The strength of human resource practices and transformational leadership: impact on organisational performance

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The Human resource (HR) strength concept (Bowen, D., and Ostroff, C. 2004, 'Understanding HRM-Firm Performance Linkages: The Role of the "Strength" of the HRM System,' *Academy of Management Review*, 29, 2, 203–221) reflects the capacity of an HR system to transmit messages characterised by high distinctiveness, consistency and consensus. HR systems are therefore affecting perceptions and interpretations of organisational realities, such as climate and culture. Furthermore, Bowen and Ostroff (2004) suggest that organisational climate mediates the relationship between HR strength and performance. The leadership literature advocates that leaders are people who are able to create a social context in which employees are guided towards a shared interpretation, understanding and perception of the organisational climate (Yukl, G.A. 1989, *Leadership in Organizations*, Englewood Cliffs, NJ: Prentice Hall). In summary, both HR strength and leadership are two environment dimensions shaping and moulding employees' perceptions and interpretations. The current study explores the relationships between HR strength, leadership, organisational climate and performance. 323 questionnaires were used to gather information from a company in the industrial sector. The results show a positive relationship between the variables; however, mediating effects of climate were only observed between leadership and performance.

Keywords: HR system strength; leadership; organisational climate; performance

1. Introduction

As a strategic partner, the HR function is expected to be aligned with an organisation's strategic purpose and mission (Ulrich 1997). Ferris, Hochwarter, Buckley, Harrell-Cook and Frink (1999) suggest that HR practices and systems must *adapt* to the organisation's strategy, i.e. HR must follow management choices to support the firm's competitive moves. It is therefore expected that HR will contribute to organisational goals and strategy through systems, which will ideally ensure greater internal consistency and complementarity (horizontal alignment) as well as greater congruency with organisational goals (vertical alignment) (Miles and Snow 1984; Becker and Gerhart 1996; Delery and Doty 1996; Michie and Sheehan 2005).

Despite some empirical confirmation of the relationship between HR and performance, there is no consensus as to the mechanisms that explain this connection. Ferris et al. (1998) suggest that the social context plays a role between HR and performance. *Social context* consists of culture, climate, policies and processes of social interaction, and it affects organisational efficiency through HR systems (see also Evans and Davis 2005). HR systems therefore affect employees' *sensemaking* (Weick 1995), i.e. the process through which they understand and share individual experiences of organisational events.

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A review of literature confirms that organisational performance is the result of several factors, such as the context in which the professional activities are performed. Studies show that financial performance is associated with positive attitudes and that there is a link between sales performance and service climate (Gelade and Ivery 2003). In particular, when employees perceive that their work context allows them to achieve their personal goals, they will become involved and will devote more time and effort to the organisation, thereby contributing towards the organisation's productivity and competitiveness (Brown and Leigh 1996). Leadership is another powerful factor affecting performance, as shown in several works (Podsakoff, MacKenzie and Bommer 1996; Mayer, Nishii, Schneider and Goldstein 2007).

The current study aims to investigate the mediating role of social context on the relationship between leadership and HR, on one hand, and performance, on the other hand. The study builds on concepts of HR strength and climate strength discussed by Bowen and Ostroff (2004), to explore the above-mentioned relationships.

2. Organisational influence processes

2.1 Content and process in HRM

Bowen and Ostroff (2004) put forward a proposal to answer the question as to how HR produces benefits for increased performance. They suggest that HR systems must be analysed and understood in relation to: (1) content, i.e. practices and policies for reaching particular goals; and (2) process, i.e. which attributes of the HR system can shape/create strong situations in the form of shared meanings about contents.

As far as the content dimension is concerned, the aim should be the design of practices that are effectively linking organisational goals with employee's goals (vertical alignment). At the process level, the concern is with horizontal alignment, i.e. how different HR practices are implemented and communicated to employees. Considering that it is the employees who put the strategy into practice (Lambooij, Sanders, Koster and Zwiers 2006), HR must be aligned within the organisation because only in this way will the employees know what is expected of them. Within the HR process dimension, communication is a key concept.

In fact, the HR system can be defined as a complex set of communication mechanisms between the organisation and its employees (Tsui, Pearce, Porter and Tripoli 1997), which is why the way in which the message is transmitted and how it is received by the employee, are of utmost importance. Similarly, Galang and Ferris (2003) suggest that HR exercises influence and power over employees, acting at the level of symbolic communication.

Since individuals are active throughout the process, the perception and agreement of the content of the message depends on the attributions that are made. Causal inference is a process through which the employees meet, obtain causal explanations from others and communicate these explanations to others (Kelley 1973). In an organisational context, and with regard to HR, the employees make attributions of trust about cause–effect relationships whenever they can create situations that reflect the following assumptions (Kelley 1973): distinctiveness, consistency and consensus.

2.1.1 Distinctiveness

Distinctiveness refers to mechanisms and characteristics that enable HR practices to attract the employees' attention and arouse their interest. Distinctiveness is embodied in four attributes:

(1) Visibility: degree to which the messages stand out and are observable. Ease of recognition influences the attention employees pay to the information, the way in which they organise it cognitively and how they make causal attributions. To create a strong situation, its characteristics must be salient and visible throughout the day's work and must be part of the individuals' routines and activities.

