combination models of the HR system strength meta-features are visualised in the conceptual model below (Figure 1).

Insert Figure 1 about here

METHODOLOGY

The research context

The research was undertaken within a Dutch private home care organisation with more than 20,000 employees spread across 56 locations. It provides various types of care, including household assistance and personal care. The majority of employees in this sector work part-time, receiving regular wage employment with less than "normal" hours of work.

At the time of the research, a new HR strategy was being implemented to professionalise the HR department and transition it to a HR service delivery model. The main goal of the strategy was to maximise efficiency and control costs in the delivery of HR services. Consistent with this

strategy, the practices employed to manage workers corresponded to a "productivity-based HR configuration" (Lepak & Snell, 2002). These workers were largely performing standardised tasks, with limited opportunities for skill development with the exception of training aimed at improving efficiencies in the care provided. While their work was largely coordinated through teams of similar caregivers, given the remote nature of their working arrangements, communication and involvement opportunities with the wider organisation were limited. Thus, the opportunity to create a strong HR system, was diminished. This sample and research context therefore offered the opportunity to explore whether non-traditional workers such as part-time workers working under "low-road" HR systems would require high HR system strength to generate desired outcomes (Ostroff & Bowen, 2016).

Sample and participants

An online survey was administered to all those employed to provide direct care in the organisation (n = 19,990). The HR director provided a pre-notification of the survey encouraging employees to participate. This was followed by an e-mail invitation and two subsequent reminders. The invitation included information about the research aims and survey instructions and offered assurances regarding anonymity. By the close of the survey, a total of 3,170 employees responded, yielding a response rate of 16 percent. Although this response rate is lower on average than other studies within the HR and management fields (e.g. Mellahi & Harris, 2016), it is fairly consistent with other research in the healthcare sector (Cook, Dickson, & Eccles, 2009). While this signals that response rates in this context are declining, the results should be considered on their merits (Cook et al., 2009), particularly given that the Durbin Watson's correlation of residuals and the measure of Cook's distance of cases did not show any issues of sampling bias.

Among the sample, 97 percent were female, which is unsurprising given the nature of the care sector where more females than males tend to be employed. Respondents mostly worked part time (88%), were aged between 40 and 60 years (72%) and were on permanent contracts (72%). A high proportion had worked for the organisation for three years or less (39%), while 27% worked for the organisation for over 11 years. While it could be argued that respondents within the dataset are nested within locations, they are not truly nested in that these care workers work remotely across the 56 locations. The workers are led by a team of coordinators who oversee planning and rostering of staff in each location and line managers who oversee operations across the various locations. However, there is a level of transience in terms of team coordinators and line managers and many workers provide services in more than one location. The workforce is mainly managed from the same central location i.e. all recruitment, training etc. is carried out by a team of HR professionals based at the organisation's headquarters. For these reasons, it is not easy to group the sample in any meaningful way according to location.

Measures

HR system strength. We used Bondarouk et al.'s (2017) measure to capture HR system strength. This extended version of the measure was developed by Delmotte et al. (2011) and contains 27 items to capture distinctiveness (13 items), consistency (10 items) and consensus (4 items). The distinctiveness measure included items such as: "Employees are regularly informed about the initiatives taken by the HR department". A sample item for consistency was "There is a wide gap between intended and actual effects of HR initiatives". Consensus was measured with items including: "HR management and line management are clearly on the same wavelength". All items were measured on a five-point Likert scale ranging from 1 "strongly disagree" to 5 "strongly

agree". The reliabilities of the meta-features were as follows: distinctiveness = .91, consistency = .77, consensus = .87.

Affective Commitment. Torka's (2003) Dutch translation of the 6-item affective commitment scale (Meyer et al., 1993) was used. A sample item was "This organisation has a great deal of personal meaning for me". The items were measured on a five-point Likert scale ranging from 1 "strongly disagree" to 5 "strongly agree". The reliability of the scale was .93.

Control Variables. In order to rule out the role of other variables that have been associated with employees' affective commitment, some control variables were included. These variables were chosen based on similar studies (Cafferkey et al., 2019; Sanders et al., 2008) and include employees' gender, age, level of education, organisational tenure, type of contract (permanent or temporary) and work mode (full-time or part-time).

