Determinants of building consistent human resources management systems: a focus on internal communication

Introduction

The human resources (HR) literature has highlighted the need to design fitted HR strategies, which are understood as organizations’ consistently defined strategic orientation to their external environment and internal resources to manage their human capital (Monks, Kelly, Conway and Flood, 2013). Nevertheless, the strategy is an insufficient condition to ensure the strategic contribution of HR management (HRM) practices. More research is needed to analyse the internal mechanisms through which HR strategy is formulated and implemented (Lengnick-Hall, Lengnick-Hall, Andrade and Drake, 2009).

Specifically, HR strategies are usually defined at the strategic apex of the organization to be transmitted to the rest of the firm through different hierarchical levels and managers. However, the central meaning of the HR strategy may change in this intricate dynamic system, which leads to at least three conflicting messages at the formulated, implemented and individual-perceived levels (Nishii and Wright, 2008). The differences between these three levels of interpretation can cause organizations to lose the original meaning of the HR content, which produces a disconnection between what was designed and the results of HR action (Khilji and Wang, 2006). To manage this misalignment, communication is particularly relevant because it operates as a crucial link between the formulation and implementation stages (Den Hartog, Boon, Verburg and Croon, 2013).

The purpose of this study is to deepen our understanding of determinants conditioning internal communication in the HRM context. In this way, we focus on how HR decision-makers’ characteristics influence communication implementation to improve HRM system consistency. That is, how proper communication may ensure that HR contents are perceived...
clearly and integrated enough to have the potential to guide other managers’ and employees’
behaviours towards organizational goals.

For this purpose, we consider HR managers’ perspective as especially relevant because
they are experts and responsible for the HR area (Cohen, 2015); therefore, they are the main
person in charge of HR communications. In doing so, we cover two main calls from the
literature regarding the role of HR managers in current organizations, i.e., the inclusion of
other core executives in addition to chief executive officers or chief financial officers
(Abatecola and Cristofaro, 2016), to identify an alternative explanation for different strategic
processes such as internal communication in the HR context. Moreover, this perspective leads
us to reinforce the current strategic importance of HR professionals in current companies
(Aldrich, Dietz, Clark and Hamilton, 2015).

In practice, managers and professionals are currently concerned by several important
factors affecting internal communications. Among those factors, the composition of the HR
decision-makers in terms of their human capital attributes plays a relevant role, influencing
their abilities to implement communication, as in any strategic process (Khanna, Jones and
Boivie, 2013).

Hence, we introduce two dimensions of human capital in the model, following
Hambrick and Mason’s (1984) seminal work on groups’ cognitive style and values
orientation. Consideration of the former allows us to examine the effects of HR decision-
makers’ capabilities to process, interpret and elaborate information in communication
implementation (Hodgkinson, 2003). By analysing their values, we explore how managers’
belief patterns influence the way in which they establish relationships within the group and
how these relationships influence their capabilities to translate HRM messages
(Ramamoorthy and Flood, 2004).

Consequently, this study contributes to the strategic HRM (SHRM) literature in three
different ways: (a) examining the conditions under which HR decision-makers are better at implementing HR communication; (b) providing a different view to explain the HRM–performance relationship, adopting a process perspective instead of the traditional content focus, and (c) explaining how communication issues affect the internal consistency of the HRM system.

To conduct the analysis, this study will be organized as follows. First, we review the extant SHRM literature to explain the role of organizational communication in the HRM context. To do so, we analyse the factors that affect the HR decision-makers’ capacity to communicate HRM strategies. Second, we examine the human capital composition of HR decision-makers, focusing on their cognitive abilities and team values. Third, we examine how appropriate communication implementation influences the internal consistency of the HRM system. Drawing on this theoretical discussion, we propose a model, which is empirically tested by applying partial least squares (PLS) modelling. Finally, the implications and limitations of the study, as well as future research lines derived from our conclusions, are discussed.

Literature review

*Internal communication in the HRM strategy formulation*

A variety of studies in the last decade have attempted to explain why HRM strategies do not always achieve the expected results (Khilji and Wang, 2006). As Den Hartog et al. (2013) argued, a consistent design is a necessary but insufficient condition to drive employee behaviours towards organizational objectives. Line managers and subsequently employees sometimes misunderstand the original meaning and objectives of HR policies and practices, which causes a gap between intended and implemented HRM (Wright and Snell, 1998). As previous studies have shown, these communication problems can be particularly problematic,
leading to an inefficient implementation of the HRM strategy (Bowen and Ostroff, 2004; Stanton, Bartram and Leggat, 2010).

HR decision-makers need to ensure that the rest of the managers and employees know and deeply understand the HRM strategy. To do so, non-ambiguous and consistent messages need to be sent to all hierarchical levels. Well-developed communication will help firms to obtain desired employee behaviours by elucidating what is expected from them to develop business strategy (Bowen and Ostroff, 2004). Some studies suggest that the degree of formalization of HRM strategies—supported by written and accessible documents—makes it easier to generate common understanding concerning HR content, which facilitates HR message transmission (Stanton et al., 2010). Providing formal information and instructions about how to implement practices helps organizations to reflect legitimacy and agreement regarding HRM content. Krishnan and Singh (2011) and Raes, Heijltjes, Glunk and Roe (2011) highlight top management team implications in HRM. Maxwell and Farquharson (2008) explain that this requires not only participation in HR-related decisions, but also recognition and acceptance of HR’s strategic role. Once top managers understand the importance of HR based on values, preferences, priorities and skills (Wei, Liu, Zhang and Chin, 2008), they are capable of translating HRM strategies into action.