(2) Understandability: degree of ambiguity and understanding in the messages conveyed by HR. In situations in which the stimulus is not clearly understood, the employees may make several categorisations. Accordingly, different people will use different cognitive categories to process the information, resulting in different attributions.

(3) Legitimacy of authority: legitimacy of authority of the HR systems and its agents (e.g. HR professionals) involves employees' perception of the roles that are required, the expectations for performance and which behaviours are formally accepted.

(4) Relevance: the situation must be presented in a way so that individuals can perceive how important is it for the goals they hope to achieve. Relevance is found alongside legitimacy of authority, whereby the influence over employees operates through the authority of the leader and the motivational significance he/she has for the employee. Thus, employees must perceive the situation to be relevant for achieving both personal and organisational goals, and the desired behaviours must be clear and adequate for these goals to be reached.

2.1.2 Consistency

Consistency helps employees to gain awareness and understand what is expected of them. For employees to make attributions about expected and rewarded behaviours, the principles of causal attribution must be present, and it must be possible to ascertain the priority (in which the causes precede the effects) and the contiguity to the effect (the cause is close in time to the effect). Consistency refers to the existence of an effect whenever its cause is present, and it is fundamental that these relationships are consistent over time, for everyone in every context. This is guaranteed through:

(1) Instrumentality: establishes a non-ambiguous perception of the cause–effect relationship relative to the desired behaviours and their associated consequences. Instrumentality is perceived as higher when the connection between employees' behaviours and the results are close in terms of time (principle of the contiguity of causal attribution) and when they are applied consistently over the established time (principle of the priority of causal attribution).

(2) Validity: HR practices must be consistent in terms of what they propose to do and what they effectively do. When a practice is applied and publicised with certain effects and then does not result in what was expected, the message sent to employees is contradictory, which enables them to develop their own personal interpretations.

(3) Consistent HR messages: transmits compatibility and stability in the signals sent by the HR practices, while lack of consistency in the communications may lead to situations of cognitive dissonance.

2.1.3 Consensus

Results from the agreement among employees on how they perceive the cause–effect relationships. The attribution concerning behaviours, and which answers lead to which effects, are more likely to be accurate when there is consensus. This is fostered by:

(1) Agreement among principal HR decision makers: when the employees perceive that decision makers (top managers, HR and first line managers) agree among themselves regarding the message, a consensus is more likely to be reached.
(2) Fairness: extent to which HR practices follow the principles of justice (distributive, procedural and interactional). This attribute refers to the employees' perception of the 'fair' way in which they are treated.

In short, the central idea of the theory is that HR systems influence employees' attitudes and behaviours and, consequently, individual and organisational performance, through perceptions of the organisational climate. Since the climate is defined as the perception that the employees have of the policies, practices and organisational procedures, the HR system is considered to play a critical role in the perception of the climate. Sanders, Dorenbosch and Reuver (2008) suggest that when a system is perceived by employees as having high distinctiveness and consistency and when there is consensus among all, the system is expected to contribute towards organisational performance and greater affective commitment, motivating the employees to display the behaviours and attitudes that are appropriate and desired.

2.2   HR system strength

Bowen and Ostroff (2004) propose a model that connects HR to organisational performance, through the mediating effect of the *situational strength*. This concept was presented by Mischel (1973) and is used by Bowen and Ostroff (2004) to describe how a strong HR system must lead to greater behavioural consistency and uniformity within the group.

According to Mischel (1973), individuals constantly receive information from their surrounding environment, and their cognition and behaviours are affected by these *situational clues*. Situations are strong in as much as they lead people to construct events in the same way, encourage uniform and well-defined expectations with the aim of obtaining the most suitable behavioural standard, associate incentives with the performance of this standard behaviour and promote the skills necessary for adequate construction and execution (Mischel 1973; Schneider, Salvaggio and Subirats 2002; Sanders et al. 2008). Strong situations lead to the sharing of ideas, beliefs, attitudes and objectives that strengthen the effectiveness among employees (Dorenbosch, Reuver and Sanders 2006), and lead to cooperation and the use of routines that are suitable for organisational objectives (Whitman, Van Rooy and Viswesvaran 2010).

Situational strength is therefore understood to oscillate between the capacity that the situation has to induce conformity (strong situation) or discrepancy (weak situation). A strong situation manifests itself in group cohesion, whose members will make an effort to stay and keep the group intact, complying with its rules and taking into account the interests of the group above their own (Nauta and Sanders 2001; Frenkel and Sanders 2007). In weak situations, individuals are uncertain as to how to categorise the events and do not have clear information on the most adequate behaviours for the situation. Hence they will rely on their internal dispositions to guide their behaviour.

The HR system is in a key position to create strong or weak systems, thus influencing employees' perception of practices, policies, procedures, routines and rewards. The HR strength concept draws attention to the processes that are associated with it, what communication practices exist, the way in which people are influenced/persuaded and the way in which they react and attribute meaning to the messages they receive.

As observed, the top, direct and HR managers play a key role in how HRM ensures the presence of distinctiveness, consistency and consensus. It is therefore necessary to

understand the behaviours and the position of the leaders within their units of work so as to understand their potential contribution to the strength of HR practices and to organisational performance.