Data Screening

Prior to analysis, data were cleaned. Data screening involved calculating the standard deviations across all latent variables. Responses with a standard deviation below 0.5 were manually assessed to verify disengagement and were subsequently removed. This resulted in a final sample of 2,844. The skewness, kurtosis, and normality characteristics of all variables were assessed across items. This analysis indicated that the assumptions of multivariate analysis were met (Hair et al., 2010). To test for multicollinearity, we calculated the variance inflation factors (VIFs) all of which were all below the recommended threshold of 10 (Levin, Whitener, & Cross, 2006). These scores are provided in Table 1 along with the descriptive statistics.

Insert Table 1 about here

Analysis Strategy

In line with research question one, data analysis procedures first focused on the additive and compensatory models. Both models were examined separately beginning with the additive model. First, to explore the additive model, confirmatory factor analysis (CFA) was conducted in AMOS 25.0 to test the model fit for a three-factor model of HR system strength with each item loaded on to its intended dimension (distinctiveness, consistency, and consensus). Eight items had extremely low loadings ranging from .21 to .40. These items – three distinctiveness and five consistency – which were all negatively worded, were subsequently dropped from the analysis. This led to a substantially improved model fit; $\chi 2 = 3717$, df = 331, root mean square error of approximation (RMSEA) = .06, standardised root mean square residual (SRMR) = .049, comparative fit index (CFI) = .94. The standardised regression weights for the additive model ranged from .640 to .906 meeting respectable thresholds for the sample size (Hair et al., 2010). The factor loadings for all items are provided in Appendix A.

For the compensatory model, a CFA was conducted to assess the measurement model for HR system strength as a second order reflective latent variable with the three meta features serving as first order factors loading on to the second order factor. This follows the approach taken by Aksoy and Bayazit (2014). The model fit ($\chi 2 = 2572$, df = 264, RMSEA = .06, SRMR: .041. CFI = .95) met required thresholds. The standardised regression weights for all items were respectable with values for items loading on to first order factors ranging from .635 to .921, and each first order factor loading well on to the second order HR system strength factor (distinctiveness: 914, consistency: .977, consensus: 851). The factor loadings for all items are provided in Appendix A.

Reliability and validity estimates for both models including average variance extracted (AVE), composite reliability (CR), square root of the AVE (in bold on diagonal) and intercorrelation values were examined independently and are depicted in Table 2. For the additive

model, all variables demonstrated reliability with CR scores above .70 (Raykov, 1997). The AVE for each variable was above .50, thereby indicating convergent validity. Discriminant validity is achieved when the square root of the AVE for each variable is greater than its correlation with the other variable. There were discriminant validity issues between the three meta features of HR system strength. However, Malhotra and Dash (2011) argue that the AVE measure can be too strict, and that CR represents a sufficient indicator of reliability. Furthermore, O'Brien (2007) notes the importance of ensuring that models are theoretically based and that factors with validity or collinearity issues are retained to achieve this. As all variables demonstrated high CR scores and since a higher order factor structure was included in the compensatory model, the factor structure for the additive model was retained to further explore the models leveraging this operationalisation (additive model and mediation models). For the compensatory model, both variables demonstrated reliability with CR scores above .70 (Raykov, 1997). The AVE for each variable was also above .50 indicating convergent validity. The variables also demonstrated discriminant validity, offering further support for this factor structure.

In line with our second research question, the mediation model focused on examining consensus as a precursor and the potential mediating roles of distinctiveness and consistency as a result. This model leveraged the same factor structure as the additive model and thus, no further CFA or reliability testing was required. Two different mediation models were tested; one for distinctiveness and one for consistency using bootstrapping in AMOS. Lastly, research question three focused on examining the role of different configurations across the three meta-features. To do so, a median spilt was performed for the three meta feature variables to create high and low configurations for each variable. The eight different configurations of HR system strength were computed in SPSS and dummy variables were created to represent each configuration. The

relationship between each configuration and affective commitment was examined using regression analysis in SPSS (version 25).

As all data were collected at a single point in time, we checked for common method bias using the specific bias test based on Archimi et al. (2017) using the plugin from Gaskin and Lim (2016). A test of equal specific bias demonstrated unevenly distributed bias. The data for each model was imputed in AMOS for subsequent analysis with the common latent factor retained to account for any shared variance owing to method. The structural models were then examined using structural equation modelling (SEM) in AMOS 25.0.