A widely discussed factor that improves communication is the role played by line managers (Den Hartog et al., 2013), i.e., agents who are particularly relevant in the transition between HRM formulation and implementation. Line manager presence is not the only relevant factor when it comes to communication. That is, managers’ skills such as communication and motivational abilities determine whether there is a shared understanding of the meaning of HRM strategy among employees (Den Hartog et al., 2013). Additionally, we argue that both informal and formal channels promote appropriate communication. Sending a coherent HR message does not guarantee that employees receive or perceive
desired information. Stanton et al. (2010) explain that communication strategies are determinants of information flows throughout the entire organization. To increase the speed and clarity of HR messages, HR decision-makers should use channels that allow them to avoid blockages during transmission.

**Influence of HR decision-makers’ cognitive style on communication**

Diverse authors point out that cognitive styles are the basis on which communication patterns are built (Allen, Rybczyk and Judd, 2006). Communication requires competencies of verbal, non-verbal and para-verbal interactions, and requires competencies to demonstrate how original meanings should be interpreted (Dasgupta, Suar and Singh, 2012). Following this logic, different cognitive styles can help to explain what HR decision-makers transmit to translate HR strategy into action and to preserve the original meaning of HR messages.

Traditionally, the cognitive literature has recognized the existence of two main cognitive orientations: rational/analytical and creative/intuitive (Allinson and Hayes, 1996; Cools and Van der Broeck, 2007; Hodgkinson and Clarke, 2007). Regarding the former, rationality implies to be analytical, deductive, rigorous, constrained, convergent, formal and critical (Cools and Van der Broeck, 2007). Rational individuals and groups usually follow a step-by-step decision-making process, detail problems assessing information, present different alternatives of actions/solutions and, depending on a rational criterion (cost-benefit), they make a logical choice (Calabretta, Gemser and Wijnberg, 2016).

Logically, these attributes not only affect decision-making process in general, but also the way in which individuals communicate. In this sense, analytical communicators tend to be more argumentative and reasoning communication (Loffredo and Opt, 2006). Additionally, they would tend to be less influenced by other people’s opinions (Williams and Bicknell-Berhn, 1992), which hinders the debate and discussion of issues to some extent. Rational managers present a lack of empathy which introduces complexity in the connection
with other organizational groups; they also find that it is especially difficult to ‘sell’ their ideas to the rest of the organization (Cools and Van den Broeck, 2008, p. 107). Moreover, they would be able to separate emotions and anxiety derived from certain situations of communication by keeping focused on the task they are developing (Nasca, 1994; Opt and Loffredo, 2000).

Consequently, these characteristics will be linked to certain communication roles and behaviours identified in the literature. For example, developing roles that require the deployment of systematic, operative and analytical skills, such as ‘structuring’ that implies planning, and resources and tasks allocation, or ‘representing’ with active monitoring of the environment or providing resources (Johansson, Miller and Hamrin, 2014).

Concerning creative or intuitive cognitive styles, they have been generally described as synthetic, inductive, expansive, unconstrained, divergent, informal, diffuse and creative (Cools and Van der Broeck, 2007, p. 362). When communicating, creative profiles are more able to deal with ambiguity and integrate different issues to provide a holistic view of a certain topic. In addition, creative individuals usually are more adaptable to diverse social environments of communication (Opt and Loffredo, 2000). As observed in the literature, other communication roles demand the deployment of more creative or intuitive skills. For example, the role of ‘facilitating’ that implies coaching and training, and hence, more interpersonal skills or the ‘relating’ role where communicators foster relational dynamics, showing openness, supportiveness and conflict management (Johansson et al., 2014).

In a similar vein, Hamrefors (2010) identified four primary roles demanded by communication strategies—system designer, mediator, influencer and coach—which primarily show a creative cognitive pattern. As communication system designers, managers must integrate relevant information and promote actions to ensure that HR messages flow holistically. The second role requires managers to transmit HR messages to the organization,
and in doing so, they must go beyond automatic transmission, seeking generation of shared understanding and creating meaning regarding HRM strategy.

Creative individuals possess a holistic understanding of situations and they are more capable of building hypothetical realities, integrating diverse elements and giving meaning to information (Hodgkinson and Clarke, 2007). These characteristics allow HR decision-makers to negotiate and persuade organizational members of the meaning of HR content by applying an assertive communication style. This style fosters good interpersonal interactions and openness (Moye and Henkin, 2006), with which managers minimize ambiguity and misunderstanding (Newbold, 1997). In addition to transmitting HR messages, HR decision-makers act as coaches, teaching line managers to implement successful communication styles (Den Hartog et al., 2013).

Generally, it can be said that creative teams are more cohesive and generate less conflict, which leads them to create conditions for communication (Karn, Syed-Abdullah, Cowling and Holcombe, 2007). A creative cognitive profile helps HR decision-makers to generate agreement regarding HR content and transmit it to the rest of the organization (Stanton et al., 2010).

However, despite that the cognitive literature stresses that individuals with creative cognitive styles are more communicative and deliberative than rational profiles (Hough and Ogilvie, 2005; Hodgkinson and Clarke, 2007), the latter is also needed to develop certain behaviours and roles to ensure efficient communication. In this sense, to introduce cognitive competencies in our model, we adopt a multidimensional focus by considering rational and creative cognitive styles as orthogonal dimensions of human capital. We assume that individuals change cognitive styles depending on the task nature that they are developing (Hodgkinson and Sadler-Smith, 2003). Considering these arguments, we propose the following:
Hypothesis 1. Cognitive styles of HR decision-makers will improve communication implementation.

Hypothesis 1a: Rational cognitive style of HR decision-makers will improve communication implementation.

Hypothesis 1b: Creative cognitive style of HR decision-makers will improve communication implementation.

Influence of HR decision-makers’ values on communication

In the contemporary business environment, which is characterized by greater managerial discretion, the values and beliefs of senior executives play a particularly relevant role in organizations (Tsui, Nifadkar and Ou, 2007). Analysis of group values allows a deeper study of communication behaviours and those internal dynamics that influence transmission of HR information. Specifically referring to individualism and collectivism provides a synthetic description of managers that emphasizes values that impact cognitive and communication processes greatly (Ilies, Wagner and Morgeson, 2007).