2.3　Leadership

The leader is key because of the intermediate position he/she holds between the strategic apex and the operational base. Supervisors are *interpretative filters*, since they are the ones who implement the company's goals and policies and communicate the characteristics of the work processes on which to focus most. They have the power to create a context that leads to a shared interpretation/understanding of the desired behaviours and attitudes, thereby influencing employees' perception (Mayer et al. 2007; Whitman et al. 2010). They thus influence employee behaviours and attitudes, both through the leader–subordinate relationship, and because leaders put the strategic and HR goals into practice.

In recent years, the transformational leadership framework has caught much attention. It has been suggested that transformational leaders strongly affect not only individual and organisational performance, but also group cohesion and employees' beliefs and values (Grojean, Rsick, Dickson and Smith 2004). Such leaders are close to their subordinates and motivate them beyond the material benefits (Rubin, Munz and Bommer 2005). They also have the influence/power to change the values, beliefs and attitudes of their subordinates so as to motivate them to go above and beyond what is expected of them. This is achieved by articulating a future vision of the organisation, ensuring an operational model that is consistent with this vision, encouraging a focus on the goals and showing individual consideration for the employees (Podsakoff et al. 1996; Judge and Bono 2000).

Wu, Tsui and Kinicki (2010) describe two types of transformational behaviours: individual versus group oriented. Behaviours related to 'individualised consideration' and 'intellectual stimulation' tend to influence employees individually, since they are directed at each employee. On the other hand, 'idealised influence' and 'motivational inspiration' tend to influence the group as a whole, as the emphasis is placed on the level of sharing values and one ideology. In terms of impact on individual performance, this is related to the processes through which transformational leaders affect results (Walumbwa, Avolio and Zhu 2008). The authors ascertain that this style of leadership is positively related to: (1) identifying with the work unit, through the effect on motivation for achieving organisational goals and interests; in this case, the employees adopt the latter as their own and are willing to make a greater effort on behalf of the organisation; and (2) perception of self-efficiency: employees are confident and believe in their capacities so as to successfully complete the tasks that are required of them.

The leader's behaviours allow for a cognitive and emotional identity to be created among employees (Wu et al. 2010), increasing the individuals' sense of self-worth and the adoption of attitudes that benefit collective success. These psychological mechanisms enable the leader to promote a collective identity among group members, whereby idiosyncratic characteristics will have less of an impact on employees' perceptions.

3.　Effects of influence processes

3.1　On organisational climate

Studies on HR and leadership show that these factors affect the situations that employees experience in the workplace and the social context of the organisation. Different HR and leadership practices foster different organisational climates, which lead to different

behaviours and attitudes on the part of the employees. In this way, the social context produces or inhibits behaviours. Literature on organisational climate also suggests that climate has a mediator role on the relationship between HR and performance (Dickson, Hanges and Resick 2006; Takeuchi, Chen and Lepak 2009).

Amidst climate literature, the psychological climate is a key concept. Psychological climate is related to the individual perceptions and meanings attributed to the environment; it is based on experimentation and the meaning given to what is seen and to the events experienced (Parker et al. 2003; Dickson et al. 2006; Takeuchi et al. 2009). Employees attribute different meanings to the stimuli received in accordance to their knowledge structure and their information-processing traits, which then leads to different attitudinal and behavioural responses (Parker et al. 2003; Nishii, Lepak and Schneider 2008). Brown and Leigh (1996) state that the perceptions that contribute to the psychological climate are clearly related to the support given by leaders, the extent to which they are seen to be flexible, the support they provides, the clarification of roles, the chance for employees to express themselves, and the recognition and contribution they see themselves as making to the organisation. In this sense, the psychological climate may be considered in terms of psychological security and/or significance of the working environment, both of which are clearly related to leadership action and the HR practices within the organisation.

In an organisational context, the meanings include contents such as goals, expected work-related behaviours and performance activities which are expected, supported and rewarded by leaders. In this sense, psychological climate should be closer (i.e. stronger) at the intra-department level than at the inter-department level (Takeuchi et al. 2009). It is therefore likely that organisational goals are understood in a different way according to the department area (e.g. production vs. commercial).

Organisational climate and psychological climate are distinct concepts. The former is the result of what is experienced within the organisation, and it reflects the beliefs shared among employees, which give meaning and significance to the organisational environment. It is related to the practices, policies, procedures, routines and rewards, with regards to what is important, expected and rewarded. It is based on interaction processes among the employees and on the shared perception resulting from them. It is stable over time and may be integrated into formal organisational units, such as departments (Dickson et al. 2006; Dawson, González-Romá, Davis and West 2008). The climate is therefore a powerful social mechanism, since it models the way in which individuals build the meaning of their organisation reality.

The distinction between psychological and organisational climate has generated some empirical challenges. The authors suggest that organisational climate is created by aggregating the psychological climates of each individual. In accordance with the *composition model*, there are several ways to assess organisational climate at an aggregate level of analysis. Following Chan (1998), there are five variants of the composition model: additive, direct consensus, referent shift, dispersion and process. The direct consensus and dispersion variants are the most relevant for analysing organisational climate and are characterised by: (1) direct consensus, in which the meaning of the construct represents the consensus among the variables; and (2) dispersion, in which the meaning of the construct is the variance of the variables that comprise it.

