

Relationship between Organizational Recognition of Contributive Uniqueness  
and the Knowledge Management Processes

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### **Abstract**

The present study aims to analyze in what extent the organizational recognition of the contributive uniqueness has impact in knowledge management processes. Contributive uniqueness (Dos Santos, 1999) is the unique contribution of each individual to the team's functioning when working cooperatively. The uniqueness of individuals seems to be, on one hand, an individual need, and on the other hand a characteristic which can contribute to enrichment of the team or organizational performance. Knowledge management (Pais, 2014) is a set of daily activities related to the creation and development of internal organizational conditions, which catalyze every knowledge-related process. The impact of this relation has not yet been studied. Therefore, this research will contribute to the understanding of the relationships between the collectivizing and individualizing trends in organizations. This project gains from the research traditions (1) on organizational recognition, (2) on knowledge management, (3) and on human uniqueness. Our sample had 1117 subjects, 39.2% male and 60.3% female, aged between 18 and 69 years ( $M = 39.8$ ;  $SD = 11.2$ ). All have a bond of at least one year with the organization where they work, representing a wide range of business sectors. Two instruments were used: The Knowledge Management Questionnaire – Short Form (KMQ-SF, Pais, 2014); and the Organizational Recognition of the Contributive Uniqueness Questionnaire (ORCUQ, Cabo-Leitão & dos Santos, 2011). A descriptive and correlational analysis were performed for each scale factor and global scale, as well as univariate and multivariate regression analysis. Moderations between the ORCUQ factors, and between the gender and ORCUQ factors in the prediction of the KMQ-SF dimensions were also conducted. Results showed a large effect of 41% ( $R^2$ ) of the ORCUQ in the prediction of KMQ-SF.

*Keywords:* knowledge management, contributive uniqueness, uniqueness

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## Introduction

### Relationship between Organizational Recognition of Contributive Uniqueness and the Knowledge Management Processes

We live in an era when both organizations and work itself are facing new challenges. One of the most important must be the tension between collectivizing trends (*e.g.* globalization and global and regional integration) and individualizing trends (*e.g.* knowledge specialization, organizations' focus on core business, valuing the individual as expressed in the Universal Declaration of Human Rights), an apparent dilemma of modern societies that expresses itself at the organizational level (Gergen, 2001; Giddens & Sutton, 2012). The way those two trends are managed is a crucial aspect of the present political and organizational agenda (Gergen, 2001). The present project tries to contribute to the understanding of the relationships between these two trends, in organizations, by studying and analyzing if the organizational recognition of the contributive uniqueness has a positive impact in knowledge management processes.

Contributive uniqueness (Dos Santos, 1999) is the specificity and uniqueness of individuals as a benefit for the group. It means that the collective "we" is built and enriched by the diversities of its several members – and that this collective “construction” happens simultaneously with the perception of each individual of himself as a unique person, contributing with their uniqueness for the group cooperation. Also, knowledge management can be defined as Pais (2014) proposed: A set of daily *modus operandi*, related to the creation and development of organizational conditions, at the internal level, which catalyze every knowledge-related process – having knowledge in account as an indispensable asset to achieve organizational objectives. Therefore, the mentioned knowledge-related actions to reach the previously defined

organizational goals, imply not only an intra orientation, but also an orientation extra organization, in order to achieve certain outcomes.

Finally, this author suggests that knowledge management requires an organizational culture which serves the purposes of knowledge creation, sharing and use: In other words, a knowledge-centered culture, with the adoption of strategies that impact all organizational actors and the commitment of the whole organization to the knowledge management processes.

Ergo, the organizational recognition of the contributive uniqueness of its members, in the collective projects, is a manifestation of intention to establish a combination of both collectivizing and individualizing trends, in a constructive way: While it appreciates the collective project, the project itself is made up of the synergy of unique contributions. In this sense, the concept of knowledge as a core resource becomes particularly important and involves a careful and attentive management. Taking into account that knowledge requires, in one hand, differentiation and specialization, and in other hand the integration of the unique contribution through cooperation, no individual alone masters the necessary knowledge to offer full solutions. Therefore, knowledge management gains particular relevance in this context, because as an eminently cooperative process, it takes knowledge in account as a core resource that requires differentiation and cooperation.

The present project gains from the research traditions (1) on organizational recognition, (2) on knowledge management, (3) and on human uniqueness. The impact of the organizational recognition of the contributive uniqueness on knowledge management has not yet been studied. The project presented here will contribute to the understanding of the relationships between the collectivizing and the individualizing trends in organizations. This is significant and has practical implications for individuals, for organizations and for society, because (as the literature review



will show) fair and ethic recognition practices, culture centered organizations, cooperative processes and the organizational recognition of the contributive uniqueness, tend to improve performance and well-being at the individual, group and societal levels (Alavi & Leidner, 2001; Brun & Dugas, 2002, 2008; Cabo-Leitão & Dos Santos, 2011; Cardoso, 2003, 2007; Delaney & Huselid, 1996; Demir, Simsek, & Procsal, 2013; Dos Santos, 1999; Fromkin & Snyder, 1980; Johnson & Johnson, 1975; Lynn & Snyder, 2002; Maeve, 2008; Pais, 2014; Sano & Kuroishi, 2009; Shiraz, Rashid, & Riaz, 2011).

Two instruments were used: The Knowledge Management Questionnaire – Short Form (Pais, 2014), whose global scale presented a high coefficient of consistency ( $\alpha = .91$ ; Nunally, 1978); and the Organizational Recognition of the Contributive Uniqueness Questionnaire (Cabo-Leitão & Dos Santos, 2011), whose global scale reached a value of .89 (Almeida & Freire, 2003). Structural Equation Modeling was used in order to do the estimation of the structural model of the perception of knowledge management as predicted by organizational recognition of the contributive uniqueness. Also Confirmatory Factor Analysis was employed to assess the factorial validity of both KMQ-SF and ORCUQ, and a Principal Component Analysis was done in order to lower the ORCUQ dimensionality from 42 to 20 items. Finally, to conduct data analyzes, this research uses descriptive and correlation analysis for each scale factor and global scale, univariate and multivariate regression analysis, and tests if there is moderator's effects, to analyze if the organizational recognition of the contributive uniqueness has a positive impact in knowledge management processes.

## Conceptual Framework

### Organizational recognition

Taylor's (1911) mechanistic perspective of work considered workers as a mere input into the production of goods and services. This point of view expanded through the capitalist society and, in a sense, still *contaminates* the public opinion - as if considering the organizations as machines, and the workers as *lifeless* components of those machines (taking away the meaning from work) would result in better productivity and in more efficient and flawless work.

Even if today this idea is still widespread, since early on many studies have been proposing that it is far away from the reality – at least on the majority of the cases. Many authors (Delaney & Huselid, 1996; Johnson & Johnson, 1975; Mayo, 1940; O'Reilly & Pfeffer, 2000; Shiraz et al., 2011) developed studies which defend that the human resource is one of the most important assets of an organization. Adding to this, they also state the organizational success strongly relies in realizing that its members perform better when they feel supported, actively pursuing the organizations goals, with increased job involvement and decreased negative behaviors (like absentism).

We can also argue that Maslow (1943) has established that workers have five levels of needs: physiological, safety, social, ego and self-actualizing. He defended that each lower need must be satisfied in order for the next one to motivate the worker. Herzberg, Mausner, and Snyderman (1959) prosecuted on this line of thought, and defined that workers' motivation can be divided in two different factors: motivators and hygienes. The motivators factors, where we include the organizational recognition, produce job satisfaction. Shiraz et al. (2011) advocate that a worker that feels respected and recognized can be extremely valuable to the organization, and concluded in their research that there is a statistically significant relationship between reward and

recognition, motivation and satisfaction. Brun and Dugas (2002) consider too that recognition can have symbolic, affective, concrete or financial value, and in that sense the act of recognition must be understood as an interactional process (Brun & Dugs, 2008). Cooke (2009) reinforces this idea, stating that recognition, in practical terms, is a dynamic relation.

Brun and Dugs (2008) identify four non-exclusive approaches of recognition in the scientific literature, namely: Ethical perspective (which considers the recognition as a question of human dignity and justice), humanistic and existential perspective (which considers that a worker feels recognized when he acknowledges that his existence is perceived by others in the organization. In this case, he will feel that he is respected as a whole – having unique human characteristics), work psychodynamics school (the relation of the subjective experience of people in the workplace, as well as defense strategies of the individual or group to maintain the psychological balance in confuse working environment), and behavioral perspective (in which recognition is perceived as a method to positively reinforce actions and behaviors considered advantageous for and by the organization).

Other authors (like Nierling, 2007) contributed with researches which help to understand the importance of the organizational recognition for workers and to the organization. In this sense, Brun and Dugas (2008) propose that recognition can be expressed at work by four practices: personal recognition (which focus on the workers as distinctive individuals), recognition of the work practices (aimming attention to the way the worker performs a task, having in account his distinctive characteristics), recognition of work dedication (mostly concentrated on the quality and quantity of the worker's efforts, regardless of the results), and recognition of results (focusing on the product directly finished). These practices can be expressed both in formal and informal recognition.

Lastly, other authors concluded that organizational recognition improves motivation and performance, having a positive impact on organizational productivity (Appelbaum & Kamal, 2000), engagement and health (Bakker, Schaufeli, Leiter, & Taris, 2008; Cho, Laschinger, & Wong, 2006).

### **Knowledge management**

Knowledge management configures the ability of a given organization to create and acquire new knowledge, disseminate it and incorporate it in their processes, products and services (Cardoso, 2003, 2007, 2014). Therefore, it contains all the practices, behaviours and actions, formal and informal, that create, share and use that fundamental knowledge. Knowledge is therefore considered an unlimited asset (which develops itself by its use) and one of the most valuable factors that contributes to the sustainable success and management of the organization.

Knowledge management is also a strategic asset (Hwang, 2003, cited in Cardoso, Meireles, & Peralta, 2011) and is increasingly becoming a fundamental vector of the organizational agenda. This conception arises because it makes the organization act more intelligently (Gupta, Iyer, & Aronson, 2000), but also due to having the potential to help organizations make more effective use of their knowledge and expertise (Alavi and Leidner, 2001; Davenport and Prusak, 1998). In this manner, knowledge management should be understood as much more than a passive ability of mere *knowledge gathering*: In fact, it involves all the organization members' in the construction and definition of what the organization is indeed. Thus, it doesn't (and can't) exist in isolation, having a contingent nature that can be more technology oriented or more people oriented, but that nevertheless correlates both this views at the intraorganizational level.

We will use, in the present research, Pais' (2014) knowledge definition, which understands it to be a complex, dynamic and multidimensional combination of cognitive, emotional and behavioural elements, which is personally and socially build, and whose orientation to action makes it elementary to the organizations' life. The definition of knowledge management adopted will also be from Pais, which defines it as the ability of an organization to create and acquire new knowledge, disseminate it and incorporate it in each and every process, product and service it has.

Having reviewed the literature in knowledge management, we chose both these definitions because they are built upon the founding principle that both knowledge and knowledge management are two concepts that must be supported by cooperation, commitment, engagement and active participation of all the organizational actors. This is underlined by the importance given by the author to the organizational actors' role in the knowledge management processes, and its purpose to align people and their activities with the organization goals. Having this in account, it should also be noted that these definitions are proposed by the same author that developed the Knowledge Management Questionnaire – Short Form, so both concepts and instruments are well linked.

As previously stated in this paper, knowledge management is a eminently cooperative process, and knowledge itself (particularly at the organizational level) exists in a continuum that requires both differentiation and integration, whether at the individual level, or at the organizational level. This said, the optimal distinctiveness theory (Brewer, 1991) gains particular relevance because it focused on the tension between the need for inclusion and the need for differentiation, and not only in how it would give *birth* to a social identity (but also what would motivate it). Knowledge management requires both these processes, and also that people interact

and cooperate with each other. Therefore, it is of utmost importance to understand how these concepts are linked with the balance between the need for uniqueness and the need for identification.