Akin to cognitive dimensions, the literature presents individualism and collectivism as occupying opposite ends of a continuum, considering them uni-dimensionally. This focus suggests that individuals can be only individualistic or collectivistic, or can occupy an intermediate position between them, but cannot be both (Gibson and Saxton, 2005). Various studies provide deep explanations of individualistic and collectivistic behaviours by examining circumstances under which they can be developed simultaneously (Hardin, Fuller and Davison, 2007). These studies do not assume that the orientations represent a single, bipolar dimension. Although some individuals lean towards one value orientation, this does not preclude a preference for other values (Cools and Van der Broeck, 2007). We treat individualism and collectivism as orthogonal dimensions, suggesting that team members can
implement both kinds of behaviours depending on the stage of the process to be developed and the context in which a group operates.

Studies demonstrate that a collectivistic orientation emphasizes collaborative processes of debate and decision-making in which overall interests are more important than individual objectives (Oyserman, Coon and Kemmelmier, 2002). Translating these findings to HRM strategy formulation, we argue that collectivistic patterns are more appropriate for generating a common understanding about what the HRM strategy means and how to transmit it to other groups (Bowen and Ostroff, 2004; Stanton et al., 2010). Ohbuchi, Fukushima and Tedeschi (1999) suggest that collectivism both fosters behaviours oriented to avoiding conflict and creates social relationships. Collectivistic teams are characterized by following in-group norms and values that, if transmitted to the rest of the firm, help to communicate and create a shared understanding of HRM strategy (Triandis, 2001).

Triandis (1988) explores these effects, explaining that individualistic and collectivistic orientations determine various styles of communication. Individualistic managers implement direct conflict communication styles and solution-oriented approaches. Conversely, collectivistic groups prefer conflict-avoidance or solution-oriented styles (Leung, 1988). Considering HR decision-makers communicate HR content to drive employees’ behaviours towards organizational goals, trust-reinforcing communication should be implemented (Jarvenpaa and Leidner, 1999). Hofstede (1994) explains that collectivism-oriented organizations facilitate communication between individuals and departments, and develop social networks as a primary source of information to achieve organizational objectives. Some studies in this area demonstrate that individualism is normally associated with leaders who have strong personalities, which often limit group communication and the participation of other departments or business units in the strategic process (Dimitratos, Petrou, Plakoyiannaki and Johnson, 2011). Because individualists perceive both that they are not part
of a group and that they possess traits that differentiate them from others (Ollo-López, Bayo-
Moriones and Larraza-Kintana, 2010), they find it more difficult to negotiate and transmit a
common understanding of HRM content. Considering these arguments, we offer hypotheses
regarding the effects of HR decision-makers’ values on communication capabilities.

Hypothesis 2. Value orientation of HR decision-makers will improve
communication implementation.

Hypothesis 2a. Collectivistic values of HR decision-makers will influence
communication implementation positively.

Hypothesis 2b. Individualistic values of HR decision-makers will influence
communication implementation negatively.

Communication and consistency of the human resources management system

As mentioned earlier, differences between ‘intended’ and ‘implemented’ HR strategies
appear because of communication pitfalls. Incoherent messages are sometimes sent to
organizational members, which leads to a misunderstanding of the original meaning and
objectives of HR practices. In this context, HR decision-makers need to be sure that they are
consistently transmitting HRM contents to avoid the situation described by Sikora and Ferris
(2011, p. 113) in which ‘HR policies described in detail by senior managers during interviews
exist only on paper’.

The determinants of the internal consistency of HRM systems are still an ongoing
debate in SHRM research (Kidron, Tzafrir, Meshulam and Iverson, 2013; Samnani and
Singh, 2013). This concept, sometimes referred as ‘horizontal fit’, is traditionally linked to
the presence of a set of connected and integrated policies, which cannot be implemented
effectively individually (Delery and Doty, 1996). By implementing consistent HRM systems,
organizations achieve specific synergies, which improve business performance (Kidron et al., 2013). The role played by communication in creating clear and coherent HR messages is particularly relevant. Through these mechanisms, organizations can facilitate implementation and shape consistent HRM systems. Sikora and Ferris (2011) highlighted the role played by line managers in this sense and the need to transmit their HRM objectives and actions. Efforts to communicate the HRM strategy properly will avoid discrepancies between what HRM agents decide and what employees perceive from HR practices. In this context, conflicting messages can be reduced to make the HRM system stronger (Bowen and Ostroff, 2004).

Considering the above arguments, we propose a final hypothesis, which closes the causal path in our model:

Hypothesis 3: Appropriate communication implementation will improve the internal consistency of the HRM system.

Empirical study

Sample and unit of analysis

To test our hypotheses, quantitative data were collected using a self-administered questionnaire that was distributed to the 290 members of the Spanish Association for People Management and Development. The complete survey (100 items), designed within a broader research project, was created to obtain information about the different stages of HRM strategy formulation, and the human capital of the main participating agents and HR decision-makers. To conduct the present study, we used only the relevant information and measures involved in the studied model. HR managers were asked about the internal dynamics through which HR decision-makers communicate the HRM information. Seven-item Likert-type scales were used, ranging from strongly disagree (1) to strongly agree (7).

To guarantee data quality, we followed Johnson and Harris’s (2002) recommendations
in the design of items and scales, and tried to maximize validity and reliability. We also introduced a specific item in the survey to ensure that all HR executives who completed the survey knew and participated in the HRM strategy formulation process. After different surveying rounds, 120 usable responses were received after removing invalid questionnaires, i.e., those completed by people other than HR managers, that were incomplete or had many unanswered items. The final sample was mostly composed of large companies in the service sector and HR managers who confirmed that they were part of the senior management team.