Direct consensus has been widely used in empirical research. A high level of organisational climate will reflect a greater consensus among the group members. If the group members have little shared perceptions, or if they are highly varied, it means there is

no shared meaning within the group about the practices, policies or even goals (Schneider et al. 2002; Dickson et al. 2006).

3.2   The concept of climate strength

In short, within the organisation there is a sharing of/variance in perceptions of beliefs and values, and this reflects the strength of the organisational climate. In other words, the agreement/disagreement among the employees of the organisation/department with regard to the practices and policies that characterise them will determine whether the climate is strong enough to induce desired behaviours (Schneider et al. 2002; Dickson et al. 2006).

A strong climate reflects less ambiguity with regard to the organisation's policies, practices, procedures and goals. This leads to shared expectations and perceptions among the group members, which are necessary for behavioural uniformity. In practice, strong climates stimulate sharing of the standards, practices and expectations associated with the organisation's environment. Nevertheless, it should be remembered that even when the organisational climate is strong, it may be negative. In this case, there is behavioural consistency among the employees, but these behaviours do not reflect what is desired and not positive for organisational performance.

In organisations with strong climates, the consensus among employees about how the organisation works enhances the relationship between the climate and the organisation's results, through greater consistency and continuity of employee behaviour (Dickson et al. 2006). Moreover, if the organisational climate is strong, there will be more chance of its persisting throughout the organisation's life (Schneider et al. 2002). Climate strength is considered to act in favour of the organisation provided that it is geared towards good performance (Dickson et al. 2006).

4.   Research hypotheses

On the basis of the aforementioned studies, we propose the model shown in Figure 1.

4.1   HR strength: organisational performance

The HR system is considered to have an impact on the creation of strong situations reflected in the organisational climate and, thus, have an impact on the organisation's performance (Bowen and Ostroff 2004; Evans and Davis 2005). It is therefore expected that:

Hypothesis 1a: The HR system is positively associated with situational strength (analysed through organisational climate) so that the stronger the HR system is, the stronger the organisational climate will be.

Hypothesis 1b: The relationship between HR strength and performance is mediated by situational strength (analysed through organisational climate).
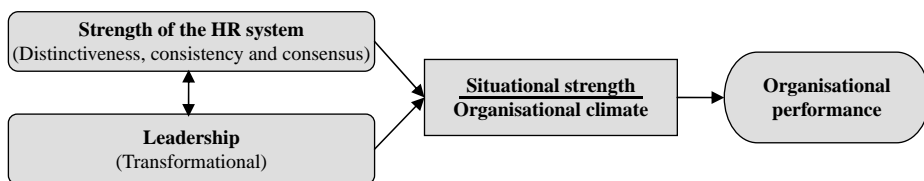

Figure 1.   Relationship between the HR system strength, leadership, organisational climate and performance.

4.2 Leadership: organisational performance

Leaders' behaviours foster the commitment of their subordinates and boost the climate of confidence between them (Podsakoff et al. 1996; Dvir, Avolio and Shamir 2002; Rubin et al. 2005; Walumbwa et al. 2008). Transformational leadership is shown to have an influence over organisational results, through employee behaviours, attitudes and performance. In particular, transformation leadership dimensions such as serving as a role model, fostering an articulated vision, communicating expectations, intellectual stimulation and providing individualised support are all said to shape the social context in which the employees work, thus contributing to improved performance (Podsakoff et al. 1996). It is therefore expected that:

Hypothesis 2a: Transformational leadership is positively associated with situational strength (analysed through organisational climate), and the more leaders demonstrate behaviours associated with transformational leadership, the stronger the climate will be.

Hypothesis 2b: The relationship between leadership and performance is mediated by the situational strength (analysed through organisational climate).

In addition to the direct effects of each of the two preceding variables, the model also indicates that the combination of HR practices with the behaviour of leadership in the organisation influences employee competencies, attitudes and behaviours; in other words:

Hypothesis 3:   The joint effect of HR strength and leadership on performance is mediated by the situational strength (analysed through organisational climate).

5. Methodology

The present study was undertaken in a multinational company in the industrial sector. The HR department of the company consists of the HR director, an assistant and two administrative staff; it is responsible for the administrative activities and strategic management practices. The HR policies are global for the entire group, defined in the USA and in Europe, and later applied in various companies, with the necessary adaptations to the local labour law and collective labour agreement.

5.1 Instrument and variables

The constructs were operationalised through a questionnaire that sought the agreement of employees to various statements. Since there were no previous studies connecting the variables of the model, the current research was limited to the main constructs:

5.1.1 HR strength

HR strength refers to assessment of the organisation's HR system concerning the characteristics that constitute and guarantee the strength of HR practices. This variable was analysed on the basis of a questionnaire consisting of four groups of questions (42 items), developed by Coelho, Cunha, Gomes and Correia (2012).

Two metrics were used to analyse the variable: (1) arithmetic means, where a high value indicates a greater agreement within HR practices; and (2) the coefficient of intra-group agreement or consensus, which indicates whether the employees perceive the

practices in a shared way. In the current study, Cronbach alpha was 0.97, and eight factors were extracted by exploratory factor analysis, which explained 71% of the total variance.