### **Optimal distinctiveness theory**

The optimal distinctiveness theory was first proposed by Brewer (1991) and advocates that the human being has two fundamental and competing needs, which manage the relationship between the self-concept and membership in social groups. Those necessities are the need for inclusion, and the need for differentiation. Thus, social identity would derive from the everlasting tension between the need for validation and similarity to others (a desire to belong, that motivates immersion in social groups), and the need for uniqueness and individualization.

Brewer (1991) considered that the original statements of social identity theory (Tajfel, 1981) and of self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) were deeply based on the cognitive processes of categorization and perceptual intonation. Therefore, they could explain why and how specific social categorizations and in-group-out-group distinctions become salient (Leonardelli, Pickett, & Brewer, 2010), but they did not denote a motivational component for the process of social identification. Brewer considered that both the motivational significance of the social identity and the cognitive processes were fundamental to explain the following circumstances: why, and when, individuals are willing to demote their sense of self to significant group identities; why group membership does not always lead to identification; and why some persons tend to identify themselves more with some in-groups than others.

Therefore, the optimal distinctiveness theory proposes that individuals are permanently trying to find a balance between the need to fit in, and the need to stand out; and that every time

this balance is disturbed, actions are carried out in order to regain it (Pickett, Silver, & Brewer, 2002). Brewer (1991) supports this theory on four postulates: “(a) the social identification will be more intense for social groups or categories at the inclusive level that solve the conflict among differentiation needs of the self and assimilation to others; (b) the optimal distinctiveness is independent of evaluative implications of the group belongingness and despite the rest of the equal variables, the individuals will prefer positive group identities than negative ones; (c) the distinctiveness of a certain social identity is specific to a context. It depends on the scope in which the social possible identities are defined in a certain moment that can go from the participants in a specific social reunion, till the whole human race; (d) the optimal level of categorical distinctiveness or inclusiveness is function of the intensity of the opposite impulses for assimilation or differentiation. For any individual, the intensity that emerges from these two needs is determined by cultural standards and rules, by individual socialization and for the recent experience.” (pp. 478).

According to this model, the two identity needs mentioned by Brewer (1991) occur simultaneously, thus being independent and working in opposition to motivate group identification. This said, social identities are selected and activated according to their contribution to the balance between inclusion and differentiation in specific social contexts. Thus, optimal identities will be the ones that fulfill, at the same time, the need for inclusion within the in-group, and the need for distinctiveness through distinctions between the in-group and the out-group (Leonardelly et al., 2010). This notion is the basis for the uniqueness theory (Snyder & Fromkin, 1980). Furthermore, even if it isn't novel, it differs from other motivational theories because it proposes that the said balance happens at the group level, through identification with groups that are both sufficiently inclusive and sufficiently distinct to meet

both needs simultaneously (Leonardelly et al., 2010). This is very important to our research, because it supports that even if we consider both differentiation and integration as individual needs, the balance that allows for people to work together and cooperate happens simultaneously at the group level. This allows it to be, at the organizational level, analyzed, coordinated and studied; but also supports our theory that the individual perception of the uniqueness will probably influence the organizational processes, namely knowledge management.

### **Uniqueness theory**

Uniqueness is one of the most important dimensions of personal identity, and refers to the individuals' private sense of experiencing the self, that can only be acknowledged by the individuals themselves (Simsek & Yalinçetin, 2010). The need for uniqueness (Lynn & Snyder, 2002; Snyder & Fromkin, 1980) is a universal human trait (Takeuchi et al., 2012) which opposes to social conformity, and that reveals itself because people appear to derive intrinsic satisfaction from the perception that they are unique, special and separable from the masses (Fromkin & Snyder, 1980).

A variety of different approaches to uniqueness have been observed in the empirical literature (Brewer, 1991; Elkind, 1967; Lapsley, 1993; Lapsley & Rice, 1988; Snyder & Fromkin, 1977). Of these, the uniqueness theory of Snyder and Fromkin (1980) received the most empirical attention.

The need for uniqueness theory is based on a comparison with other people, and is defined on the extreme similarity and extreme dissimilarity continuum. This means that an individual can order attributes into different categories (such as behaviours, attitudes, or physical characteristics) and then compare them with the attributes perceived from other individual, as Roulin, Bangerter and Yerly (2015) showed. In this sense, the individual can perceive that its



attributes are (slightly, moderate or highly) similar to those of another person – and this comparison will then have consequences on the individual.

According to this theory, the feeling of a certain uniqueness is usually fundamental for individual well-being (Lynn & Snyder, 2002), makes people experience less anxiety (Sano & Kuroishi, 2009), can help to predict a wide range of behaviours, and is also associated with better mental health (Takeuchi et al., 2012). Uniqueness can influence the perception one has regarding religion (McCutcheon *et al.*, 2015) or even be a key-factor when adopting or sharing new technologies (Moldovan, Steinhart, & Ofen, 2014). Nevertheless, the healthy point on the continuum, described above, is defined to be a moderate level of similarity to others. Cabo-Leitão and Dos Santos (2011) refer that people tend to be displeased when they feel highly similar (need of differentiation) or highly different (need of similitude).

Dos Santos (1999) also considers that the need for uniqueness is culturally learned. Burns and Brady (2001) have led a research where they found significant differences between subjects in the United States of America (who usually demonstrated stronger traits of uniqueness need), and in Malaysia (where the subjects demonstrated less uniqueness needs). They suggest that the need for uniqueness differs the most when collectivist societies are compared with individualist societies.

### **Contributive uniqueness**

The concept of contributive uniqueness is proposed, for the first time, by Dos Santos (1999), demonstrating that the worker's uniqueness can be positively valuable not only for the organization, for the team or group where it is included, but also to the individual as a single person. Dos Santos also suggests that uniqueness can be a contribute for cooperation, stating that

the personal identity can have an important role in this case (unlike what Turner, in 1987, presented on his self-categorization theory).

According to Dos Santos (1999), contributive uniqueness can be designated as the specificity and uniqueness of individuals as a benefit for the group. It means that the collective *we* is built and enriched by the diversities of its several members. This collective construction happens simultaneously with the perception of each individual of himself as a unique person, contributing with their uniqueness for the group cooperation.

Dos Santos (1999) proposes the following elements to be relevant for successful cooperation where contributive uniqueness plays an important role: (a) the individual perception of unique characteristics emerges from the salience of personal identity, associated with the self-uniqueness perceptions. Furthermore, it is determinant to the individual perception of what is the individual value and ability to provide a valid contribute to the group, through cooperation; (b) as the individual's unique characteristics have worth for the team or organization, they foster the high salience of team or organizational identities; (c) and because the individuals in a group express their uniqueness through interaction, each person must participate in the group processes with their own individual contribute. This requires that everyone participates in this cooperation process, thus creating, collectively, the group through the unique characteristics each of its member has. That being said, it seems clear that the social identities are then simultaneously collective (by belonging to a certain group) and unique.

Through contributive uniqueness, the individual has the perception of himself as a member of a team or organization and at the same time the perception of himself as unique. Therefore, contributive uniqueness allows the need for belongingness to be satisfied and the need

for uniqueness to be satisfied at the same time, when there is recognition of this within the team or organization.

In this sense, the contributive uniqueness is a very important concept because it establishes a bridge between the need for uniqueness, and the varied complexity that exists in organizations and in the individuals. It also states that through recognition and cooperation, it is probably possible to achieve organizational goals with better productivity and general well-being.

### **Recognition of the contributive uniqueness**

Cabo-Leitão and Dos Santos (2011) developed a formal questionnaire in which the two concepts above described (worker's recognition and contributive uniqueness) were interrelated, in order to create a useful assessment tool for organizations to know how their workers' contributive uniqueness is recognized by the parts involved.

Having in account that: (a) the organizations are not only privileged spaces where the majority of people work (acquiring social importance), but also symbolic spaces of assertion of identity and social recognition by its members (Dos Santos, 1999); (b) people usually approve the individuals that sometimes make an effort to participate and cooperate in the traditions and conventions on the society, but also the one's that sometimes try to bend the rules and go beyond the ways of thinking and action of society (Snyder & Fromkin, 1980); (c) both processes can happen within the same individual, in different moments; (d) and that recognizing people in work context can provide valuable hints and information about how the workers' perform (and if it's in an adequate way), creating the circumstances to reward the good performance and properly acknowledge it (Costa, 2003); Cabo-Leitão and Dos Santos (2011) found relevant to create a theoretical framework, as a base for an instrument that could assess the worker's contributive

uniqueness recognition. The authors had in account several types of recognition practices in organizations, and considered contributive uniqueness to be a more personal and individual characteristic.

The questionnaire was based on the Bruns and Dugs (2008) definition of recognition: judgments made by all of those who belong and populate the workers' environment, concerning their contributions in terms of work practices and personal investment, bearing in mind that those recognition practices have an ordinary basis (regular or occasional). Those judgements can have both formal and informal, individual and collective, private and public, and financed or not financed, manifestations. Moreover, the questionnaire was also built on the Dos Santos' (1999) definition of contributive uniqueness, as the unique characteristics that workers bring to an organization which are considered valuable for its development and well-function.

This said, organizational recognition of contributive uniqueness is defined as the formal or informal expression of appreciation of the individual's differentiated and unique contribution for projects or goals, considered valid and worthwhile by the social and organizational system where those projects or goals come from.

As the literature review shows, the impact of the organizational recognition of the contributive uniqueness on knowledge management has not yet been studied. Nevertheless, we can state that, being knowledge management an eminently cooperative process, with individual and group dimensions, probably it will be positively influenced by the organizational recognition of the contributive uniqueness – because the latter tries to make a bridge between the individual and unique contribution of each person, and the collective goals that the organizational actors share. As we conclude from the literature review, both processes require individual and collective dimensions, integration and differentiation, and, always, cooperation as the main support for

their processes. In such manner, we believe the link between organizational recognition of the contributive uniqueness and knowledge management might be an important key to understand and facilitate the ever growing tension, in the world and in the organizations, between individual and collectivizing trends. Thus, it would allow to better achieve organizational goals and general well-being through recognition and cooperation.

### **Study aim**

The present study aims to analyze in what extent the organizational recognition of the contributive uniqueness has impact in knowledge management processes.

### **Method**

#### **Procedure and participants**

This is a non-experimental and transversal study. The data is processed in SPSS version 20.0 (SPSS Inc, Chicago, IL). Our sample has 1117 subjects, 39.2% male ( $n = 438$ ) and 60.3% female ( $n = 674$ ), aged between 18 and 69 years old ( $M = 39.8$ ;  $SD = 11.2$ ) All the participants had worked for at least one year in their organization, when the questionnaire was applied, and were from a wide range of business sectors. The business sector less pointed is “Real estate activities” with 1.1%, and the most chosen option is “Other profession” with 25.8%. Concerning tenure, 5.5% were entrepreneurs, 66.3% held a tenure, and 64% were employees. Most participants had a net monthly salary of between 501 and 1000 euros (48%). Regarding academic qualifications, 4% of participants only knew how to read and write, 18.2% had basic education, 32.3% reached high school level, and 2.7% had a master degree. Of the sample subjects, 24.3% had a leadership role (5.4% top leadership, and 18.5% middle management), and 74.5% did not have a leadership role in the organization. Finally, 25.4% ( $n = 284$ ) of the participants worked in an organization with up to nine workers, 30.3% ( $n = 339$ ) in an organization with between 10 and

50 workers, 20.9% ( $n = 233$ ) with between 51 and 250, and the remaining 23.4% ( $n = 252$ ) worked in organizations with more than 250 workers.