*Control variables*

A first step before discussing the empirical analysis of the model is to perform specific tests to control for potential biases. These analyses were to verify that the sample \((n = 120)\) was representative of the entire population \((N = 290)\) and that it was proportionally distributed in terms of two grouping variables that we could measure for all the firms in the population. Due to the nature of the model and the information needed in this specific research, questions related to firm size and sector were included in the survey (Spector and Brannick, 2011). An analyses of variance analysis was performed to control for size differences. Our results confirmed that mean differences were not statistically significant \((F = 0.299; \text{sig} = 0.597)\), confirming that the sample was representative of the population. Similarly, for sector differences, a \(\chi^2\) analysis showed that the firms that responded to our questionnaire were also proportionally distributed by sector \((\chi^2 = 1.910; \text{sig} = 0.385)\).

*Method of analysis*

The test of the model was conducted using structural equation modelling based on PLS methodology. Although PLS has been criticized recently (Rönkkö and Evermann, 2013), another stream of research asserts that this approach is particularly useful for testing complex models when using latent variables or when introducing formative and reflective constructs.
(Chin, 1998; Henseler et al., 2014). Reflective constructs imply the ‘reflection’ of the theoretical construct behind the indicators which are highly correlated and are interchangeable. Therefore, if an indicator was eliminated, the nature of the latent construct would not change. By contrast, formative constructs are composed of different indicators that together create a specific reality or latent variable. In this case, indicators cannot be correlated because they represent a concrete reality of the latent variable. If an indicator was removed, the essence of the construct would change completely.

Because of the nature of our model and dataset, we have controlled for common method bias (CMB) problems. Following Podsakoff, MacKenzie, Lee and Podsakoff’s (2003) recommendations, we have performed two different sets of analyses: (a) procedural remedies and (b) specific statistical method. Specifically, we have paid particular attention to the design of the study and the survey, protecting respondent anonymity and reducing evaluation apprehension. An introductory paragraph was included in the survey to explain the objective of the study and to ensure the academic use of data. Additionally, we used most validated scales and defined our own scale for HR communication implementation following Tourangeau et al.’s (1991) criteria. In doing so, ambiguous and unclear items, vague concepts and complex wording were reduced, minimizing CMB problems. Regarding the statistical method, the Harman’s one-factor test was conducted. Several factors emerged from the analysis in which the variance for the first factor was 36.99%, suggesting that CMB does not significantly affect the empirical analysis (Podsakoff et al. 2003, p. 889).

TABLE 1A and 1B HERE

Measures

To check the validity of the measures, we used Cronbach’s alpha. Table 1a and 1b show the results, which suggest internal consistency and reliability for the constructs.
Cognitive competences (COG)

To measure this variable, we introduced 18 items: 11 items were related to rational style, i.e., knowing and planning style, and 7 items for creative style (Cools and Van der Broeck, 2007) (Appendix A). The original individual scale was adapted to the group level to capture the way in which HR decision-makers communicate HR issues. We followed Leonard et al.’s (2005, p. 123) argument explaining that it is possible to utilize theories developed at one level of analysis (e.g., individual decision-making models) to understand a similar phenomenon at another level of analysis (e.g., group and/or organizational decision level). Because of the formative nature of this construct, we analysed item multicollinearity (Table 2). Variance inflation factor (VIF) values were all below 5, which confirms that the measures were not affected by multicollinearity (Diamantopoulos, Riefler and Roth, 2008).

Values orientation (VAL)

To measure values orientation, we used a 7-item scale (four items were related to collectivism and three to individualism) from Earley (1994) (Appendix A). As for the formative construct already discussed, VIF values were calculated (Table 2). The results in this case also confirmed that no multicollinearity problems existed because all items showed VIF values below 5.

TABLE 2 HERE

HR communication implementation (COM)

Although the literature provides a variety of instruments to assess different aspects of communication, we defined our own scale because none focused on the particularities of communication of HRM content. We created a reflective measure by including the communication dimensions proposed by Wright, Snell and Jacobsen (2004), Stanton et al. (2010) and Raes et al. (2011). We generated a 5-item scale for items (Appendix A) pertaining
to: (1) degree of top management teams’ and line managers’ involvement in communication (two items); (2) documentation of HRM information (one item); (3) accessibility of HRM information (one item); and (4) quality of information channels within the organization (one item). Individual item reliabilities, and discriminant (average variance extracted [AVE]) and convergent validity (\(\rho_c\)) indicators are shown in Table 3.

**Internal consistency of HRM system (CONS)**

We used Delmotte et al.’s (2012) scale to measure the internal consistency of the HRM system. A 4-item reflective scale was included to measure this dimension (Appendix A). Table 3 shows that individual item reliabilities, and discriminant (AVE) and convergent validity (\(\rho_c\)) indicators present acceptable values and levels.

**TABLE 3 HERE**

**Results**

**Measurement model**

Before analysing the relationships among constructs, we verified the reliability and validity of the measurement model. We verified that indicators measuring latent constructs fulfilled two conditions: (1) convergent and (2) discriminant validity (Barclay, Higgins and Thompson, 1995). Convergent validity assesses the internal consistency of the indicators that comprise each variable, evaluated through the composite reliability index (\(\rho_c\)) (Werts, Linn and Jöreskog, 1974). Discriminant validity evaluates whether indicators referring to a construct are different from others that represent a specific reality. Barclay et al. (1995) indicate that this condition is met when a construct shares more variance with its indicators than with other latent variables in the model (Fornell and Larcker, 1981). AVE measures how much variance a construct captures. AVE values should be greater than 0.5, but Chin (1998) proposes a more conservative criterion, arguing that AVE needs to be superior to the squared
correlation of each pair of constructs.

Results from the measurement model show that all variables were measured reliably. Regarding the reflective constructs, indicators linked to managers’ capacities to implement communication and to internal consistency showed acceptable individual reliabilities because loadings for all items were greater than 0.707 (Carmines and Zeller, 1979). The indicators also showed acceptable discriminant (AVE > 0.5) and convergent validities ($\rho_c > 0.7$) (Nunnally, 1978).