5.1.2 Leadership

The Podsakoff et al. (1996) questionnaire was used to measure transformational leadership. The variable was analysed through the arithmetic means and intra-group coefficient, so as to check whether the employees perceive the leadership practices in a shared and consensual way. In this study, the Cronbach alpha for the 22 items of the scale was 0.98, while the exploratory factor analysis allowed a single factor to be extracted which explains 67% of the total variance.

5.1.3 Organisational climate

The Brown and Leigh (1996) questionnaire (21 items) was used to measure climate. The variable was operationalised through: (1) arithmetic average, where a high average indicated the climate strength within the organisation; and (2) estimation of the coefficient of intra-group consensus to check whether the employees perceive the practices in a shared and consensual way. Reliability results showed an alpha of 0.94. Exploratory factor analysis revealed one main factor.

5.1.4 Performance

Six items were used for measuring individual perceptions about their organisation performance against their competitors'. This way of measuring performance was used in several studies (e.g. Tzafir 2005; Dany, Guedri and Hatt 2008), with good metric qualities and convergent validity between subjective and objective measures of performance. In the current study the variable was assessed through the arithmetic means and the coefficient of intra-group consensus. A reliability coefficient of 0.90 was obtained; exploratory factor analysis revealed one central factor.

All items used a six-point Likert scale ranging from 1 (totally disagree with the statement) to 6 (totally agree with the statement).

5.2 Procedure

An interview with the HR director was carried out before data gathering. This was necessary not only to make sure that that the practices mentioned in the questionnaire actually existed within the organisation, but also to ensure that the written expressions fit the company's jargon and vocabulary. After the interview, minor modifications to the original questionnaire were introduced. Moreover, a letter written by the HR director was added to the questionnaire, soliciting collaboration with the study. The trade union was also consulted, which agreed and gave full support to the study.

The questionnaires were handed over with a pre-paid return envelope, so that employees could post their answers straight to the researchers. Furthermore, envelopes had an identification number so that answers from the same organic units could be identified. Biographical data (gender, age groups, tenure and hierarchical position) was also collected. Confidentiality and anonymity were assured at all times.

All in all, these procedures along with the relatively short dimension of the questionnaire were responsible for the high return rate (470 questionnaires handed over and 331 received – 70% return rate).

6. Results

6.1 Intra-group consensus

To test the hypotheses, the intra-group consensus was estimated (IRR, or $r_{\text{WG(J)}}$; James, Demaree and Wolf 1984). This analysis is essential for the climate variable since it allows us to move from an individual construct (psychological climate) to a collective one (organisational climate; composition model; Chan 1998).

Table 1 shows the descriptive statistics of the main variables.

With regard to HR strength, the employees tend to disagree partially with the sentences of the questionnaire. The observed IRR indicates that there is consensus regarding the way in which HR practices are perceived within the organisation. It can also be seen that, with regard to the nine HR strength attributes, the employees tend to reflect greater disagreement about visibility[1] (IRR = 0.87), understandability (IRR = 0.81), instrumentality (IRR = 0.42) and justice (IRR = 0.46).

As for leadership, the employees tend to agree partially (IRR = 0.83) with the fact that the leader shows a transformational style. At the level of sub-dimensions of leadership, it can be ascertained that the behaviours associated with communicating expectations (IRR = 0.53), group spirit (IRR = 0.48) and serving as a model (IRR = 0.32) are those for which there is greater agreement.

As for climate strength, the employees tend to agree partially with the questions related to the dimensions of psychological climate. The observed IRR (0.88) suggests that there is consensus among the employees with regard to the way in which they perceive the climate. By demonstrating consensus among employees, this result confirms that the climate construct can be operationalised at an organisational level. The dimensions of climate, contribution (IRR = 0.70) and self-expression (IRR = 0.57) are those for which there is greater agreement.

The results concerning performance indicate that the employees partially agree as to the perception that the company/work unit is better than its competitors. The IRR (0.76) shows that there is consensus among the employees as to the way in which they perceive the performance of their organisation/work unit. The dimensions of employee competencies (IRR = 0.38) and performance at work (IRR = 0.49) are those for which there is greater agreement at the level of employee perception.

6.2 Testing for main effects (Hypotheses 1a and 2a)

In a first phase, linear regression was used to study Hypotheses 1a and 2a, i.e. the effect of the independent variables (HR strength and transformational leadership) on the mediator variable (climate strength).

Results showed no problems of heterogeneity of variances or of collinearity between the independent variables. The R_{a}^2 was 0.78 (for a $F_{(228,2)} = 411.3$, $p < 0.001$), which indicates excellent quality of adjustment. Table 2 shows the regression coefficients.

Table 1. Measurements of central tendency, dispersion and IRR.

	HR strength	*Leadership*	*Climate strength*	*Performance*
Mean	3.11	3.62	3.87	3.79
IRR[a]	0.94	0.83	0.88	0.76

[a] IRR, within-group Inter-rater Reliability Coefficients – multiple-item estimator.