### **Ethical Standards**

Data collection was done with the utmost concern for respect of the dignity and rights of each individual, while maintaining a high level of competence, responsibility and integrity. Participation was voluntary, and the principles of informed consent, confidentiality and anonymity were guaranteed.

### **Instruments**

Our research is based on the survey method. Two instruments were used: the Knowledge Management Questionnaire – Short Form (KMQ-SF, Pais, 2014); and the Organizational Recognition of the Contributive Uniqueness Questionnaire (ORCUQ, Cabo-Leitão & Dos Santos, 2011).

#### **Knowledge Management Questionnaire – Short Form**

Knowledge Management was measured with the Knowledge Management Questionnaire – Short Form (KMQ-SF, Pais, 2014). This questionnaire is constituted by 22 items, which identify and evaluate employees' perception of the different knowledge management processes. The items are presented on a 5-point Likert-type scale (from 1 = “almost not applicable” to 5 = “almost always applicable”). The factorial validity of the questionnaire was evaluated by a confirmatory factor analysis (CFA) with software AMOS (Arbuckle, 2008, 2009), and the parameters were estimated through maximum likelihood method. CFA is used to test whether measures of a construct are consistent with the researchers' understanding of the nature of that construct, so it was used to accomplish that goal. The composite reliability (Knowledge Centered Culture = .82 ; Competitive Orientation = .81; Formal Practices of Knowledge

Management = .8; Informal Practices of Knowledge Management = .77) and the average extracted variance (Knowledge Centered Culture = .4; Competitive Orientation = .52; Formal Practices of Knowledge Management = .4; Informal Practices of Knowledge Management = .41) for each factor were evaluated as described in Fornell and Larcker (1981). The existence of outliers was evaluated by the square distance of Mahalanobis (Tabachnick & Fidell, 2007) and the normality of the variables was evaluated by the coefficients of asymmetry (Sk) and kurtosis (Ku) univariate and multivariate. None of the presented variables indicated violations to the normal distribution, being  $|Sk| < 3$  e  $|Ku| < 10$ . The quality of the global adjustment of the factorial models was made by the CFI, NFI, TLI, and RMSEA indexes, attending at the respective reference values (Bentler, 1990; Schumacker & Lomax, 1996; Brown, 2006; Kline, 2011; Hu & Bentler, 1999). The adjustment of the model was made by modification index (higher than 80;  $p < .001$ ) that made us correlate the residual variability, which is not explained by the model, between the variables 7 and 12, 15 and 16, and 19 and 20. The final Tetra-factorial Model of questionnaires short-version reveal an acceptable quality of adjustment,  $X^2(200) = 549.5$ ,  $p < .001$ , NFI = .89; CFI = .93, TLI = .92, and RMSEA = .05<sup>1</sup>. The internal consistency was estimated by the *Alpha of Cronbach* coefficient. The global scale presented a high coefficient of consistency (Nunally, 1978),  $\alpha = .91$ . The first factor (Knowledge Centered Culture; 7 items) presents a coefficient of .83. The second factor (Competitive Orientation; 4 items) and the third one (Formal Knowledge Management Practices; 6 items) present a coefficient of .62 and .83 respectively. The last factor (Informal Knowledge Management Practices; 5 items) has a coefficient of .76. These 4 factors are described by Pais (2014) as this:

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<sup>1</sup> A model is regarded as acceptable if: the NFI (Normed Fit Index) exceeds .90, the CFI (Comparative Fit Index) exceeds .93, the TLI (Tucker Lewis Index) is over .90, the RMSEA (Root Mean Square Error of Approximation) is lower or the same as .05 (Bentler, 1990; Schumacker & Lomax, 1996; Brown, 2006; Kline, 2011; Hu & Bentler, 1999).

Knowledge Centered Culture is the orientation for rules and procedures that are established in organizations, a common reference of a collective memory where all the core knowledge is preserved; Competitive Orientation is an external orientation focused on the knowledge usability as an strategic asset to achieve sustainability, on one side, and to surpass other competitor organizations; Formal Knowledge Management Practices are formal processes that are relevant to know and use in order to create knowledge, being able to share it and use in that specific organization; Informal Knowledge Management Practices are informal processes that help in the social construction of knowledge itself, emerging from the creation of a common, collective and shared language in the organization.

In Figure 1 it is shown the tetra-factorial model of the factorial validation of the Knowledge Management Questionnaire – Short Form.



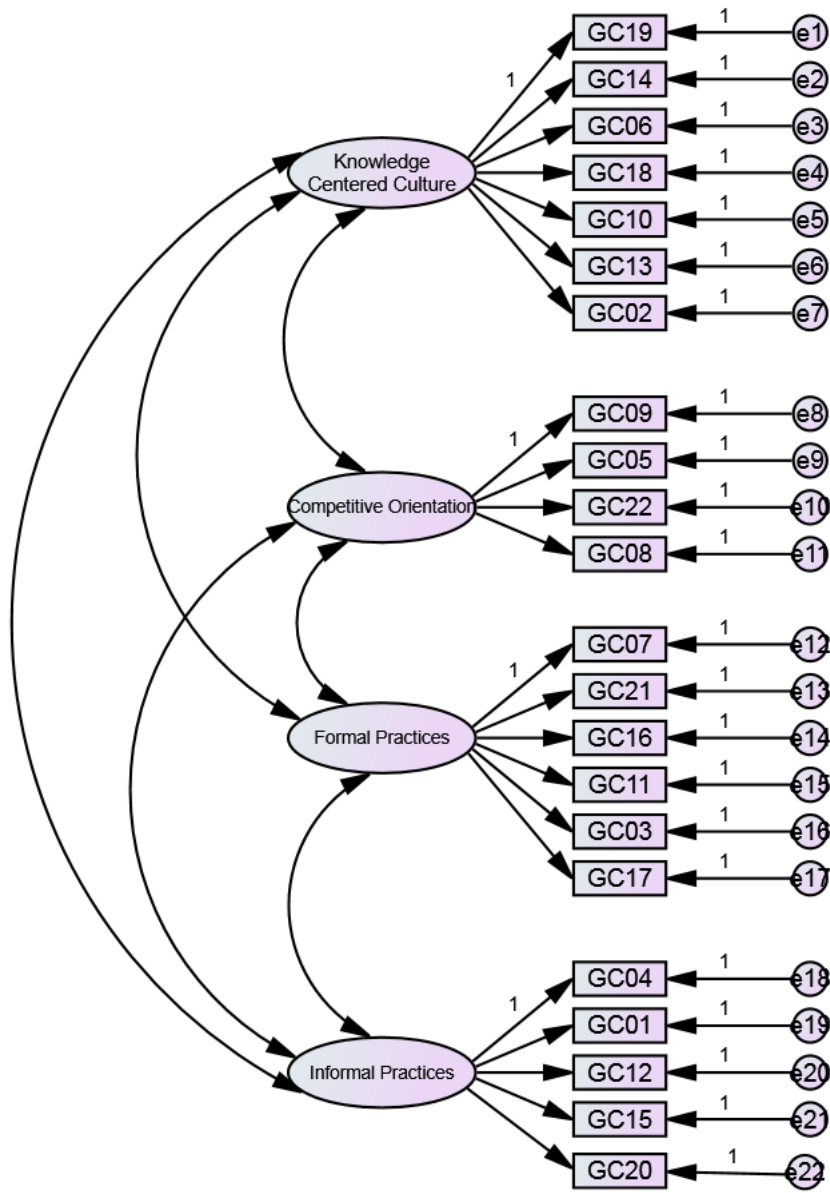


Figure 1. Confirmatory factor analysis of the KMQ-SF, after modification and according with the modification indexes and theoretical conceptualizations.

### **Organizational Recognition of Contributive Uniqueness Questionnaire**

Organizational Recognition of Contributive Uniqueness was measured with the Organizational Recognition of Contributive Uniqueness Questionnaire (ORCUQ, Cabo-Leitão & Dos Santos, 2011). This questionnaire is constituted by 42 items, which identify and evaluate employees' perception of the organizational recognition of their contributive uniqueness. The items are presented on a 7-point Likert-type scale (from 1 = "totally disagree" to 7 = "totally agree"). With the purpose of doing the analysis of the dimensionality of the Organizational Recognition of Contributive Uniqueness Questionnaire, a factorial analysis of principal components was done in a first moment (PCA – Principal Component Analysis) with VARIMAX rotation (Kaiser's normalization). PCA is a statistical procedure that uses an orthogonal transformation to convert a set of observations of possibly correlated variables into a set of values of linearly uncorrelated variables called principal components. After this step, it was essential to analyze if the requirements necessary to a reliable interpretation of PCA was being done. Following, the criteria of Gorsuch (1983), it is needed a minimum of 5 subjects per item. Since the questionnaire had 42 items, the ratio found was 1117 subjects/42 items  $\approx$  26.6 subjects/item, which enables, *a priori*, a reliable utilization of PCA. It was verified that the necessary requirements were met because the matrix of intercorrelations differed from the matrix of identity [the Bartlett's test shows a  $X^2(190) = 9018.43, p < .001$ ], and the sampling reveals as adequate – the obtained value to Kaiser-Meyer-Olkin (KMO) measure was .93, higher than the required value of .70.

Adopting the eigenvalue criteria, superior to the unit, emerged a solution of four factors, responsible for 57.47% of the total variability, with the first factor explaining 21.39% of the total variability, the second factor 15.33%, the third 12.41% and the fourth 8.34%. The factor

saturation and communalities of each factor are presented in Table 1, disposed in descending order in each factor. It was verified that all items saturate each factor above .50, being the lower value equal .52 and the higher equal .83. The items' constellation in each factor reproduced the four factors defined by Cabo-Leitão and Dos Santos (2011): F1 – Culture Recognition Effect; F2 – Tangible Recognition; F3 – Openness and Acceptance; F4 – Work Colleagues' Recognition.

Cabo-Leitão and Dos Santos (2011) define these factors as this: the first factor is constituted by items that measure the effect of the recognition culture for employee's unique contribution in its process of learning, development and performance improvement. This factor analyzes both employees' unique contributions that are recognized by their organization, and their willing to grow and develop as a consequence of that acknowledgement. The second factor is related to the tangibility of recognition that can be demonstrated by objective and direct rewards and recognition for an employee's unique contributions. The third factor is related with openness and acceptance, as in different ways to integrate divergent opinions and personal contributions. It demonstrates the openness of an organization and, most of all, the management for the creation and looming of unique ideas and contributions. Finally, the last factor is constituted by only 2 items, and despite that it could not be considered an independent factor, this solution is theoretically interpretable by measuring the recognition of an employees' unique contributions by their colleagues.