Insert Table 2 about here

RESULTS

RQ1: Tests of the Continuum Proposition

Research question one was examined by testing the additive and compensatory models. First, the additive model investigated the unique associations between the three meta-features and affective commitment. The relationships between distinctiveness, consistency, consensus and affective commitment were examined using CB-SEM in AMOS 25.0. The second half of research question one focused on testing a higher order conceptualisation of HR system strength. To do so, SEM was again performed with HR system strength operationalised as a second order reflective latent variable, with distinctiveness, consistency, and consensus treated as first order factors.

The Additive Approach. The structural additive model exhibited strong model fit (CFI =.993, SRMR = .036, RMSEA = .043, NFI = .992, GFI = .992) meeting required thresholds (Hair et al., 2010). The results are illustrated in Figure 2. Firstly, and surprisingly, distinctiveness had a

negative and insignificant relationship with affective commitment (β = -.019, p > .05). Secondly, consistency had a positive and significant relationship with affective commitment (β = .687, p < .001). Thirdly, consensus had a negative but significant relationship with affective commitment (β = -.069, p < .05). Overall, the model explained 38 percent of the variance in affective commitment.

Insert Figure 2 about here

The Compensatory Model. The model demonstrated good fit (CFI =.976, SRMR = .031, RMSEA = .061, NFI = .974, GFI = .994) meeting required thresholds (Hair et al., 2010). As shown in Figure 3, HR system strength was found to be positively and significantly related to affective commitment (β = .624, p < .001). The model explained 39.8 percent of the variance in affective commitment.

Insert Figure 3 about here

RQ 2: Test of the Precursor Proposition[1]

To test the precursor proposition, two mediation models were explored. The first follows Aksoy and Bayazit (2014), who found support for distinctiveness as a mediator of consistency and consensus on climate quality and strength. The mediating role of distinctiveness was examined

[1] In the broader data collection for this study, data from a sample of line managers and HR managers (N=106) was also collected. In the interest of comparison, mediation testing was conducted among this management sample. For this analysis, it was distinctiveness (indirect only mediation with positive indirect effect) and consensus (competitive mediation owing to negative indirect effect) that significantly mediated the relationship between consistency and affective commitment. Consistency was not found to significantly mediate the relationship between distinctiveness or consensus on affective commitment.

using CB-SEM in AMOS and performing bootstrapping with 2,000 samples and a confidence level of 90% to investigate indirect effects. The model met required thresholds of fit (CFI = .993, SRMR: .037, RMSEA = .043, NFI: .992, GFI = .992). The direct relationships echo the additive model, distinctiveness (β = -.019, $p > .05$) had a negative, insignificant relationship with affective commitment. Consistency had a significant, positive direct influence on affective commitment (β = .687, $p < .001$), and consensus had a negative, significant influence on affective commitment (β = -0.69, $p < .05$). The bootstrapping revealed that consistency had a negative insignificant indirect influence (β = -.020, $p > .05$) on affective commitment through distinctiveness, and consensus had a positive but insignificant indirect influence (β = .003, $p > .05$) on affective commitment through distinctiveness. Thus, it is concluded that distinctiveness does not act as a mediator in this study. The model explained 38% of the variance in affective commitment and 91.3% of the variance in distinctiveness.

The second model followed the same approach and explored the mediating role of consistency, following De la Rosa-Navarro et al. (2020). The model met required thresholds fit (CFI = .993, SRMR: .036, RMSEA = .043, NFI: .992, GFI = .992). The direct association between consistency and affective commitment was positive and significant (β = .687, $p < .001$). Both distinctiveness (β = -.019, $p > .05$), and consensus (β =-0.69, $p < .05$) had a negative direct effect on affective commitment but distinctiveness was not significant. To test the indirect effects, bootstrapping was conducted using 2,000 samples with a 90% confidence interval. The bootstrapping revealed strong, positive indirect effects with both distinctiveness (β = .471, $p < .001$) and consensus (β = .226, $p < .01$) having a significant positive indirect effect on affective commitment via consistency. Thus, consistency is a mediator in this study. The relationship between distinctiveness and affective commitment is classified as indirect-only mediation, due to the insignificant direct relationship and significant indirect effect (Zhao, Lynch & Chen, 2010). Put

differently, distinctiveness is only related to affective commitment through consistency. the relationship between consensus and affective commitment is described as competitive mediation, based on the negative, significant direct relationship and positive significant indirect effect (Zhao et al., 2010). In other words, despite the surprising negative direct relationship between consensus and affective commitment, through association with consistency, consensus has a stronger, significant, positive association with affective commitment. The model explained 38% of the variance in affective commitment and 94.5% of the variance in consistency. The findings for both models are illustrated in Table 3 below.