In relation to the formative construct, cognitive capability, t-statistics provided by the bootstrap resampling method suggest relevance for the two dimensions: (1) creativity ($t = 6.225; p < .01$), and (2) rationality ($t = 3.238; p < .01$). Regarding values orientation, individualism had a negative and low weight, but collectivism demonstrated satisfactory weights. The bootstrap resampling statistics confirmed the importance of only one of two dimensions; i.e., collectivistic orientation ($t = 10.707; p < .01$). This could mean that in the context of these relationships, the orientations are dependent, operating as extremes on a continuum, showing that high levels of collectivism will necessarily imply low levels of individualism. Thus, collectivism could only be measured as the opposite of individualism. This means that individualist or collectivist behaviours can only be demonstrated, but not an orthogonal combination of both.

**Structural model**

Path coefficients suggest an influence of HR decision-makers’ cognitive skills on their capabilities to implement communication of HR strategy ($\beta = 0.525, p < .01$). We also found a strong and positive relationship between HR decision-makers’ capacity to implement communication in the HR context and the internal consistency of the HRM system ($\beta = 0.631, p < .01$) (Table 4).
T-values provided by the bootstrapping resampling method indicate that there was no relationship between values orientation and ability to communicate HRM strategy to the rest of the organization. Therefore, H2a and H2b were not supported. The model explained approximately 39% of variance ($R^2 = 0.398$), and we confirm the predictive capacity of the model because $Q^2$ was greater than zero. According to the results obtained, and contrary to the hypothesis proposed in the discussion, managers’ ability to communicate depends exclusively on the team’s cognitive style. As shown in Table 2 and Figure 1, the cognitive dimensions (i.e., creative and rational) had positive weights confirming the orthogonal nature of the variable. In practice, this means that both creative and rational behaviours are necessary to communicate HRM strategy (Hardin et al., 2007).

**FIGURE 1 HERE**

**Conclusions and implications**

The purpose of this study is to examine the influence of two human capital attributes—cognitive style (H1a and H1b) and values (H2a and H2b)—on HR decision-makers’ ability to implement HR communication. Additionally, we hypothesized about the influence of appropriate communication implementation on the internal consistency of the HRM system in the implementation by assessing the consistency of the HRM system (H3). Considering the first set of hypotheses, analysis confirms the predominant effect of cognitive styles. Contrary to what we hypothesized, evidence did not suggest an influence of values. These findings lead us to argue that organizational communication is a process that is more complex than expected. With the third hypothesis, we confirm our theoretical assumptions about the influence of proper communication implementation on the consistency of the HRM system.

Regarding values orientation, its lack of significance could be explained by the nature of communication analysed in this case (i.e., inter-group encounters). Individualistic or collectivist orientations may have no implications in interactions with other groups. The
effect of values links to relationships between individuals that are more relevant at the in-group level (Earley, 1994). We assume that HR strategy communication does not demand an individualistic orientation because it normally hinders prosocial behaviours (Ramamoorthy and Flood, 2004). As Earley (1993) argues, collectivistic employees perform better when working with members of their own group, and they assume that their own norms, rules, behaviours and identity are acquired within their group. The concept of we-ness is a crucial determinant of behaviour, built and acquired normally within their identity group (Kapoor, Hughes, Baldwin and Blue, 2003, p. 687). This could lead collectivistic HR decision-makers to be highly integrated and co-operative from an internal viewpoint (Hui, 1988). According to our results, this does not mean that they are communicative and supportive when communicating with other groups in the organization.

Our results suggest that the cognitive capacity of HR decision-makers influences their capacity to implement HR communication, and both rational and creative styles hold similar importance. This confirms that to implement internal communication, the application of various cognitive abilities is required and cognitive diversity appears to be necessary. The two styles need to converge at this stage of HRM strategy formulation and diverse mental models need to be present in the same team as synergies, both benefiting from decision-making and interactions among individuals (Phillips, Northercraf and Neale, 2006). Although creativity implies communicative skills at the individual level (Allinson and Hayes, 1996), at the group level, it appears to be necessary to develop both kinds of patterns simultaneously because of the requirements and complexity of communication. Pelled, Eisenhardt and Xin (1999) and Kearney, Gebert and Voelvel (2009) argue that effects arising from cognitive diversity are more likely to appear in non-routine, complex tasks, which is the case with management. A rational profile benefits some of the required tasks to be developed through communication. Rationality structures, orders and clarifies information transmitted. Creative
individuals possess superior abilities to integrate and translate messages (Hough and Ogilvie, 2005).

As mentioned in the theoretical discussion, different roles and communication behaviours (Hamrefors, 2010; Johansson et al., 2014) will demand the application of both cognitive styles. For example, roles related to creative cognitive styles imply the analysis of internal social networks to foster symmetric and frequent interactions (Dolphin, 2005). Strong links need to be developed between managers and employees to make employees identify more strongly with the organization (Bartels, Peters, de Jong, Pruyn and Van der Molen, 2010, p. 221) and thereby allow managers to drive their behaviours towards organizational objectives (Nishii et al., 2008). These activities require creative cognitive competencies in terms of integrating organizational information holistically, as demanded by the ‘influencer’ or ‘mediator’ roles (Hamrefors, 2010). Rational profiles are also necessary for gathering information accurately concerning internal communication systems and for designing symmetrical networks that allow members to transmit and receive relevant information (Van Riel, Berens and Dijkstra, 2009), such as the ‘structuring’ or ‘representing’ role may imply (Johansson et al., 2014).