Table 2. Regression coefficients.

| Model | Non-standardised coefficients | | Standardised coefficients β | t | Sig. |
	B	Standard error			
(Constant)	0.733	0.118		6.213	.000
Leadership	0.548	0.034	0.652	16.306	.000
HR strength	0.354	0.045	0.314	7.844	.000

These results provide support for Hypotheses 1a and 2a, i.e. HR strength and transformational leadership are positively associated with climate strength. The parameters' signs follow the predicted pattern (i.e. positive connections). Leadership showed a greater influence on organisational climate than on HR strength.

6.3 Testing for mediation effects (Hypotheses 1b and 2b)

Mediation effects were tested following the generic indications by Baron and Kenny (1986). Since the method described by Baron and Kenny (1986) is often leading to a Type 1 error (Preacher and Hayes 2004), the Sobel test was also used in the current analysis.

As far as the mediation between HR strength and performance is concerned, the result found for the Sobel test was $Z = 5.27$, $p < 0.001$, which confirmed the mediating effect of the organisational climate on the relationship between the two variables. However, this effect proved to be of little importance when the conditions necessary for performing the mediation were analysed (Baron and Kenny 1986):

(1) There was a significant relationship between HR strength and organisational climate ($r = 0.72$);
(2) There was also a significant effect of the climate on performance ($r = 0.38$);
(3) Adding organisational climate to the model lowers the importance of HR strength ($r = 0.28$). Since the direct effect of HR strength ($r = 0.37$) is greater than the indirect effect ($r = 0.28$), the mediation effect is considered to be of little relevance.

With regards to the mediation test between leadership and performance, the mediating effect of organisational climate was also observed ($Z = 6.21$, $p < 0.001$). Following points were also noted:

(1) A significant relationship between transformational leadership and organisational climate ($r = 0.84$);
(2) A significant effect of organisational climate on performance ($r = 0.52$);
(3) Adding organisational climate to the model increases the importance of transformational leadership ($r = 0.44$) over organisational performance.

In this way, leadership appears to have a positive impact on organisational performance and this impact is essentially due to the mediating effect of the organisational climate.

For Hypothesis 3, a path analysis was carried out to estimate the trajectories between the variables of the model: Exogenous variables (HR strength and Leadership) (Mediator variable (strength of the organisational climate) (Endogenous variable (performance). The coefficients of the causal model for performance (with HR strength, leadership and organisational climate strength) were estimated using the following regression equations:
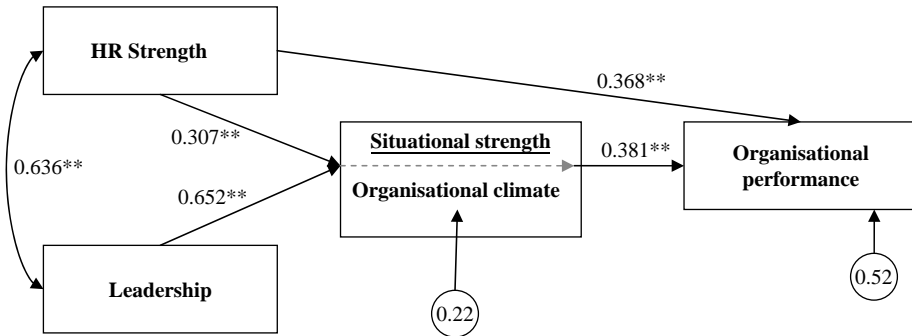
Figure 2.   Diagram of trajectories (Hypothesis 3) (**p < 0.001).

(1) Climate strength $= \beta_{1\,\text{HR strength}} + \beta_{2\,\text{leadership}} + e_1$
(2) Performance $= \beta_{3\,\text{HR strength}} + \beta_{4\,\text{leadership}} + \beta_{5\,\text{climate strength}} + e_2$.

Similarly in the previous analysis, leadership and performance showed no statistically relevant standardised coefficients. The remaining coefficients presented in the causal model were significant.

Since the trajectory of leadership to performance was not statistically significant, the model was simplified (see Figure 2). The estimation of the new coefficients is based on the following regression equations:

(1) Climate strength $= \beta_{1\,\text{HR strength}} + \beta_{2\,\text{leadership}} + e_1$
(2) Organisational Performance $= \beta_{3\,\text{HR strength}} + \beta_{4\,\text{climate strength}} + e_2$.

The results confirm the statistical significance for all the coefficients ($p < 0.000$). In this model, there were two exogenous variables under analysis (HR strength and leadership), which showed the following effects on performance:

- HR strength reveals two effects on performance: (1) direct effect on performance of 0.368; and (2) indirect effect mediated by the organisational climate of 0.117 (0.368×0.381).
- The total effect of HR strength (direct effect + indirect effect) observed on performance is 0.485 (0.368 + 0.117). Since the correlation between HR strength and performance is 0.640, it can be said that 75.8% (0.485/0.640 = 0.758) of the association between HR strength and performance can be attributed to a total effect between the two variables. It also has the spurious effect of HR strength on performance with a value of 0.158, which is due to the effect of leadership.

Since leadership does not have a direct effect on performance, it is not necessary to consider the non-analysed effects for this exogenous variable (HR strength).

In this way, for the proposed model, a correlation of 0.643 was obtained between HR strength and performance. The sum of all the effects (0.643) is slightly higher than the correlation observed between HR strength and performance (0.641), with this overestimation of the effects due to the fact that the path between leadership and performance was eliminated from the model.