Insert Table 3 about here

RQ 3: Test of the Equifinality Proposition

Research question three seeks to examine the relationship between configurations of all eight patterns of HR system strength and affective commitment. To do so, eight linear regressions were run in SPSS, each representing one configuration of the HR system strength meta-features (distinctiveness, consistency, consensus). As can be seen in Table 4, six of the eight configurations of HR system strength (LHL, HLL, LLH, LHH, LLL and HHH) had a significant relationship with affective commitment at the .01 level. Of the six significant models, only LLL and HHH had strong explanatory power (LLL t= -31.420, p <.001, adjusted $\mathbf{R}^2$ =.258, HHH t= 31.429, p <.001, adjusted $\mathbf{R}^2$ =.258), but only the HHH configuration is positively and significantly related to affective commitment.

Insert Table 4 about here

DISCUSSION

An important aim of our study was to explore the relative importance of the three meta-features for the development of affective commitment. Following Ostroff and Bowen's (2016) recommendations, we empirically assessed the three propositions by testing four combinations of HR system strength meta-features. It is only by exploring all these models that we can more fully understand the optimal combination of HR system strength meta-features in fostering employees' affective commitment.

Our findings demonstrate that all of the meta-features of HR system strength need to be present to nurture affective commitment among employees, but not to the same extent. To understand this conclusion, we first discuss the tests of the three propositions separately. Starting with the continuum proposition, the results of the *additive model* suggest that HR system strength at the employee level works as a continuum in which not all meta-features need to be perceived as high, as only consistency is significantly and positively related to affective commitment, while distinctiveness is unrelated and consensus is negatively related. This finding perhaps exacerbates the conflicting views and evidence from the literature which suggests that it is distinctiveness (Aksoy & Bayazit, 2014; Fiske & Taylor, 1984; Li et al., 2011) that is a particularly important feature of HR system strength. On the surface, the test of the *compensatory model* provides support for a second-order model of HR system strength in line with previous studies (e.g. Aksoy & Bayazit, 2014; Bondarouk et al., 2017; Bednall et al., 2014; Chacko & Conway, 2019). It suggests that at the employee level the weaker presence of some meta-features will not compromise the positive relationship between consistency and affective commitment but that instead, a high level of one meta-feature (i.e. consistency) will compensate for the weaker presence of other meta-features (i.e. distinctiveness and consensus). This compensatory effect provides a preliminary clue

that all three features play a role in the development of affective commitment and that they all need to be present, but not necessarily high to yield high levels of affective commitment. These results suggest that at the employee level, HR system strength may operate as a continuum, because as long as consistency is high, distinctiveness and consensus do not need to be high in fostering affective commitment.

For the precursor proposition, Ostroff and Bowen (2016) argued that consensus is a necessary precursor to consistency and that failure to take its importance into account may explain inconsistent research findings regarding relevant outcomes. Our *mediation model* considered the possibility that the distinctiveness or consistency meta-features might mediate the relationship between consensus and affective commitment. We found support for the mediating role of consistency only, i.e. both distinctiveness and consensus meta-features had a significant and positive indirect effect on affective commitment, via their relationship with consistency. This is contrary to Aksoy and Bayazit's (2014) finding that distinctiveness of an MBO system mediates the relationship between consistency and consensus and a high quality goal climate. It is important to note, however, that their study was based on a sample of managers. Our findings support the conclusion that consistency operates as a key dimension in the development of a strong HR system (De la Rosa-Navarro et al., 2020), which provides a much richer understanding of how the other two features operate. This result confirms that all meta-features need to be present, but that they are not linearly related with affective commitment.