To achieve alignment between employee behaviours and firm goals, HR decision-makers must manage social interactions and relationships. Managers must motivate the implementation of changes; i.e., they play a crucial role in motivating and co-ordinating employee behaviours (Putnam and Maydan-Nicotera, 2010). Social competencies provided by creative managers are required to generate shared vision and integrate sensitive information. In addition, technical abilities traditionally linked to rational cognitive style are particularly relevant for organizing social networks efficiently. As Hamrefors (2010, p. 145) argued, ‘(a) balance between social and technical roles is an important factor for building communicative ability.’
In the light of our results, we argue that diverse cognitive styles are useful for transmission of HRM strategy, considering the variety of communication media available; written, oral and electronic channels can be used to communicate HR strategy. Barkhi (2002) distinguishes between screen-to-face and face-to-face modes. We suggest that rational individuals are more objective in communicating HR messages and preserve the original meaning. These individuals perceive screen-to-face modes as more reliable and prefer written messages to oral information to avoid misunderstandings. Formal communication mechanisms need to be complemented with face-to-face channels, with which creative managers demonstrate better capabilities (Barkhi, 2002; Murray and Peyrefitte, 2007).

Another interesting conclusion of the study is related to the effects of appropriate communication implementation in reinforcing the internal consistency of the HRM system, clarifying the HRM contribution to business success. This ‘horizontal’ or ‘internal’ fit has received much attention in SHRM literature because of the insufficient evidence regarding its functioning. This study provides additional insights to clarify those mechanisms by which HRM systems are aligned more synergistically. Communication implementation seems to reinforce the links between HR practices, emphasizing their complementarities and increasing the degree of internal consistency. In practice, such consistency helps guide employees’ behaviours to organizational goals because HRM communication requires detailed and clear explanations about how HR actions need to be implemented. In this sense, it facilitates the operationalization of HR practices, avoiding conflicting messages (Bowen and Ostroff, 2004). As mentioned by Kidron et al. (2013, p. 710) ‘internal communication process contributes to the incorporation of processes, activities and perceptions of HRM staff, and prevents a narrow vision of each HR practice’.

Limitations, implications and future research

The findings from this study should be assessed considering the following limitations. We are
aware of the limitations of the sample size. Although the estimation of the model confirmed that the measures were valid and reliable, the number of respondents was limited; therefore, the results should be interpreted cautiously. Considering this limitation, we paid special attention to the measures and method used to test the model. We used validated scales to ensure data quality. PLS modelling was applied because this method is particularly suited to testing small samples. For future research, obtaining multilevel data from different respondents could be an interesting line of research to cope with this limitation. Additionally, the extrapolation of the results was limited because of the particularities of our sample, which was focused on a single country (Spain). Further research is necessary to test the proposed relationships and compare our results with those from different contexts and contingencies. Future research lines should be oriented to deepen the strength of the HRM system (Ostroff and Bowen, 2016); e.g., in the context of the HR communication, including its three dimensions—distinctiveness, consensus and consistency—and examine how these constructs can be linked to improve the HRM–performance relationship.

A third limitation arises from the data-collection process. We designed an individual-response questionnaire and assumed that there were some biases and information problems. To minimize the risks of using a single respondent, we have controlled for the potential effect of CMB using specific statistical analyses. However, the limitations derived from self-reported measures demand that the results be considered cautiously. Finally, in the light of our preliminary conclusions, further research on cognitive diversity is needed to explore whether combinations of attributes influence communication of HRM strategy. In this line and to clarify those skills and competences needed to develop proper communication, different theoretical frameworks to human capital theory can be used. Leadership literature, managerial competences or communication roles research may complement human capital theory to define a set of ideal competences and skills in the HR communication context.
Regarding the professional implications, the evidence suggested that organizations should pay attention to those cognitive skills required to ensure that HR communication implementation succeeds. Communication implementation implies not only the transmission of a certain message, but also the collection and treatment of information and design and management of messages. Therefore, all involved agents—top managers, line managers and supervisor—have to be able to act as ‘communicators’ during different parts of the communication process. To do so, the selection of different managers involved in HR communication should be done carefully to ensure that they adapt their communications properly. Training and development, implementing role playing, workshops or conferences are other interesting tools to ensure that managers can deploy communication behaviours and roles appropriately.

In addition, this study also offers insights about how to implement communication efficiently. For example, the study confirms that top and line managers are crucial agents in developing and transmitting HRM messages and identifies the challenges organizations face in fostering bidirectional and frequent interactions at all hierarchical levels to enhance daily communication (Welch and Jackson, 2007). Other specific actions useful for managers and practitioners can be oriented to the design of communication mechanisms. In this line, organizations should combine formal and informal ways of communication. Specifically, a balanced mix of face to face meetings, the use of formal and objective documents (HR manuals or text-books) or intranet messages can foster proper communication (Stanton et al., 2010).

Conclusion
Organizations currently experience special difficulties when implementing their HR policies and practices. The great complexity involved in these strategic processes makes HR issues particularly challenging for practitioners and researchers. Thus, this study attempts to provide
an alternative perspective about the determinants conditioning the efficiency of HRM systems.

In doing so, we mostly focus on internal communication and those HR decision-makers’ attributes affecting HR communication implementation. This study offers an approximation for how cognitive styles highly determine the way in which communication is implemented. Both rational and creative styles are arguably needed, which subsequently improves the internal coherence of HRM systems. In other words, diverse cognitive skills are demanded to better deploy different communication roles and behaviours. Nevertheless, due to the extreme complexity of communication in the HRM context, more research is needed to deepen those processes affecting HRM success.

APPENDIX A HERE

APPENDIX B HERE
Acknowledgments

The authors appear in alphabetical order and have contributed equally to this paper. The research project described in this paper was developed under the Research Group SEJ-449 funded by the Andalusian Government (Andalusian Plan for R+D+I 2007-2013) and the Research Projects ECO2011- 26982 and ECO2014-56580-R, funded by the Spanish Ministry for Science and Technology (Non-oriented Fundamental Research Projects Subprogram) and the Research Project P12-SEJ-1810 (Andalusian Government).