Table 1

*Factor saturations and communalities of the ORCUQ*

	<u>Factors</u>				<u>h<sup>2</sup></u>
	F1	F2	F3	F4	
ORCUQ13. A minha organização reconhece que me dedico ao meu trabalho	.72	.28	.22	.12	.66
ORCUQ11. Na minha organização existe abertura para que possa expressar as minhas opiniões	.68	.30	.34	.09	.67
ORCUQ7. No meu trabalho, tenho oportunidade de fazer aquilo que sei fazer melhor	.67	.11	.11	.04	.48
ORCUQ9. Nesta organização, o facto de sermos reconhecidos na nossa contribuição, ajuda-nos a crescer como pessoas	.67	.38	.19	.11	.64
ORCUQ22. Quando sou reconhecido(a) na minha organização por um trabalho bem feito, procuro no futuro fazer ainda melhor	.66	.01	-.02	.29	.52
ORCUQ8. A nível hierárquico as diferentes contribuições das diferentes pessoas são valorizadas	.63	.39	.19	.09	.58
ORCUQ29. A minha opinião é importante para o meu superior hierárquico	.62	.33	.15	.18	.56
ORCUQ15. Nesta organização as críticas sobre o meu trabalho são acompanhadas de explicação sobre como melhorar	.59	.40	.15	.09	.54
ORCUQ27. O meu superior hierárquico está envolvido na maioria dos assuntos relacionados com o meu trabalho	.52	.11	-.09	.23	.35

ORCUQ36. Na minha organização posso ser promovido(a) pela minha contribuição única	.17	.81	.00	.18	.72
ORCUQ30. Sou reconhecido monetariamente pelo meu contributo para a organização	.17	.74	.09	.12	.60
ORCUQ20. Na minha organização existe oportunidade de progressão de carreira	.30	.71	.04	.09	.60
ORCUQ25. Recebo mensagens de agradecimento pelo meu contributo para a organização	.30	.65	.11	.14	.54
ORCUQ6.i As pessoas nesta organização receiam apresentar as suas ideias	.07	.11	.73	.10	.55
ORCUQ24.i Nesta organização as pessoas sentem-se inibidas de criticar as ideias ou propostas que alguém apresentou	.00	-.05	.71	.05	.51
ORCUQ35.i Nesta organização as críticas às ideias transformam-se rapidamente em críticas pessoais	.04	.02	.69	-.03	.47
ORCUQ42.i Na minha organização, sinto que sou ignorado(a) nas opiniões que dou	.33	.04	.59	.11	.47
ORCUQ1.i Mesmo que fizesse um ótimo trabalho, isso seria ignorado na minha organização	.23	.25	.54	.01	.41
ORCUQ40. Nesta organização, os colegas dão valor aos contributos singulares de cada um	.27	.25	.10	.83	.83
ORCUQ37. Na minha organização os colegas reconhecem o meu contributo	.30	.23	.12	.81	.82

*Note.* F1 – Culture Recognition Effect, F2 – Tangible Recognition, F3 – Openness and Acceptance, F4 – Work Colleagues' Recognition

The conducting of an exploratory factor analysis to the items that belong to the ORCUQ intended to meet the goal of “finding what variables in the set form coherent subsets relatively independent from each other (Tabachnick & Fidell, 2001, pp. 582). Then, in a second moment, we conducted a Confirmatory Factor Analysis (CFA).

The factorial validity of the questionnaire was evaluated by a confirmatory factor analysis with software AMOS (Arbuckle, 2008, 2009), and the parameters were estimated through maximum likelihood method. The composite reliability (Culture Recognition Effect = .89; Tangible Recognition = .8; Openness and Acceptance = .73; Work Colleagues Recognition = .82) and the average extracted variance (Culture Recognition Effect = .48; Tangible Recognition = .5; Openness and Acceptance = .35; Work Colleagues Recognition = .7) for each factor were evaluated as described in Fornell and Larcker (1981). The existence of outliers was evaluated by the square distance of Mahalanobis (Tabachnick & Fidell, 2007) and the normality of the variables was evaluated by the coefficients of asymmetry (Sk) and kurtosis (Ku) univariate and multivariate. None of the presented variables indicated violations to the normal distribution, being  $|Sk| < 3$  e  $|Ku| < 10$ . The quality of the global adjustment of the factorial models was made by the CFI, NFI, TLI, and RMSEA indexes, attending at the respective reference values<sup>2</sup>. The adjustment of the model was made by modification index (higher than 80;  $p < .001$ ) that made us correlate the residual variability, which is not explained by the model, between the variables 4 and 6, and 4 and 7. The final Tetra-factorial Model of questionnaires short-version reveal an acceptable quality of adjustment,  $X^2(162) = 714.4$ ,  $p < .001$ , NFI = .92; CFI = .94, TLI = .92, and RMSEA = .06. The internal consistency was estimated by the *Alpha of Cronbach* coefficient.

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<sup>2</sup> A model is regarded as acceptable if: the NFI (Normed Fit Index) exceeds .90, the CFI (Comparative Fit Index) exceeds .93, the TLI (Tucker Lewis Index) is over .90, the RMSEA (Root Mean Square Error of Approximation) is lower or the same as .05 (Bentler, 1990; Schumacker & Lomax, 1996; Brown, 2006; Kline, 2011; Hu & Bentler, 1999).

The global scale presented a high coefficient of consistency (Nunnally, 1978),  $\alpha = .97$ . The first factor (Recognition Culture Effect; 9 items) presents a coefficient of .88. The second factor (Tangible Recognition; 4 items) and the third one (Openness and Acceptance; 5 items) present a coefficient of .80 and .70 respectively. The last factor (Work Colleagues' Recognition; 2 items) has a coefficient of .82. In Figure 2 it is shown the tetra-factorial model of the factorial validation of the Organizational Recognition of the Contributive Uniqueness Questionnaire.

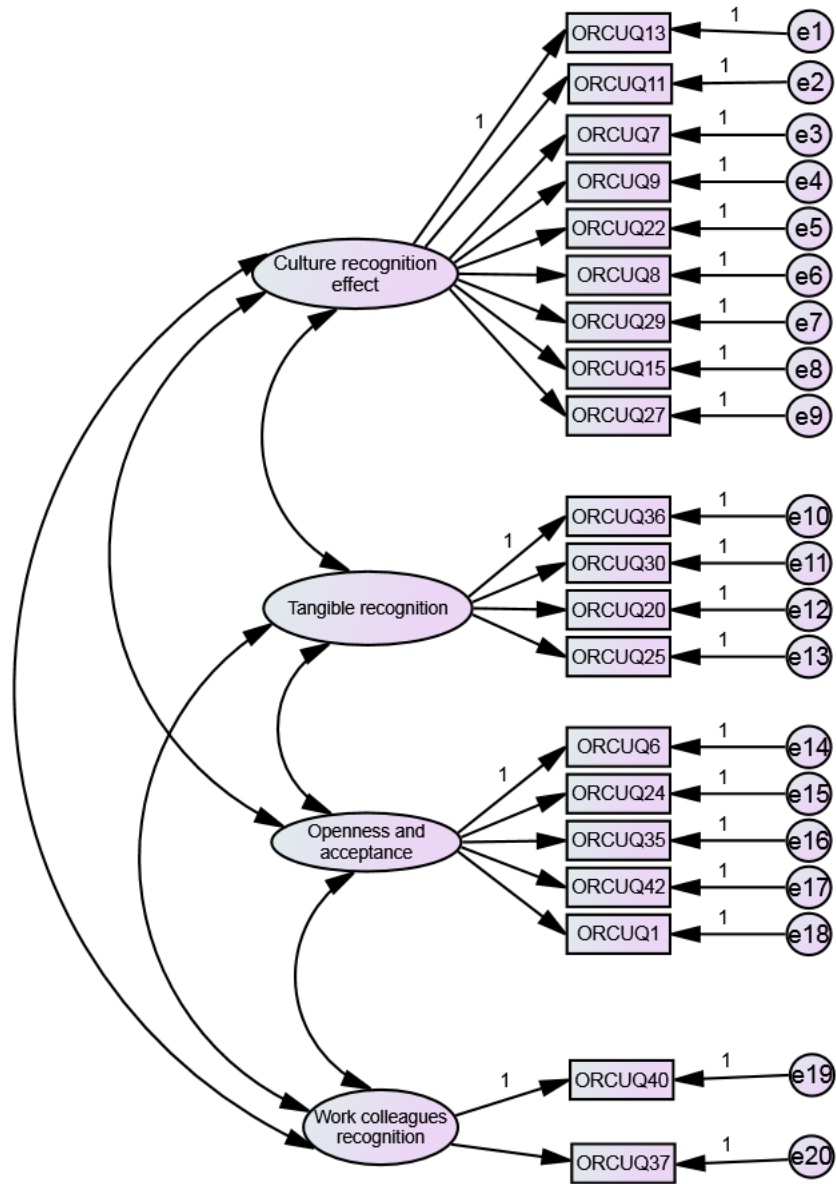


Figure 2. Confirmatory factor analysis of the ORCUQ, after modification and according with the modification indexes and theoretical conceptualizations.



## Results

### Descriptive analysis

Table 2 shows the descriptive statistics obtained and the correlation matrix between the Organizational Recognition of the Contributive Uniqueness Questionnaire and the Knowledge Management Questionnaire – Short Form.

All the KMQ-SF factors (as well as the KMQ-SF global scale) presented a minimum of 1 and a maximum of 5. For the ORCUQ, the first factor (ORCUQ\_F1 – Culture Recognition Effect) presented a minimum of 1.11 and a maximum of 7. All the other ORCUQ factors presented a minimum of 1 and a maximum of 7. This said, the ORCUQ global scale presented a minimum of 1.19 and a maximum of 6.88.

The mean value for KMQ-SF global scale was 3.57 with a *SD* of 0.64, calculated from the mean of the answers of Knowledge Centered Culture, Informal Knowledge Management Practices, Formal Knowledge Management Practices and Competitive Orientation. The KMQ-SF manifest variable with the highest mean value (3.92) was the first manifest variable (KM\_F1 – Knowledge Centered Culture), whereas the lowest mean value (3.17) was found in the third manifest variable (KM\_F3 – Formal Knowledge Management Practices). This means that, in relation to KMQ-SF, our sample subjects perceived Knowledge Centered Culture as the most operative manifest variable, followed by Informal Knowledge Management Practices, Competitive Orientation and Formal Knowledge Management Practices. These manifest variables result from the calculation from the items mean on each factor. This procedure is done in some researches (Gagné *et al.*, 2014)

For the ORCUQ global scale, the mean value was 4.27 with a *SD* of 1.06, calculated from the mean of the answers of Culture Recognition Effect, Tangible Recognition, Openness and

Acceptance and Work Colleagues' Recognition. The ORCUQ composite variable with the highest mean value (4.68) was the third one (ORCUQ\_F3 – Openness and Acceptance), whereas the lowest mean value (3.31) was found in the second composite variable (ORCUQ\_F2 – Tangible Recognition). It should be noticed that the first composite variable (ORCUQ\_F1 – Culture Recognition Effect) had a mean value very close to the highest one (4.67). This means that, in relation to ORCUQ, our sample subjects perceived Openness and Acceptance as the most operative composite variable, very closely followed by Culture Recognition Effect, Work Colleagues' Recognition and Tangible Recognition. These composite variables descriptive statistics were calculated from their correspondent items.

Concerning the correlations, all the values are significant at the .01 level of significance.

Figure 3 and Figure 4 show the tetra-factorial models of the factorial validation of KMQ-SF and ORCUQ.