By further responding to Ostroff and Bowen's (2016) call to consider equifinality, our *configuration model* explored potentially "powerful connections" (Delery, 1998) among the three features in the development of affective commitment based on different configurations of the features. Comparing all possible combinations of high and low features, we found that several configurations were positively related with affective commitment, including configurations with

low levels of meta-features, but that the HHH configuration was most strongly related with affective commitment. In other words, the combination of high distinctiveness, high consistency and high consensus in a configuration of mutually supporting meta-features yielded the highest level of affective commitment. These results provide some support for the equifinality proposition because various configurations were positively related with affective commitment, but they were not necessarily equally effective. Theoretically, this can be explained on the basis of Kelley's (1973) co-variation principle, which suggests that individuals' perceptions of HR messages as high in distinctiveness, consistency and consensus are attributed to a stimulus or higher entity i.e. HR practices or the HR system that they comprise. It also suggests that the messages received are understood in terms of their underlying intention and are thus stable and robust. It is also in line with the results of Sanders and Yang (2016) and suggests that when employees attribute HR signals sent by HR practices to cause-effect relationships, they show higher levels of affective commitment. They do so because in the case of the HHH pattern, employees are able to make sense of the messages intended by management and the messages signalled through HR practices.

Implications for Theory

Our findings make a number of important contributions to the understanding of how the three meta-features of HR system strength need to be combined in fostering affective commitment. They suggest that the relationship between the meta-features of HR system strength and affective commitment does not operate in a simple linear manner. Instead, consistency is positively and directly related to affective commitment, while distinctiveness and consensus are not. The possibility of the nonlinearity of the meta-features of HR system strength was suggested by Ostroff and Bowen (2016), and our results strongly support this proposition. Analysing this finding in more detail suggests that when perceptions of the consistency of signals that are transmitted through HR

practices across employees, over time, and in response to behaviours (i.e. cause-effects) are coherent, then employees will attribute these signals as promoting justice across the organisation (Fu et al., 2018). Thus, our findings correspond to other evidence suggesting that it is the consistent application of HR practices that transmit messages about what kind of behaviours are expected and which are reciprocated with high levels of affective commitment. For example, evidence suggests that employees differentiate between HR practices on the basis of how consistently they are applied, which in turn is associated with affective commitment (Grimshaw & Rubery, 2015; Heffernan & Dundon, 2016). However, our test of the compensatory model leads us to conclude that higher levels of consistency can compensate for lower levels of distinctiveness and consensus.

As a further exploration of non-linearity, our tests of the mediation model show that consistency is indeed directly and positively related with affective commitment, but that distinctiveness and consensus are precursors of consistency. Thus, we cannot conclude that distinctiveness and consensus are not needed to yield high levels of affective commitment. On the contrary, our findings suggest that not considering them as features of a strong HR system would be detrimental to the development of affective commitment. We conclude that when employees perceive that messages are clear and relevant, and that there is consensus among decision makers and fairness in the implementation of HR practices, the relationship with affective commitment is stronger because they perceive that there is a high level of consistency regarding the behaviors that are expected and rewarded. Thus, for our employee-level analysis, consistency has a more proximal role in the development of affective commitment. We suggest that future research consider whether consensus or distinctiveness may be more important for an organisational-level analysis (and manager sample) and a more distal measure of performance-related outcomes. Our test of the configuration model supports the conclusions drawn from the mediation model. It shows that although several configurations are positively and significantly related to affective commitment,

the best configuration for affective commitment is one in which distinctiveness, consistency and consensus are high. This confirms that all meta-features do need to be present; that high consistency is needed to yield positive and significant relationships with affective commitment; and that both distinctiveness and consensus can generate this high level of consistency.

Our final contribution to knowledge about HR system strength is reflected in the research context and the sample investigated. Since our knowledge of HR system strength is largely derived from contexts involving both full-time employees and knowledge workers who typically experience "high commitment" HR systems, we have less understanding of how such meta-features operate in a context that focuses on part-time care work. Following Ostroff and Bowen's arguments, we conclude that the development of affective commitment among part-time workers who experience a "low-road" productivity-based HR system is possible, and that a high level of consistency may compensate for the weaker presence of the other meta-features. This would suggest that transparent procedures that are consistently applied can create strong signals about what is expected and rewarded, which will enhance feelings of being treated as a full member of an organisation (Tremblay et al., 2010), and that this sense of transparency will be reciprocated in the form of high affective commitment.