Authors’ biography

- Natalia García-Carbonell, PhD, is Assistant Professor in the Business Management Department of the University of Cádiz. She completed her PhD on the influence of top management team’s human capital in the HRM strategy formulation process in 2013. Her teaching and research interests are focused on the HRM strategy, human capital and top management teams’ composition. She is also co-author of different research articles published in international journals such as the European Management Journal, the Business Research Quarterly, the Management Research Review and the International of Journal of Organizational Analysis.

- Fernando Martín-Alcázar, PhD, is Professor of Organization at University of Cádiz. He is currently leading a founded research project on influencing factors in the HRM strategy formulation process. His work has been published in international peer review journals such as the International Journal of Manpower, British Journal of Management, the Journal of Business Research, the European Management Journal, the International Journal of Human Resource Management, and the Journal of Organizational Behavior.

- Gonzalo Sánchez-Gardey, PhD, is Associate Professor in the Business Management Department of the University of Cádiz. His investigations are focused on the influence of workforce diversity in strategic HRM. He is co-author of several papers in international sources such as the British Journal of Management, the European Management Journal, The International Journal of Human Resource Management, the Group Decision and Negotiation and the Journal of Business Ethics among others.
References


FIGURE 1. EMPIRICAL MODEL

t values significant at: *** p < .01

CREA=Creative cognitive style
RAT=Rational cognitive style
COL=Collectivism
IND=Individualism
COM (1-5)=Communication implementation (See Appendix A for complete items wording.)
CONS (1-4)=HRM system consistency (See Appendix A for complete items wording.)
Statistics in the diagonal of the matrix represent the squared root of AVE values for each of the constructs, used to assess discriminant validity.

### TABLE 2. MEASUREMENT MODEL-FORMATIVE CONSTRUCTS

<table>
<thead>
<tr>
<th>Latent constructs</th>
<th>Original parameters</th>
<th>Bootstrap resampling</th>
<th>Variance inflation factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean of the parameter in the subsamples (standard deviation)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$t$</td>
<td>VIFs</td>
</tr>
<tr>
<td>Cognitive skills (COG)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creativity (CREA)</td>
<td>.7264***</td>
<td>.6959 (.1167)</td>
<td>6.225</td>
</tr>
<tr>
<td>Rationality (RAT)</td>
<td>.4305***</td>
<td>.4538 (.1329)</td>
<td>3.238</td>
</tr>
<tr>
<td>Values structure (VAL)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collectivism (COL)</td>
<td>.9345***</td>
<td>.9264 (.0873)</td>
<td>10.707</td>
</tr>
<tr>
<td>Individualism (IND)</td>
<td>-.2270</td>
<td>-0.1736 (.1941)</td>
<td>1.169</td>
</tr>
</tbody>
</table>
### TABLE 3: MEASUREMENT MODEL - REFLECTIVE CONSTRUCTS

<table>
<thead>
<tr>
<th>Latent construct: Capacity to communicate the HR strategy (COM)</th>
<th>Indicators</th>
<th>Weight</th>
<th>Loading</th>
<th>( \rho )</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Top managers’ involvement (COM01)</td>
<td>.2558</td>
<td>.7991</td>
<td>.914</td>
<td>.680</td>
</tr>
<tr>
<td></td>
<td>Line managers’ involvement (COM02)</td>
<td>.2447</td>
<td>.7803</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>HR strategy documentation (COM03)</td>
<td>.2403</td>
<td>.8294</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>HR information accessibility (COM04)</td>
<td>.2410</td>
<td>.8495</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quality of communication channels (COM05)</td>
<td>.2349</td>
<td>.8627</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Latent construct: Degree of internal consistency of the HRM system (CONS)</th>
<th>Indicators</th>
<th>Weight</th>
<th>Loading</th>
<th>( \rho )</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Success in actively changing employees’ behaviour (CONS 01)</td>
<td>.2902</td>
<td>.8015</td>
<td>.918</td>
<td>.738</td>
</tr>
<tr>
<td></td>
<td>Coherence between intended and actual effects of HR initiatives (CONS 02)</td>
<td>.2901</td>
<td>.8858</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Clear consistency between words and deeds of the HR department (CONS 03)</td>
<td>.2762</td>
<td>.8976</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>HR policies are internally coherent (CONS 4)</td>
<td>.3099</td>
<td>.8474</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latent constructs</td>
<td>$R^2$</td>
<td>Blindfolding $Q^2$ (standard deviation)</td>
<td>$\beta$</td>
<td>Resampling Bootstrap $t$ value</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------</td>
<td>-----------------------------------------</td>
<td>---------</td>
<td>-----------------------------</td>
<td></td>
</tr>
<tr>
<td>HR communication implementation (COM)</td>
<td>.3983</td>
<td>.5137 (.1720)</td>
<td>.525***</td>
<td>6.391</td>
<td></td>
</tr>
<tr>
<td>Cognitive skills (COG) (H1)</td>
<td></td>
<td></td>
<td>.139</td>
<td>1.614</td>
<td></td>
</tr>
<tr>
<td>Values structure (VAL) (H2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal consistency (CONS)</td>
<td></td>
<td></td>
<td>.631***</td>
<td>11.143</td>
<td></td>
</tr>
<tr>
<td>HR communication implementation (COM) (H3)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
### APPENDIX A: Items and wording