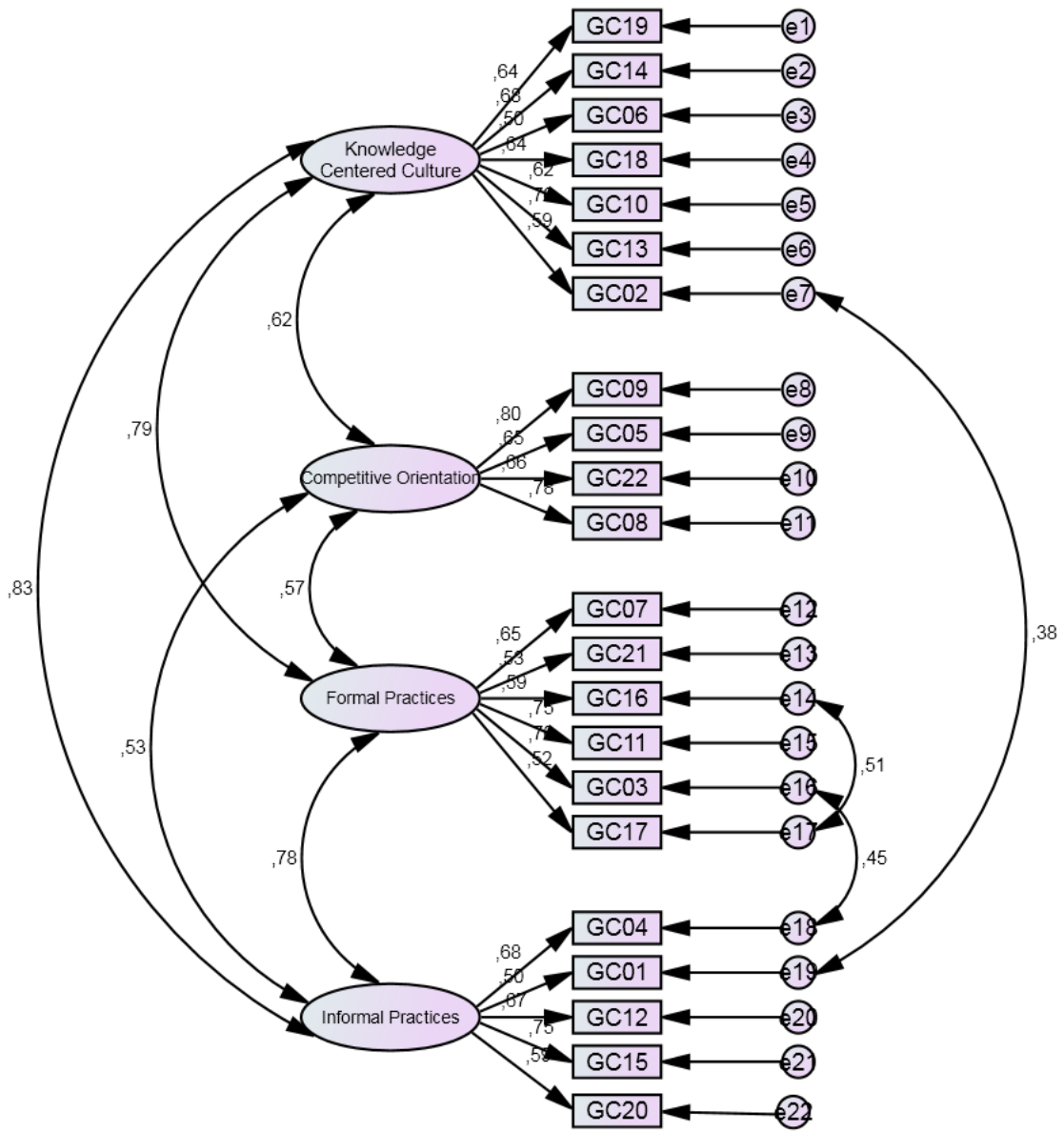


Figure 3. Tetra-factorial model of factorial validation of the KMQ-SF.

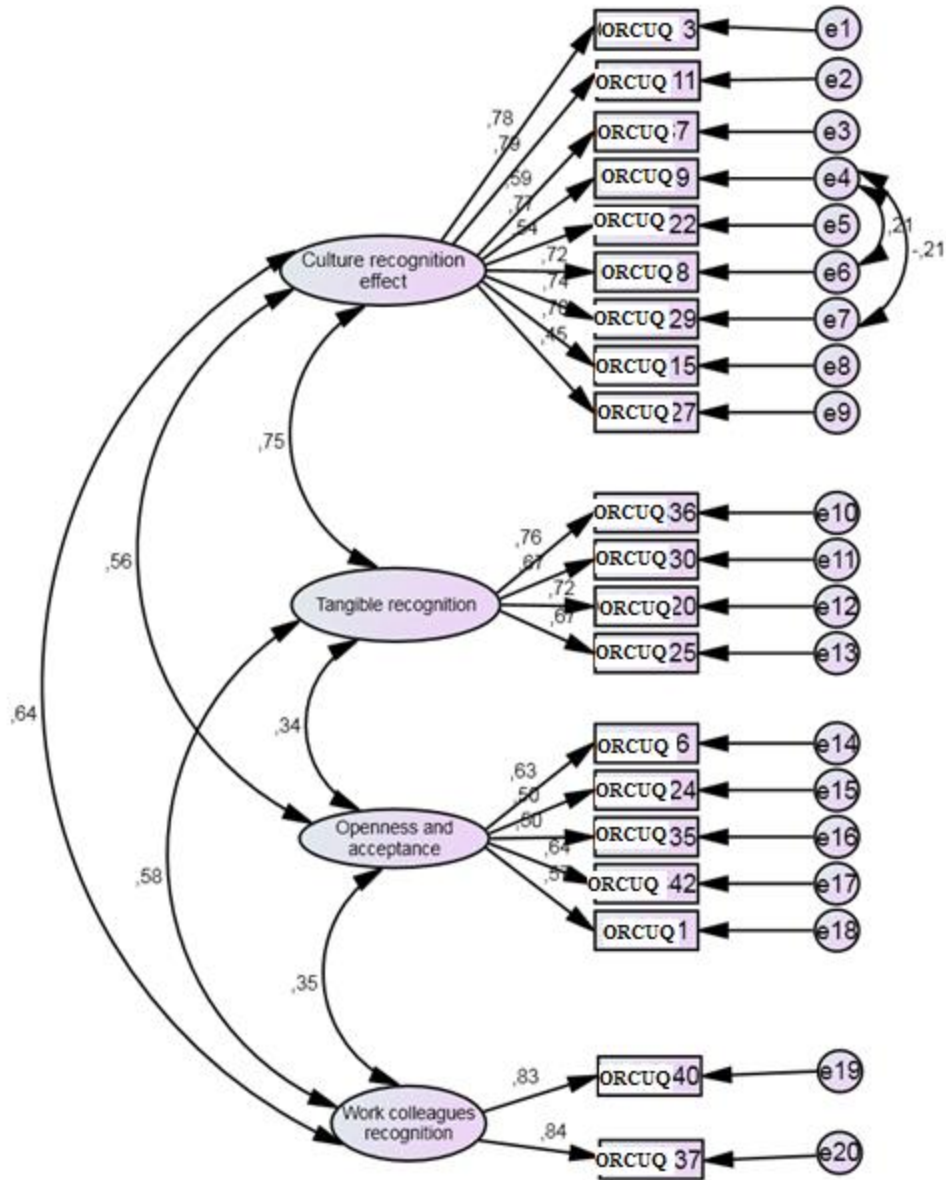


Figure 4. Tetra-factorial model of the factorial validation of the ORCUQ.

Table 2

*Descriptive statistics obtained and the correlation matrix ( $R^2$  into brackets) between the ORCUQ factors and KMQ-SF factors*

	Min	Max	M	SD	KM_ GL	KM_ F1	KM_ F2	KM_ F3	KM_ F4	ORCUQ_ GL	ORCUQ_ F1	ORCUQ_ F2	ORCUQ_ F3	ORCUQ_ F4
KM_ GL	1	5	3.57	0.64	---	---	---	---	---	.63** (.40)	.59** (.35)	.47** (.22)	.27** (.08)	.52** (.27)
KM_ F1	1	5	3.92	0.63	---	---	.53** (.28)	.61** (.37)	.68** (.46)	.53** (.28)	.53** (.28)	.30** (.09)	.26** (.07)	.47** (.22)
KM_ F2	1	5	3.42	0.93	---	---	---	.46** (.21)	.43** (.19)	.42** (.18)	.40** (.16)	.38** (.14)	.06** (.00)	.34** (.12)
KM_ F3	1	5	3.17	0.88	---	---	---	---	.60** (.36)	.64** (.41)	.56** (.31)	.56** (.31)	.33** (.11)	.47** (.22)
KM_ F4	1	5	3.67	0.76	---	---	---	---	---	.41** (.17)	.40** (.16)	.25** (.06)	.19** (.04)	.40** (.16)
ORCUQ GL	1.19	6.88	4.27	1.06	---	---	---	---	---	---	---	---	---	---
ORCUQ F1	1.11	7	4.67	1.16	---	---	---	---	---	---	---	.64** (.41)	.41** (.17)	.56** (.31)
ORCUQ F2	1	7	3.31	1.44	---	---	---	---	---	---	---	---	.26** (.07)	.47** (.22)
ORCUQ F3	1	7	4.68	1.14	---	---	---	---	---	---	---	---	---	.25** (.06)
ORCUQ F4	1	7	4.46	1.39	---	---	---	---	---	---	---	---	---	---

*Note.* \*\*. Correlation is significant at the .01 level (2-tailed). KM\_GL: KMQ-SF global scale; KM\_F1: Knowledge Centered Culture; KM\_F2: Competitive Orientation; KM\_F3: Formal Knowledge Management Practices; KM\_F4: Knowledge Management Practices. ORCUQ\_GL: ORCUQ global scale; ORCUQ\_F1: Culture Recognition Effect; ORCUQ\_F2: Tangible Recognition; ORCUQ\_F3: Openness and Acceptance; ORCUQ\_F4: Work Colleagues' Recognition.

**KMQ-SF predicted by ORCUQ**

The first analysis we conducted was to test if the ORCUQ predicted the KMQ-SF. We previously analysed the assumptions of the model, namely the normal distribution, the homogeneity and independence of errors. The first two assumptions were validated graphically and the independence assumption was validated with the Durbin-Watson statistic. VIF was used to diagnose multicollinearity and showed no collinear variables. All analyses were performed with SPSS (v. 20, SPSS, Chicago, IL). It was considered for all analyses a probability of a type I error of .05. The final bi-factorial model reveals an acceptable quality of adjustment, NFI = .93; CFI = .94, TLI = .90, and RMSEA = .11. This structural equation modeling (SEM) is a very general, chiefly linear, chiefly cross-sectional statistical modeling technique, usually rather confirmatory than exploratory.

The correlation coefficient presented of  $r_{\text{multiple}} = .74$ , classified as of large magnitude according to Cohen (1988), indicating that, overall, the ORCUQ is responsible for 54.8% of the variability of the KMQ-SF. Figure 3 shows the explanatory model of the perception of KMQ-SF predicted by the ORCUQ. Table 3 shows the regression weights.

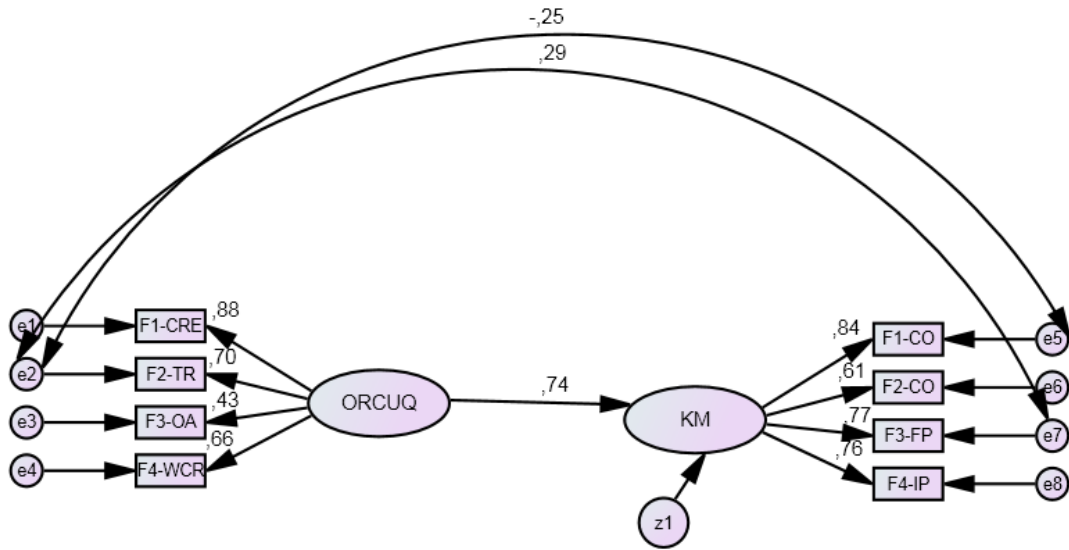


Figure 5. Explanatory model of the perception of KMQ-SF predicted by the ORCUQ, with standardized coefficients.