Implications for Practice

The findings yield a number of important implications for practice. First, they highlight how the meta-features of HR system strength operate together, which suggest ways in which system strength can be optimised. In particular, the findings highlight how important it is that the messages or signals embedded in HR systems to manage part-time workers are consistent and that there is coherent implementation of HR practices by line managers to reinforce employees' attributions about what is expected, valued and rewarded. This will require that practices are implemented

coherently across people, across different contexts and over time. Given the "low-road" productivity-based HR system considered in our study, where jobs tend to be quite standardised and market-based wages are offered in return for performance, expectations will need to be acceptable to employees, while at the same time being consistent with the strategic orientation of that system. Thus, efforts might include ensuring consistency in requirements for work scheduling, offering training, mentoring and performance feedback to all, in addition to fairness in opportunities for more interesting projects or cases, or more contract hours or more permanent contracts. These efforts should cultivate a climate of fairness which in turn will be reciprocated by higher levels of employee commitment.

Importantly, however, our findings provide additional insights regarding how consistency can be created. They demonstrate that it is the distinctiveness of the signals that HR practices transmit and the consensus about the behaviours that are valued and rewarded that form the basis for the consistent application of these practices, which in turn fosters commitment. This implies a key role for HR professionals in responding to the messages that the organisation intends to signal. When these signals are established, their role will then be to craft distinctive HR messages, i.e. making sure that HR practices are visible, understandable, relevant and legitimate, and consensual HR messages, i.e. monitoring that there is agreement among actors about how HR practices can be implemented in a fair way. They can do so by communicating unambiguous messages to line managers about which HR practices are used and why (visibility and understandability), how these practices should be used (legitimacy), and what the benefits of those practices are for the organisation in comparison to other practices (relevance). To enhance perceptions of consensus, HR professionals can establish unanimity and fair implementation through clear communication about how practices should be operationalised, by monitoring managers' own performance and through reinforcement in management development programmes. These efforts will also require

managers to be responsive, to develop an awareness of which practices best transmit the signals intended, and to develop a level of self-awareness of how effective they are in encouraging and reinforcing the desired behaviours. To further support consistent implementation of these practices at the operational level, HR professionals need to support line managers in communicating and managing expectations to employees about what behaviours are expected, valued and rewarded. They further need to make sure that all line managers expect the same values, such as high levels of affective commitment, and that messages communicated, feedback given and rewards allocated can be attributed by employees to particular attitudes and behaviours. Consistent application of HR practices can also be reinforced by HR professionals, for example, by ensuring that changes in line management positions among teams do not lead to inconsistent implementation and by monitoring consistent implementation between employees and over time.

Limitations

While our study has made a number of contributions to knowledge about HR system strength, there are some limitations to our efforts. First, our study was cross-sectional, which raises questions about causality. We therefore recommend that future research take a longitudinal approach to explore how the dimensions of HR system strength and commitment operate over time. Second, the data were derived from self-report measures, which raises concerns about common method variance. Our study, however, was based on prior theorising and was primarily interested in relating employees' perceptions of HR system strength to their affective commitment. We believe that only employees can provide a valid assessment of their commitment. Further, we believe that the construct of HR system strength is complex and will not form part of a respondent's theory-in-use (Chang, van Witteloostuijn, & Eden, 2010). Prior to administration, established recommendations to control for potential common method bias were followed (Podsakoff et al., 2012). For example,

we assured participants about the anonymity of the survey and the confidentiality of the data and we pre-tested the survey prior to full administration. In addition, both the confirmatory factor analysis and the complex specification of our models further reduces concerns about the likelihood of such bias (Chang et al., 2010; Spector, 2019). We also retained the common latent factor when imputing data, which ensures that any shared variance due to method is accounted for when testing the structural models. Third, there are limits regarding the generalisability of our findings. Our sample comprised mainly part-time care workers and, to our knowledge, no study has considered HR system strength among such workers. While we regard this as a key strength of our study, future research should consider a broader range of workers and contexts. Nonetheless, we suggest that our findings should be applicable to full-time workers experiencing a similar HR system in a similar work context. Finally, there is the possibility that additional variables have been omitted from our model. For example, our study is consistent with other studies that have considered HR process and HR content streams separately. While we regard HR system strength as a higher order architectural feature that possibly mediates the relationship between the content of the system and employee outcomes, we recommend that future research consider more closely this assumption by measuring both content and process streams simultaneously in order to get a better understanding of both how and why HR system strength is important.