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Labels</th>
<th>Item writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive skills (COG)</td>
<td>Rational cognitive style (RAT)</td>
<td>The HR decision makers always want to have a full understanding of a problem  The HR decision makers always like to analyze problems  The HR decision makers always make details analysis  The HR decision makers always study each problem until they understand the underlying logic  The HR decision makers always develop a clear plan for action  The HR decision makers always want to know exactly what should be done  The HR decision makers always prefer detailed action plans  The HR decision makers always prefer clear structures to do the job  The HR decision makers always prefer well-prepared meetings with clear agenda and strict time management  The HR decision makers always make definitive engagements and follow up meticulously  The HR decision makers always think that a good task is a well-prepared task</td>
</tr>
<tr>
<td></td>
<td>Creative/Intuitive cognitive style (CREA)</td>
<td>The HR decision makers always like to contribute to innovative solutions  The HR decision makers always prefer to look for creative solutions  The HR decision makers are always motivated by ongoing innovation  The HR decision makers always want very much variety in their work  The HR decision makers always prefer new ideas than existing solutions  The HR decision makers always want to extend boundaries  The HR decision makers always try to avoid routines</td>
</tr>
<tr>
<td>Value structure (VAL)</td>
<td>Collectivism (COL)</td>
<td>The HR decision makers usually accept the group's decision even when personally team members have a different opinion  Problem solving by groups gives better results than problem solving by individuals  The needs of people close to the group should take priority over personal needs</td>
</tr>
<tr>
<td></td>
<td>Individualism (IND)</td>
<td>One does better work working alone than in a group  If a group is slowing somebody down, it is better to leave it and work alone</td>
</tr>
<tr>
<td></td>
<td>HR communication implementation (COM)</td>
<td>COM 1 The top management team is directly involved in HRM communication processes  COM 2 The line management actively participate in HRM communication processes  COM 3 The HR strategy information is supported in written documents  COM 4 The HR strategy information is accessible to all organizational members  COM 5 There are efficient communication channels to transmit the HR strategy in the company</td>
</tr>
<tr>
<td></td>
<td>Consistency (CONS)</td>
<td>CONS 1 The HR department always succeed in actively changing employees' behaviour  CONS 2 There is complete coherence between intended and actual effects of HR initiatives  CONS 3 In this organization, there is clear consistency of HRM messages between words and deeds of the HR department  CONS 4 HR policies are internally coherent</td>
</tr>
</tbody>
</table>
## Appendix B: Descriptive statistics and items-correlations

| Mean | SD  | Rat01 | Rat02 | Rat03 | Rat04 | Rat05 | Rat06 | Rat07 | Rat08 | Rat09 | Rat10 | Rat11 | Crea01 | Crea02 | Crea03 | Crea04 | Crea05 | Crea06 | Crea07 |
|------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 5.18 | 1.25| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.98 | 1.29| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.72 | 1.39| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.75 | 1.43| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 5.37 | 1.37| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.90 | 1.46| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 5.15 | 1.30| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.97 | 1.52| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.68 | 1.44| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.90 | 1.42| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.93 | 1.38| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.97 | 1.51| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 5.28 | 1.37| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.78 | 1.42| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.65 | 1.53| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.41 | 1.73| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.58 | 1.52| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 5.49 | 1.28| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.92 | 1.44| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.33 | 1.76| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 3.66 | 1.60| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 3.58 | 1.62| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.86 | 1.53| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.71 | 1.46| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.74 | 1.61| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.36 | 1.79| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.70 | 1.72| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.81 | 1.50| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.57 | 1.40| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 4.83 | 1.54| 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
### Appendix B: Descriptive statistics and items-correlations

|       | Mean | SD  | Co01 | Co02 | Co03 | Co04 | Ind01 | Ind02 | Ind03 | Com01 | Com02 | Com03 | Com04 | Com05 | Com01 | Com02 | Com03 | Com04 | Com05 | Cons01 | Cons02 | Cons03 | Cons04 |
|-------|------|-----|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Co01  | 4.41 | 1.73| 1.00 |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Co02  | 4.58 | 1.52| .317 | 1.00 |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Co03  | 5.49 | 1.28| .249 | .351 | 1.00 |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Co04  | 4.92 | 1.44| -.493 | .496 | .362 | 1.00 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Ind01 | 4.33 | 1.76| -.318 | .082 | .062 | .075 | 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Ind02 | 3.66 | 1.60| -.249 | .148 | .016 | .183 | .532  | 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Ind03 | 3.58 | 1.62| -.397 | -.016 | -.112 | -.247 | -.472 | .727  | 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Cons01| 4.86 | 1.53| .332 | .292 | .057 | .468 | -.077 | -.220 | -.231 | 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Cons02| 4.71 | 1.46| .341 | .130 | -.230 | .319 | -.235 | -.210 | -.239 | .743  | 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Cons03| 4.74 | 1.61| .338 | .273 | .181 | .347 | -.079 | -.076 | -.097 | .480  | .482  | 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Cons04| 4.36 | 1.79| .291 | .215 | .166 | .293 | -.028 | -.004 | -.015 | .483  | .436  | .819  | 1.00  |       |       |       |       |       |       |       |       |       |       |       |       |
| Cons05| 4.70 | 1.71| .372 | .188 | .138 | .290 | -.156 | -.030 | -.100 | .572  | .537  | .670  | .781  | 1.00  |       |       |       |       |       |       |       |       |       |       |       |
| Cons06| 4.60 | 1.29| .286 | .132 | .194 | .367 | -.065 | -.042 | -.102 | .427  | .384  | .508  | .492  | .423  | 1.00  |       |       |       |       |       |       |       |       |       |       |
| Cons02| 4.28 | 1.52| .200 | .196 | .091 | .358 | -.203 | -.156 | -.192 | .449  | .410  | .463  | .426  | .457  | .623  | 1.00  |       |       |       |       |       |       |       |       |       |       |
| Cons03| 4.57 | 1.40| .358 | .587 | .810 | .248 | -.108 | -.126 | .390  | .399  | .421  | .426  | .480  | .587  | .810  | 1.00  |       |       |       |       |       |       |       |       |       |       |
| Cons04| 4.83 | 1.54| .285 | .273 | .188 | .392 | -.173 | -.079 | -.130 | .411  | .401  | .521  | .530  | .498  | .568  | .625  | .699  | 1.00  |       |       |       |       |       |       |       |       |       |

Note: All correlations are significant at the **p<0.01 and *p<0.05 level.