Table 3

*Multiple regression analysis: Estimates (e), Standard Errors (SE), Critical Ratios (CR), Standardized Regression Coefficients ( $\beta$ ), and Significance (p)*

Hypothesized Path			E	SE	CR	p	$\beta$
KM	←	ORCUQ	0.42	.02	18.37	***	.74
ORCUQ_F4	<---	ORCUQ	1.00				.66
ORCUQ_F3	<---	ORCUQ	0.53	.04	12.76	***	.43
ORCUQ_F2	<---	ORCUQ	1.07	.05	19.75	***	.70
ORCUQ_F1	<---	ORCUQ	1.11	.05	22.37	***	.88
KM_F1	<---	KM	1.00				.84
KM_F2	<---	KM	1.07	.05	20.73	***	.61
KM_F3	<---	KM	1.29	.05	27.83	***	.77
KM_F4	<---	KM	1.09	.04	26.97	***	.76

\*\*\*  $P < .001$



### Multiple Regression Analysis

Multiple regression analysis is a powerful technique used for predicting the unknown value of a variable from the known value of two or more variables- also called the predictors. In this case, we carried a multiple regression analysis, considering as predictive variables the four ORCUQ manifest variables, and as response variable the KMQ-SF global scale, and each of the four manifest variables that compose it. We previously analysed the assumptions of the model, namely the normal distribution, the homogeneity and independence of errors. The first two assumptions were validated graphically and the independence assumption was validated with the Durbin-Watson statistic. VIF was used to diagnose multicollinearity and showed no collinear variables. All analyses were performed with SPSS (v. 20, SPSS, Chicago, IL). It was considered for all analyses a probability of a type I error of .05.

For the four manifest variables of the ORCUQ (ORCUQ\_F1 – Culture Recognition Effect; ORCUQ\_F2 – Tangible Recognition; ORCUQ\_F3 – Openness and Acceptance; ORCUQ\_F4 – Work Colleagues' Recognition), the multiple regression carried out with the global scale of the KMQ-SF presented a multiple correlation coefficient of  $r_{\text{multiple}} = .64$ , classified as of large magnitude according to Cohen (1988), indicating that, overall, Factor 1, 2 and 4 of ORCUQ are responsible for 41% of the variability of global KMQ-SF.

Table 4 presents the non-standardized ( $b$ ) and standardized ( $\beta$ ) regression coefficients, standard errors ( $Se$ ) and t tests of statistical significance, for both KMQ-SF global scale and its four constituent manifest variables.

Table 4

*Multiple regression analysis of KMQ-SF forecast from the four factors of ORCUQ*

KMQ-SF				
Criterion: Global scale				
Predictors:	<i>b</i>	<i>SE</i>	$\beta$	<i>T</i>
ORCUQ_F1	.2	0.02	.36	10.7***
ORCUQ_F2	.05	0.01	.11	3.65***
ORCUQ_F3	.02	0.01	.03	1.08
ORCUQ_F4	.12	0.01	.26	9.14***
F (4, 1112) = 190.50; $p < .001$ , $r_{\text{multiple}} = .64$ , $R^2 = .41$ , $R^2_{\text{aj}} = .40$ , $SE = .5$				
Criterion: KM_F1 – Cultural Orientation				
Predictors:	<i>b</i>	<i>SE</i>	$\beta$	<i>T</i>
ORCUQ_F1	.24	0.02	.44	12.22***
ORCUQ_F2	-.05	0.01	-.12	-3.59***
ORCUQ_F3	.02	0.02	.04	1.47
ORCUQ_F4	.12	0.01	.27	9.2***
F (4, 1112) = 141.90, $p < .001$ , $r_{\text{multiple}} = .58$ , $R^2 = .34$ , $R^2_{\text{aj}} = .34$ , $SE = .51$				

Table 4

*Multiple regression analysis of KMQ-SF forecast from the four factors of ORCUQ*

Criterion: KM_F2 – Competitive Orientation				
Predictors:	<i>b</i>	<i>SE</i>	$\beta$	<i>T</i>
ORCUQ_F1	.2	0.03	.25	6.31***
ORCUQ_F2	.12	0.02	.19	5.48***
ORCUQ_F3	- .1	0.02	- .13	- 4.26***
ORCUQ_F4	.09	0.02	.14	4.33***

$F(4, 1112) = 74.41, p < .001, r_{multiple} = .46, R^2 = .21, R^2_{aj} = .21, SE = .83$

Criterion: KM_F3 – Formal Knowledge Management Practices				
Predictors:	<i>b</i>	<i>SE</i>	$\beta$	<i>T</i>
ORCUQ_F1	.17	0.03	.23	6.69***
ORCUQ_F2	.19	0.02	.30	9.96***
ORCUQ_F3	.09	0.02	.11	4.45***
ORCUQ_F4	.11	0.02	.17	6.01***

$F(4, 1112) = 192.99, p < .001, R_{multiple} = .64, R^2 = .41, R^2_{aj} = .41, SE = .68$

Table 4

*Multiple regression analysis of KMQ-SF forecast from the four factors of ORCUQ*

Predictors:	Criterion: KM_F4 – Informal Knowledge Management Practices			
	<i>B</i>	<i>SE</i>	$\beta$	<i>T</i>
ORCUQ_F1	0.18	0.03	0.28	7.15***
ORCUQ_F2	- 0.03	0.02	- 0.06	- 1.8
ORCUQ_F3	0.01	0.02	0.02	0.69
ORCUQ_F4	0.15	0.02	0.27	8.11***

F (4, 1112) = 71.48,  $p < .001$ ,  $r_{\text{multiple}} = .45$   $R^2 = .21$ ,  $R^2_{\text{aj}} = .20$ ,  $SE = .68$

\*\*\*  $p < .001$

As we can see in Table 4, ORCUQ\_F1, significantly and positively predicts all the KMQ-SF factors, and it is seen to be the best KM\_F1 predictor (being, at the same time, the strongest relation of all the ORCUQ factors). Concerning ORCUQ\_F2, it predicts all the KMQ-SF factors except the KM\_F4, and it is seen to inhibit KM\_F1. As for ORCUQ\_F3, it is seen to only predict KM\_F2 and KM\_F3, albeit in different directions: this means that openness and acceptance is seen to promote formal knowledge management practices (nevertheless, it is the weakest significant prediction of all the ORCUQ factors), however it is seen to inhibit the competitive orientation. ORCUQ\_F4, similarly to ORCUQ\_F1, also significantly and positively predicts all the KMQ-SF factors.

### **Multiple Multivariate Regression Analysis**

Next, we performed a multiple multivariate regression analysis, to be able to explore the influence of organizational recognition of contributive uniqueness on knowledge management processes. As the name implies, multivariate regression is a technique that estimates a single regression model with more than one outcome variable. When there is more than one predictor variable in a multivariate regression model, the model is a multivariate multiple regression. The perception of Culture Recognition Effect, Tangible Recognition, Openness and Acceptance and Work Colleagues' Recognition were considered predictors of Knowledge Centered Culture, Competitive Orientation, Formal Knowledge Management Practices and Informal Knowledge Management Practices. These manifest variables are underlined to the two dimensions, and emerge from the calculation of the mean of the items retained in each factor.

Analyzing the contributions of the ORCUQ, from Table 5, we see this adjusted model explains 34% of the perception of the Knowledge Centered Culture, 21% of the perception of the Competitive Orientation, 41% of the perception of Formal Knowledge Management Practices,

and 20% of the perception of Informal Knowledge Management Practices. Only the following paths were not statistically significant: ORCUQ\_F3  $\rightarrow$  KM\_F4 ( $p=.49$ ); ORCUQ\_F3  $\rightarrow$  KM\_F1 ( $p=.14$ ); ORCUQ\_F2  $\rightarrow$  KM\_F4 ( $p=.07$ ).

It is seen that the strongest predictor is ORCUQ\_F1, in relation to KM\_F1 ( $\beta = .44$ ), which is of medium effect (Cohen, 1988). It is closely followed by ORCUQ\_F2, that predicts KM\_F3 ( $\beta = .30$ ) which is also considered of medium magnitude (Cohen, 1988). Concerning the weakest significant predictor, it is seen it is ORCUQ\_F3, in relation to KM\_F3, with  $\beta = .11$ , which is considered of null magnitude (Cohen, 1988).

Figure 6 shows the standardized estimates of the regression coefficients and of the coefficients of the determination of the dependent variables.

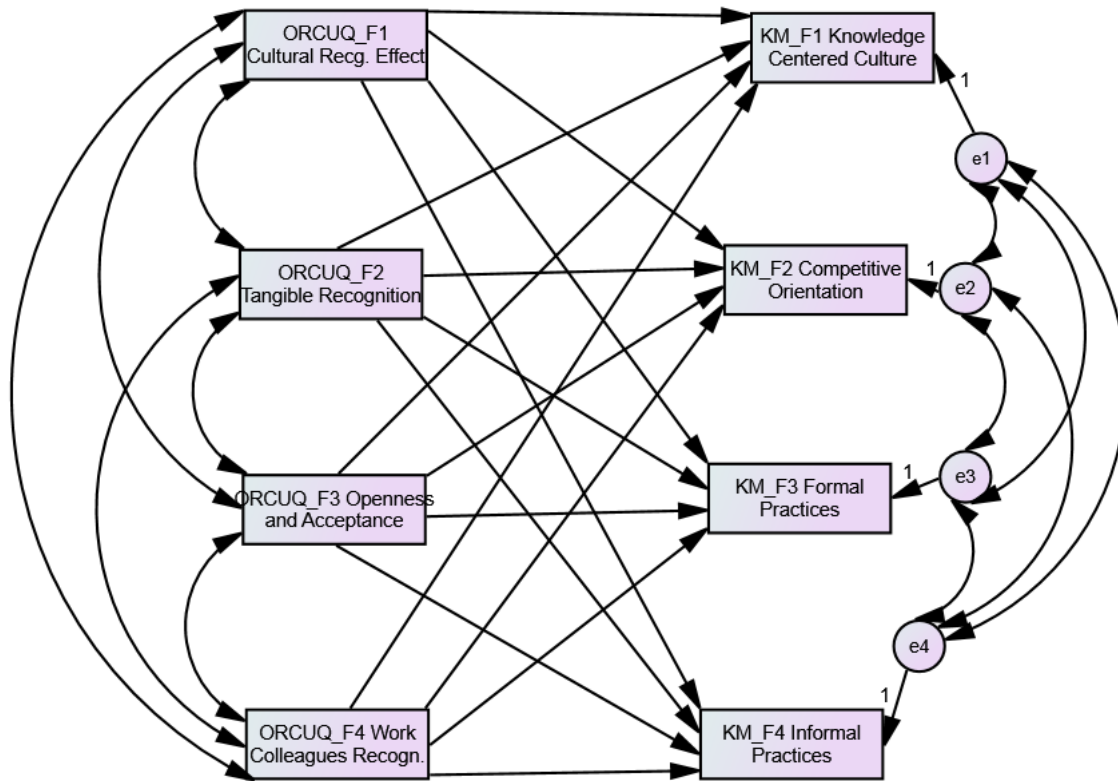


Figure 6. Proposed model of the multivariate linear regression.