CONCLUSION

Our study represented the first empirical exploration of the propositions of Ostroff and Bowen (2016) that HR system strength may be a continuum, that some meta-features may be precursors of other meta-features and that configurations of HR system strength meta-features might be equally effective to yield desired outcomes. We explored these propositions based on four combinations of the meta-features, i.e. the additive, compensatory, mediation and configuration

approaches to understand how the meta-features of HR system strength need to be combined to nurture affective commitment among employees. While the findings point to a role for all three meta-features in the development of affective commitment, the importance of consistency in the implementation of HR practices is highlighted. Combining insights from four combinations of HR system strength models, demonstrates that HR system strength may be a continuum because all meta-features need to be present, but they do not necessarily all need to be high and they are nonlinearly related. Consistency is directly related with affective commitment, but distinctiveness and consensus are indirectly related with affective commitment via consistency, providing strong support for the precursor proposition.

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TABLES AND FIGURES

Figure 1: Proposed Conceptual Model

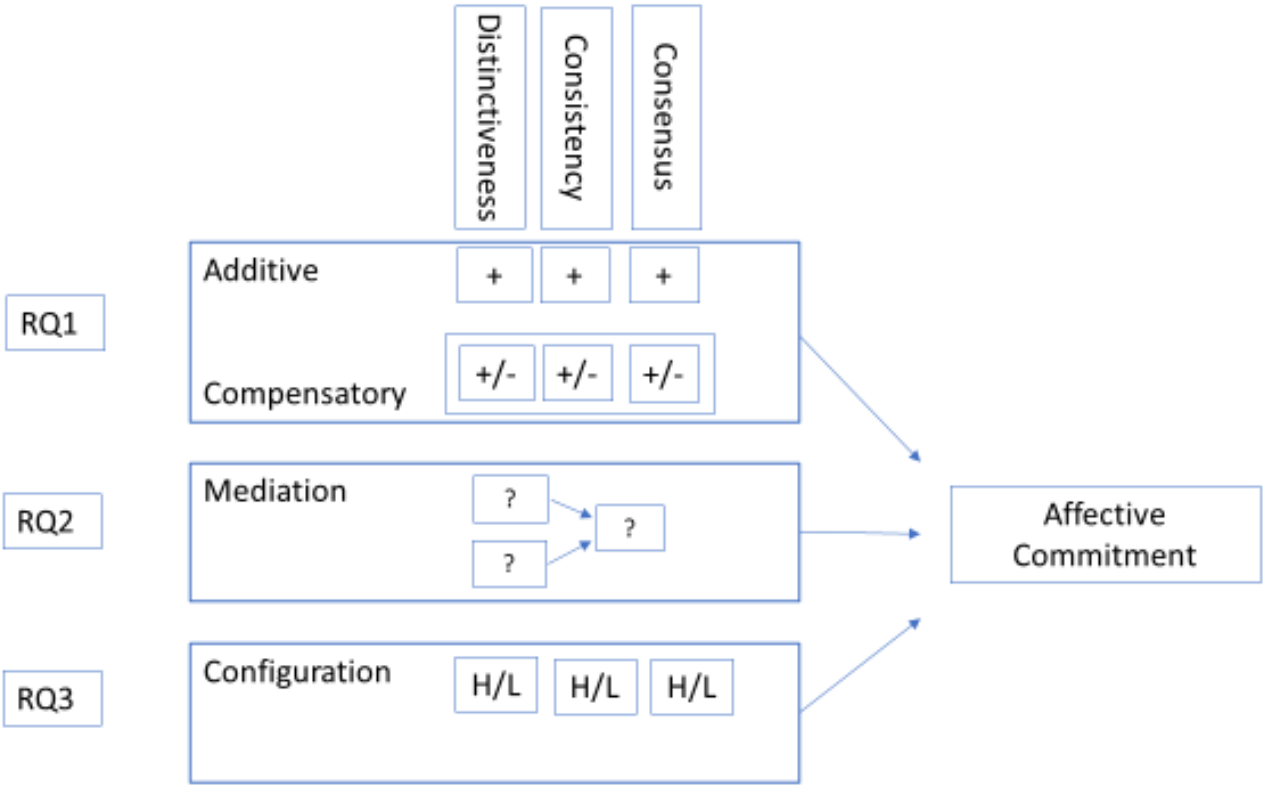

Table 1: Descriptive Statistics

	Mean	Std. dev	VIF	Tolerance