- Leadership reveals a unique effect on performance, i.e. an indirect effect mediated by organisational climate of 0.248 (0.652×0.381).

- Since the correlation between leadership and performance is 0.587, it can be said that 32.7% of the association between leadership and performance can be attributed to a total (indirect) effect between the two variables.

Concerning leadership, there are still two effects to consider: non-analysed and spurious. The non-analysed effect has a value of 0.230, and results from the association not considered between leadership and HR strength. The spurious effect with a value of 0.076 occurs through mediation of HR strength, considering the mediating effect of climate strength.

Considering the proposed model, a correlation of 0.555 is obtained between leadership and performance. This value is obtained from the sum of all the effects that act at the level of this exogenous variable. It should be pointed out that 7.5% is yet to be explained at the leadership level.

7. Discussion and conclusions

Overall, the results suggest that HR practices demonstrate little distinctiveness, consistency and consensus, and therefore tend to foster weaker organisational 'situations' (Mischel 1973). In accordance with what has been suggested in the literature (Nauta and Sanders 2001; Frenkel and Sanders 2007; Sanders et al. 2008), weak HR facilitates the incidence of situations that are understood ambiguously and allows employees to reveal a high level of uncertainty as to how they understand organisational events. The dimensions in which there was less agreement were:

- Visibility: HR practices are not easily detected by the employees and consequently lose their significance. This lower visibility may suggest that less attention is paid to messages;
- Understandability: employees have difficulty understanding the content of HR practices and consider them to be ambiguous. This allows for employees to make different attributions based on the same message content;
- Instrumentality: there is ambiguity with regard to employee perception of the desired behaviours for the organisation and the outcomes of their performance. This can be explained by the fact that this company has no rewards system linked to employees' performance.
- Justice: employees perceive little fairness on the part of HR practices. Considering what was noted with instrumentality, this lack of fairness may well be fostered by the fact that rewards for performance are only associated with certain positions, usually high up in the structural hierarchy.

In short, it can be concluded that the HR function does not succeed in efficiently ensuring that message contents are received and commonly accepted. As a result, the door is left open for employees' idiosyncratic factors to have a greater influence over the way in which they receive and accept the contents of organisational messages. It thus becomes harder to promote an organisational context that positively influences the attitudes and behaviours of the employees for a performance geared towards organisational results.

With regard to leadership, employees partially agree on the fact that their supervisors demonstrate a transformational style. Taking into account the dimensions with which the employees agree most, it can be assumed that in general, managers try to: (1) promote group spirit, foster identification with the work unit and promote a collective identity among the employees; (2) communicate expectations, and thus seek to enhance the employees' feeling of self-efficiency; and (3) act as a behavioural model, whereby they demonstrate the behaviours that are desired and aimed at the organisational goals.

Using these mechanisms, supervisors succeed in promoting a collective identity among employees, thereby minimising the impact of their personal characteristics on their decisions (Walumbwa et al. 2008; Wu et al. 2010).

As for the climate, it is observed that when employees express their perception of the company they demonstrate strong consensus, which means the construct of organisational climate can be assumed. Thus, according to the results, the employees agree with the fact that organisational climate reflects the psychological security (characterised by individualised support, clarity of task and self-expression) and psychological meaning related to the position (characterised by personal contribution and recognition) (Brown and Leigh 1996).

In this context, there is likely to be less ambiguity with regard to the employees' perceptions of the organisation, namely concerning the standards, policies, practices, procedures and goals (Bowen and Ostroff 2004; Dickson et al. 2006). It is also likely that, since there is this collective perception, employees will perform their activities taking into account suitable behaviours aimed at the emerging meaning of the organisational climate.

The aim of the hypotheses posed was to assess the relationships between the variables, assuming the mediation effect of organisational climate, as previously indicated by several studies (Bowen and Ostroff 2004; Dickson et al. 2006; Takeuchi et al. 2009).

The results confirm that both HR and leadership have an impact on organisational climate, but the effect of the latter is greater than that of the former. These results are in line with theoretical propositions (e.g. Bowen and Ostroff 2004) and empirical findings (e.g. Sanders et al. 2008). As far as leadership is concerned, the literature states that supervisors have the capacity to create a social context that fosters the shared interpretation/understanding of desired behaviours and attitudes and, in this way, they influence employees' perception of the climate (Mayer et al. 2007; Whitman et al. 2010). The results obtained in this study reinforce such accounts.

The fact that leadership has a greater impact than the HR function on organisational climate may be due to a greater disagreement among employees concerning HR practices. However, it should be remembered that, in situations in which HR practices are weaker, the climate will tend to be influenced by other variables, such as, in this case, leadership. In this context, it is essential that other organisational variables, such as leadership, should be in line with HR practices at the level of organisational climate. Only in this way will there be a shared perception among employees.