Table 5

*Multiple multivariate regression analysis: Non-standardized Regression Coefficients (b), Standard Errors (SE), Critical Ratios (CR), and Standardized Regression Coefficients ( $\beta$ )*

			<i>b</i>	<i>S.E.</i>	<i>C.R.</i>	$\beta$	<i>p</i>
KM_F1	<---	ORCUQ_F1	.24	.02	12.24	.44	***
KM_F4	<---	ORCUQ_F3	.01	.02	0.7	.02	.49
KM_F2	<---	ORCUQ_F4	.09	.02	4.34	.14	***
KM_F2	<---	ORCUQ_F1	.2	.03	6.32	.25	***
KM_F2	<---	ORCUQ_F2	.12	.02	5.49	.19	***
KM_F2	<---	ORCUQ_F3	- .10	.02	- 4.27	- .13	***
KM_F3	<---	ORCUQ_F4	.11	.02	6.02	.17	***
KM_F1	<---	ORCUQ_F4	.12	.01	9.21	.27	***
KM_F1	<---	ORCUQ_F3	.02	.02	1.47	.04	.14
KM_F1	<---	ORCUQ_F2	- .05	.01	- 3.59	- .12	***
KM_F3	<---	ORCUQ_F1	.17	.03	6.7	.23	***
KM_F3	<---	ORCUQ_F3	.09	.02	4.46	.11	***
KM_F3	<---	ORCUQ_F2	.19	.02	10	.30	***
KM_F4	<---	ORCUQ_F4	.15	.02	8.13	.27	***
KM_F4	<---	ORCUQ_F1	.18	.03	7.17	.28	***
KM_F4	<---	ORCUQ_F2	- .03	.02	- 1.81	- .06	.07

\*\*\*  $p < .001$



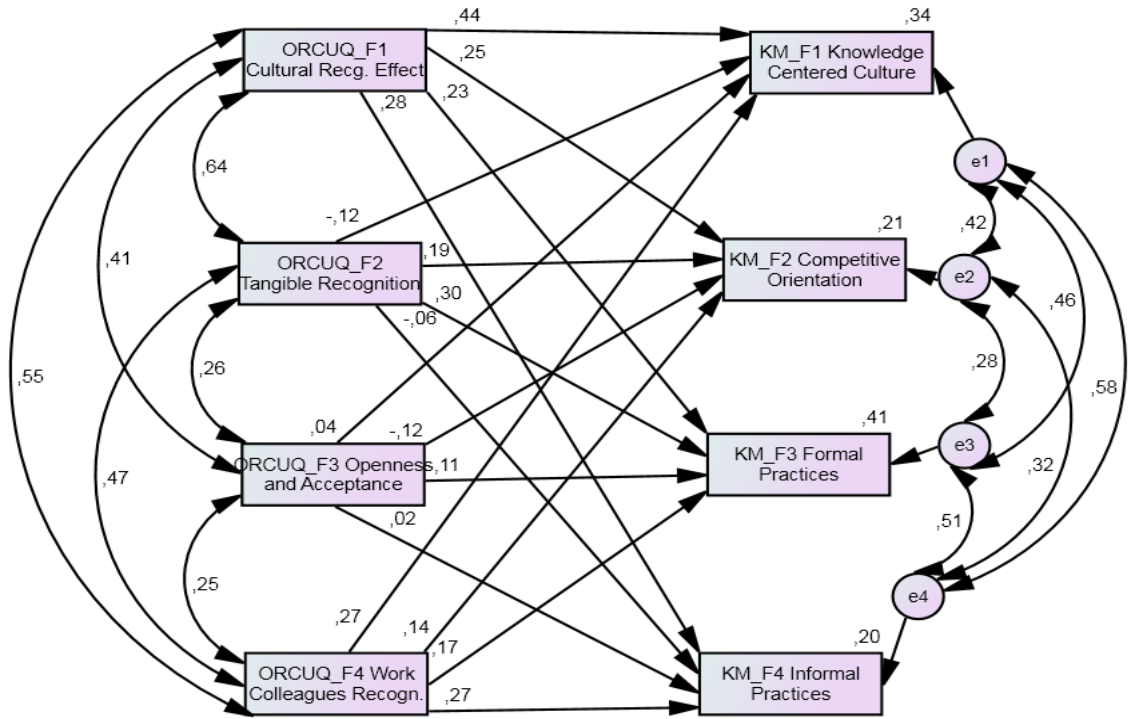


Figure 7. Multivariate linear regression model between dependent variables KM\_F1, KM\_F2, KM\_F3, KM\_F4, and the variables ORCUQ\_F1, ORCUQ\_F2, ORCUQ\_F3, ORCUQ\_F4.

### **Moderations**

In order to verify if there is interaction between the ORCUQ factors in the prediction of knowledge management processes, we tested the moderation effect of the four factors of the ORCUQ.

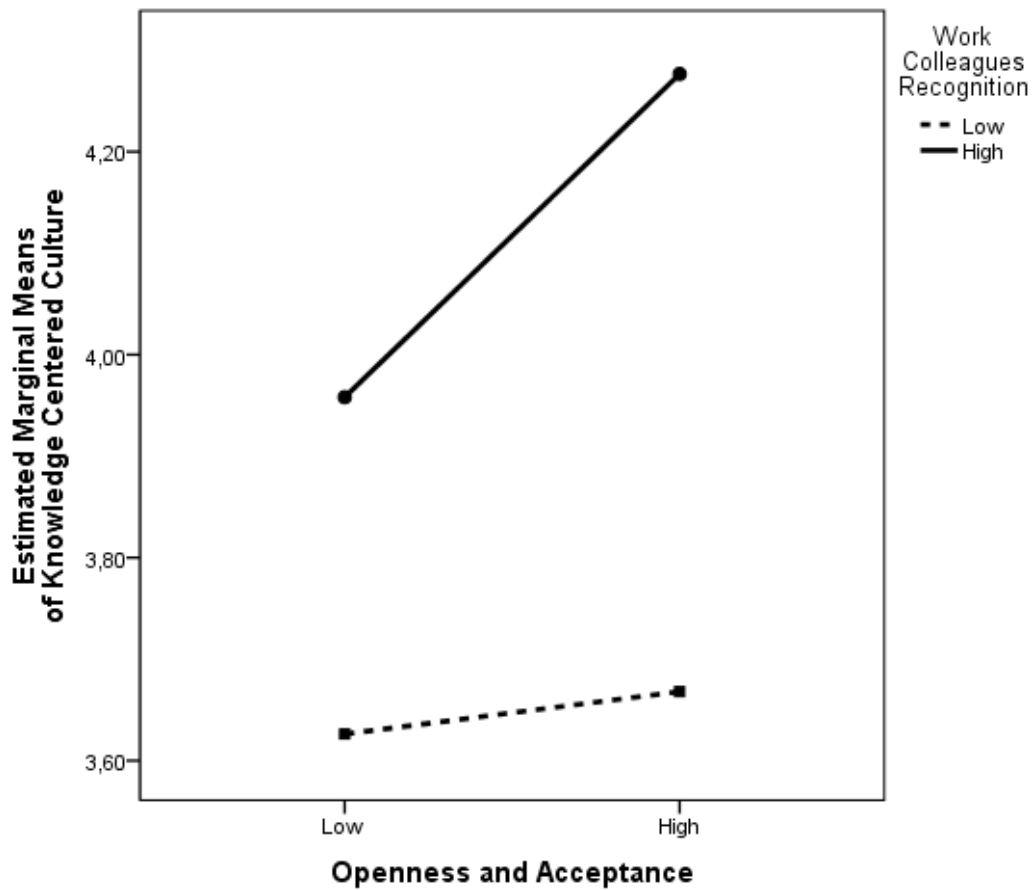
A relationship is moderated when we can verify that it applies to some sample categories, but do not apply to others (Bryman, 1991). Baron and Kenny (1986) define “moderator variable” as a qualitative or quantitative variable that affects the direction and/or strength of the relationship between the independent variable and the dependent variable. We are in the presence of a moderating effect or interaction when the effect of the predictor or independent variable (X) on the dependent or criterion (Y) variable is affected by the presence of the moderator variable (Aguinis & Gottfredson, 2010; Baron & Kenny, 1986; Maroco, 2007, 2010).

In the present study we tested the moderating effect by using the technique of multiple linear regression. The standard method of determining whether a moderating effect exists entails the addition of an (linear) interaction term in a multiple regression model. We performed an analysis with the centered independent variables, instead of using the original independent variables, in order to avoid problems of collinearity between the independent variables (Aiken & West, 1991; Maroco, 2007). Finally, to test the moderating effect we added to the regression model, the product of the two centered independent variables in order to test the interaction effect and evaluate its statistical significance. We only considered the moderations that were both significant and when each variable was transformed in a dummy variable, they were graphically relevant.

Table 6

*Moderating effects between ORCUQ factors in the prediction of Knowledge Centered Culture*

Variable	<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
Culture Recognition	.29	.02	.47	12.19	.00
Tangible Recognition	-.09	.02	-.14	- 4.16	.00
Openness and Acceptance	.03	.02	.05	1.66	.1
Work Colleagues Recognition	.16	.02	.25	7.56	.00
Culture x Tangible	.07	.02	.12	3.2	.00
Culture x Openn. and Accep.	.01	.02	.01	.35	.72
Culture x Work Coll. Recog.	-.08	.02	-.14	- 3.71	.00
Tangible x Work Coll. Recog.	-.00	.02	-.00	- 0.02	.98
<b>Openn. and Accep. x Work Coll. Recog.</b>	<b>.05</b>	<b>.02</b>	<b>.08</b>	<b>2,28</b>	<b>.02</b>
Tangible x Open. And Accep.	-.01	.02	-.02	- 0.67	.50
R <sup>2</sup>			.35		
F (10, 1106)		60.41			.00

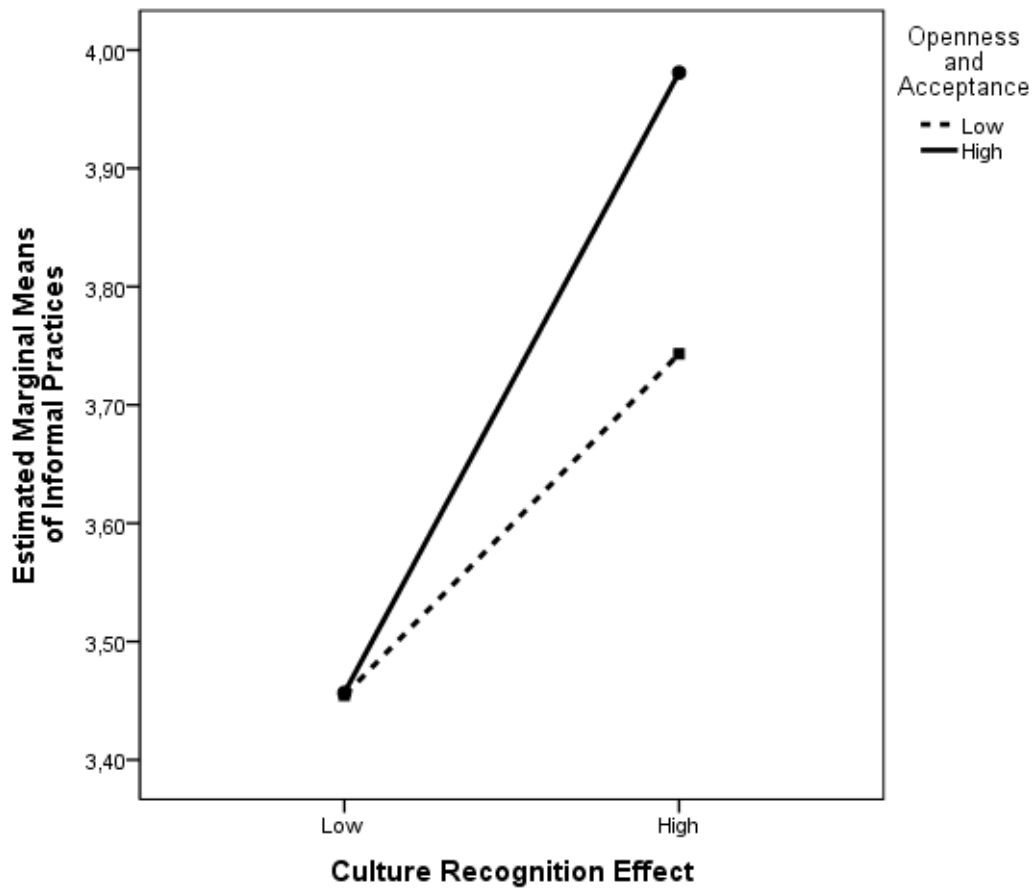


*Figure 8.* Knowledge Centered Culture according to Work Colleagues' Recognition and Openness and Acceptance. Knowledge Centered Culture depends on the Work Colleagues' Recognition and the Openness and Acceptance. Notably when there is a low level of Openness and Acceptance, a low level of Work Colleagues Recognition will lead to a higher perception of Knowledge Centered Culture. However, when the Openness and Acceptance is high, a high level of Work Colleagues Recognition will lead to a higher level of Knowledge Centered Culture.