Distinctiveness	3.03	0.79	3.19	.313
Consistency	3.07	0.77	3.41	.293
Consensus	3.10	0.69	2.17	.460
Affective Commitment	3.81	1.00		

Table 2: Reliability, Validity and Correlations for Additive and Compensatory Models

Additive Model	CR	AVE	1.	2.	3.	4.
1. Distinctiveness	.929	.567	**.753**			
2. Consistency	.853	.538	.814**	**.734**		
3. Consensus	.862	.610	.687**	.711**	**.781**	
4. Affective Commitment	.940	.724	.530**	.534**	.452**	**.851**
Compensatory Model	CR	AVE	1.	2.		
1. HR system Strength	.945	.851	**.923**			
2. Affective Commitment	.941	.729	.582**	**.854**		

*** $p < .001$

Table 3: Mediation Model Results

Model	Relationship	Direct Effects	Indirect Effects	Mediation
1. Distinctiveness as a Mediator	Distinctiveness – Affective Commitment	(-.091)n.s.	N/A	N/A
	Consistency-Affective Commitment	(.687)***	(-.020)n.s	No mediation
	Consensus-Affective Commitment	(-.069)*	(.003)n.s.	No mediation
2. Consistency as a Mediator	Consistency-Affective Commitment	(.687)***	N/A	N/A
	Distinctiveness – Affective Commitment	(-.091)n.s.	(.471)***	Indirect-only mediation
	Consensus-Affective Commitment	(-.069)*	(.226)*	Competitive mediation

Table 4: Configuration Model Results

Model	Configuration (Distinctiveness, Consistency, Consensus)	T
1	LLL	-31.420**
2	LLH	-2.824**
3	LHL	3.470**
4	LHH	2.948**
5	HLL	3.168**
6	HLH	-.641n.s
7	HHL	1.334n.s
8	HHH	31.492**

Figure 2. SEM Results: Additive Model

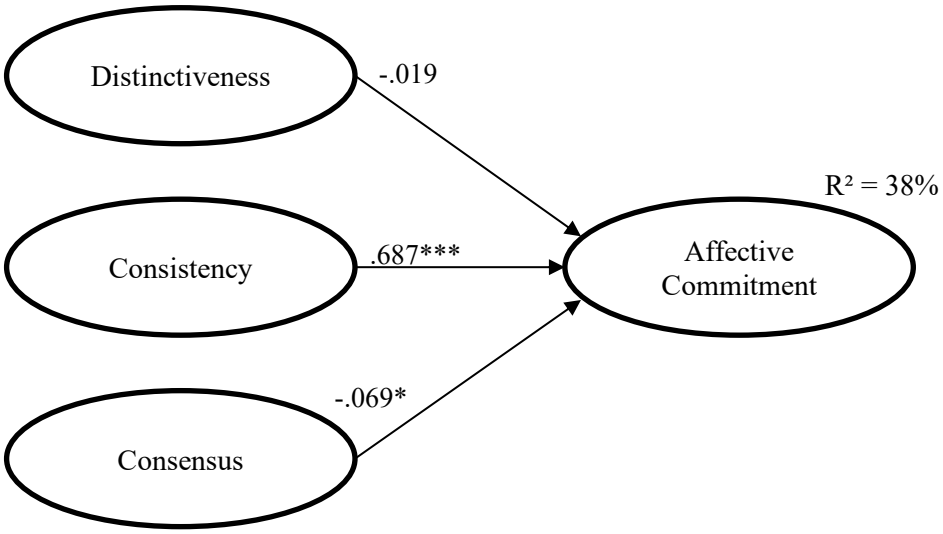

Figure 3. SEM Results: Compensatory Model