The last question to be discussed concerns the mediating effect of climate on the relationship between HR strength and leadership on the one hand, and performance, on the other. The results reveal some effects that differ from those indicated in the literature. As far as HR strength is concerned, the climate proved to have a slight mediating effect: the direct effect of HR on performance is higher than that observed through mediation. This result does not entirely support the Bowen and Ostroff model and therefore deserves some attention. A first explanation for the findings is related to the context in which the study was undertaken. The fact that the research was carried out in an industrial company, in which the behaviours associated with good performance tend to be more restricted (that is to say, they tend to be prescriptive, routine and automatic), means that the employees' daily performance is stable over time. The fact that employees have been with the company for a long time also means that know-how is strongly integrated into their practices and behaviours. Accordingly, HR practices operate as an incentive to reinforce the behaviours that are already integrated into the work context. This is highlighted by the fact that employees indicated their competencies and their performance at work to be the most relevant areas at the level of performance.

It is also observed that at the HR strength level, the dimensions on which employees most noticeably agree are centred around legitimacy, consistency of HR messages and agreement among principal HR decision makers. This suggests that, although HR is relatively weak in the general reckoning, it still reveals certain authority within the organisation, which allows it to exercise influence over performance. As Bowen and Ostroff (2004) point out, the influence inherent in the legitimacy of authority means that employees perceive the roles that are demanded of them, as well as the formally accepted behaviours and expectations of performance. This result recommends that future research should take into account the potentially different effects of the various attributes put forward by Bowen and Ostroff. In fact, not all the attributes may be relevant in certain situations.

As mentioned above, in a situation in which HR practices are weak, other factors of the organisation's social environment may influence employees' perceptions and decisions. In this particular case, the fact that the company has a workers' union that is powerful within the organisation may explain some of these results. This power arising from the social context, to which employees are closer (compared to the HR department), may have an influence on organisational climate, which does not allow for the mediator effect to be observed.

As for leadership, the hypothesis of mediation on the part of the climate relative to its impact on performance is confirmed. Mediation increased leadership's effect on performance; the direct effect was not significant, which means that leadership only demonstrates impact on performance through organisational climate. This result corroborates what the literature has claimed, namely the capacity of supervisors to foster a social context that promotes a collective perception of climate. Since the dimensions for which there is greatest agreement among the employees are related to the communication of expectations, the creation of a group spirit and the fact that supervisors serve as a model, they would appear to be associated with behaviours of idealised influence and inspirational motivation. These are behaviours which tend to influence the group as a whole, focusing on the sharing of values and beliefs, thus contributing to identification with the work unit and to group cohesion (Walumbwa et al. 2008; Wu et al. 2010).

Taking into account what has been put forward in the literature, in addition to the strong positive correlations between HR and leadership observed in this study, there is a need for greater proximity, in an organisational context, between HR and direct supervisors. Taking justice as an example (a dimension considered negatively by the employees at the level of HR practices), supervisors play a key role in achieving greater procedural and interactional justice (Pillai, Schriesheim and Williams 1999). In the same way, there is the agreement among principal HR decision makers, in which it is essential that the employees perceive there to be agreement between all the parties (top managers, HR and direct supervisors) with regard to HR practices.

In the organisation in question, the social context (namely the strength of its HR practices, leadership and climate strength) can all be said to contribute positively to organisational performance. It can also be observed that an increase both at the level of HR strength and leadership will have an effect on organisational climate and will therefore be a positive booster of organisational performance.

In contrast to what would be expected on the basis of theoretical grounds, while HR in this industrial context demonstrates little strength within the organisation, it does prove to have a direct and positive effect on performance. Also contrary to what was expected, the mediator effect of organisational climate proved to be weaker and smaller than the direct

effect of HR practices on performance. On the other hand, leadership is only reflected through the mediator effect of organisational climate.

These results must be interpreted taking into account the context in which the study was undertaken. This is an industrial company, with labour relations that may be distinct from those in service companies. It also implies different forms of work organisation (e.g. there is the idea that since it is an industrial company the employees merely have to perform the routines associated with using the machines and equipment of the productive processes, thus limiting some behaviours associated with transformational leadership). Moreover, the economic context tends to foster situations of conflict among employees and the employer/HR department (e.g. lay-off situations), and these tend to harm the image of the HR department within the organisation.

This study has some limitations. First, the questionnaire suitability: in a company whose employees are within an older age range, other strategies may be necessary to assist in the understandability of the questionnaire. It is also essential to understand the level of trust within the organisation in the sense that the presence of someone from the HR department at the distribution/collection stage of the questionnaires may influence the return and quality of the answers.

One factor to take into consideration in the future is the possibility of comparing organisations (and/or departments) so that the concept of strength can be analysed more fully, both at the level of HR practices and at the level of organisational climate. Another factor involves associating objective measures for analysing performance (e.g. goals that may exist in terms of productivity in the work units). It would be equally important to undertake longitudinal studies so that in situations in which the results reveal low distinctiveness, consistency and consensus in relation to HR practices, actions could be implemented to improve the communication processes and new analyses could later be made in the organisation. This would also be a more powerful way of demonstrating the causal relationships between variables.

In conclusion, this study confirms that a strategic alignment between the business strategies and HR systems/practices is not enough: it is also essential to consider an alignment with the employees' goals. This is achieved through the organisation's capacity to obtain employee agreement with regard to organisational practices (such as HR practices, beliefs and organisational policies). In this sense, a key factor is the increased value employees attribute to HR practices and leadership. This guarantees a basis for developing an organisational climate geared towards the company's goals and towards its results at the level of performance.

Note

1. Figures not shown in Table 1.

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