Table 7

*Moderating effects between ORCUQ factors in the prediction of Informal Knowledge Management Practices*

Variable	<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
Culture Recognition	.21	.03	.28	6.55	.00
Tangible Recognition	-.06	.03	-.07	- 1.93	.05
Openness and Acceptance	.02	.02	.03	0.96	.34
Work Colleagues Recognition	.2	.03	.26	7.21	.00
Culture x Tangible	.01	.03	.02	.45	.66
<b>Culture x Openn. and Accep.</b>	<b>.06</b>	<b>.03</b>	<b>.09</b>	<b>2.14</b>	<b>.03</b>
Culture x Work Coll. Recog.	-.1	.03	-.14	- 3.58	.00
Tangible x Work Coll. Recog.	.06	.03	.09	1.95	.05
Openn. and Accep. x Work Coll. Recog.	.01	.03	.02	0.39	.70
Tangible x Open. And Accep.	-.05	.03	-.07	- 1.72	.09
R <sup>2</sup>			.22		
F (10, 1006)		60.41			.00

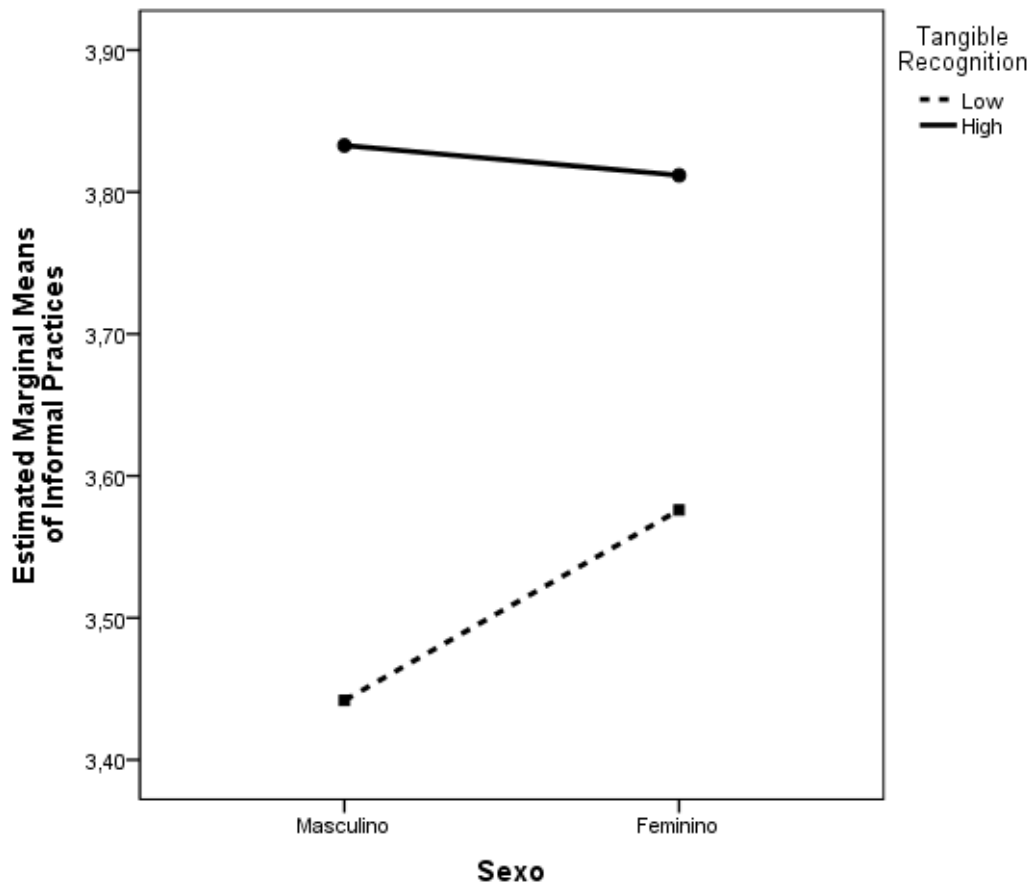


*Figure 9.* Informal Knowledge Management Practices according to Openness and Acceptance and Culture Recognition Effect. Informal Knowledge Management Practices clearly depend on Openness and Acceptance and the Cultural Recognition Effect. When there is a low level of Culture Recognition Effect, a low level of Openness and Acceptance will lead to a higher perception of Informal Knowledge Management Practices. On the other side, a high level of Culture Recognition Effect will lead to a higher level of Informal Knowledge Management Practices when the Openness and Acceptance are in a high level.

Table 8

*Moderating Effects between ORCUQ factors and Gender in the prediction of Informal Knowledge Management Practices*

Variable	<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
Gender	.09	.04	.06	2.18	.03
Culture Recognition	.27	.11	.35	2.47	.01
Tangible Recognition	.18	.09	.24	1.94	.05
Openness and Acceptance	-.19	.08	-.25	- 2.55	.01
Work Colleagues Recognition	.19	.09	.25	2.15	.03
Gender x Culture Recognition	-.04	.06	-.09	- 0.63	.53
<b>Gender x Tangible Recog.</b>	<b>-.14</b>	<b>.06</b>	<b>-.31</b>	<b>- 2.52</b>	<b>.01</b>
Gender x Openn. and Accep.	.13	.05	.28	2.86	.00
Gender x Work Coll. Recog.	.01	.05	.03	0.23	.82
R <sup>2</sup>			.22		
F (9, 1102)		34.4			.00



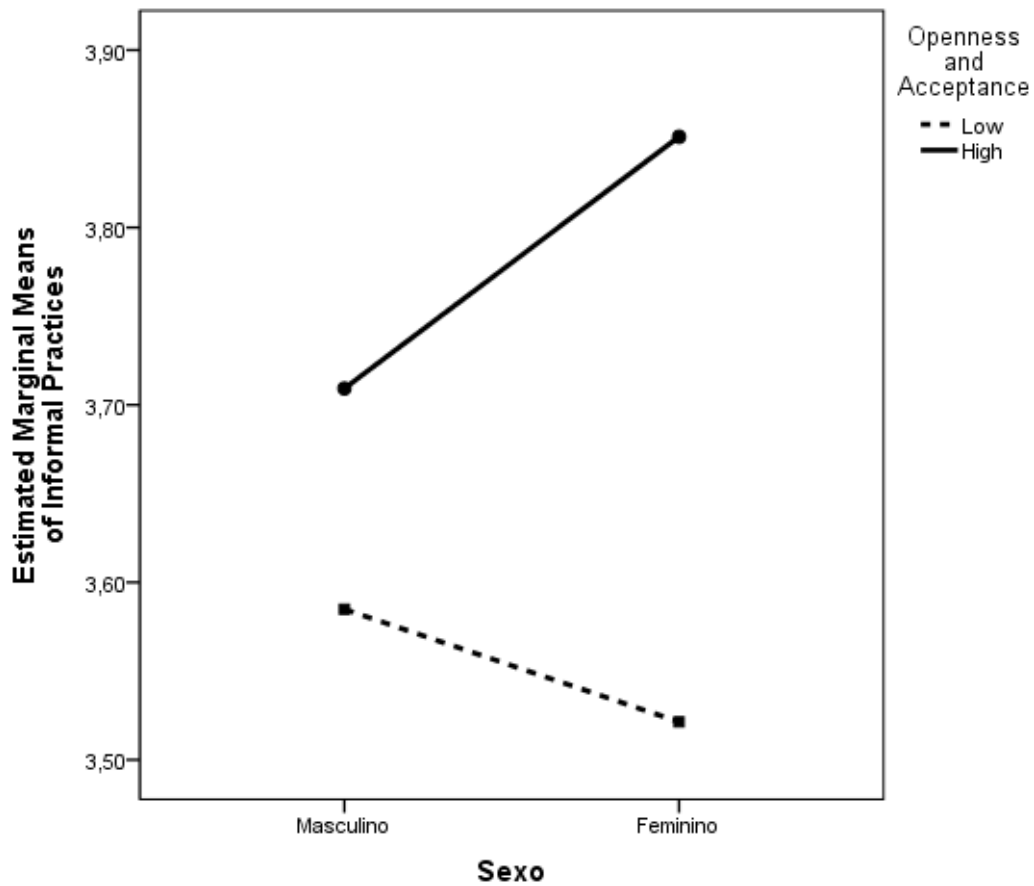
*Figure 10.* Informal Knowledge Management Practices according to Tangible Recognition and Gender. It shows that Informal Knowledge Management Practices also depend on Gender and Tangible Recognition. Men with high level of Tangible Recognition will have a better perception of Informal Knowledge Management Practices. However, women will have a better perception of Informal Knowledge Management Practices when the Tangible Recognition is low.



Table 9

*Moderating Effects between ORCUQ factors and Gender in the prediction of Informal Practices*

Variable	<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
Gender	.09	.04	.06	2.18	.03
Culture Recognition	.27	.11	.35	2.47	.01
Tangible Recognition	.18	.09	.24	1.94	.05
Openness and Acceptance	-.19	.08	-.25	-2.55	.01
Work Colleagues Recognition	.19	.09	.25	2.15	.03
Gender x Culture Recognition	-.04	.06	-.09	-0.63	.53
Gender x Tangible Recog.	-.14	.06	-.31	-2.52	.01
<b>Gender x Openn. and Accep.</b>	<b>.13</b>	<b>.05</b>	<b>.28</b>	<b>2.86</b>	<b>.00</b>
Gender x Work Coll. Recog.	.01	.05	.03	0.23	.82
R <sup>2</sup>			.22		
F (9, 1102)			34.04		.00



*Figure 11.* Informal Knowledge Management Practices according to Openness and Acceptance and Gender. It shows that Informal Knowledge Management Practices depend on Gender and Openness and Acceptance. Men, when Openness and Acceptance is low will have a higher perception of Informal Knowledge Management Practices. Women, on the other hand, will have a higher perception of Informal Practices Knowledge Management Practices when Openness and Acceptance is higher.

### **Discussion**

As outlined previously, this research had the main aim to analyse if the organizational recognition of the contributive uniqueness has a positive impact in knowledge management processes. As far as we could ascertain, this is the first study that test the relation between these two variables and the results presented before lent some support to this hypothesis.

It can be considered that the organizational recognition of the contributive uniqueness has influence on the perception and acknowledgment of the organizational Knowledge Management processes. Through the structural model and the regressions done, it was showed that the more a worker has its contributive uniqueness recognized by the organization where he is, the merrier he considers (and it is possible to better predict) that he perceives that in its organization there is a knowledge centered culture, a competitive orientation, and formal and informal knowledge management practices. However, it is seen that openness and acceptance (and, more important, the valorisation of divergent and contributive opinions) does not have significant influence on the prediction of the knowledge management practices as a whole. Openness and Acceptance is clearly a singularizing factor (the emphasis is place in “my individual difference” being accepted and recognized) and therefore cannot predict the organizational practices of knowledge management. In other words, a worker can be fully accepted in its difference and specific assets, but that does not necessarily mean that the organization has knowledge management practices. We consider that the recognition of the contributive uniqueness and the knowledge management practices are two different constructs, and this result actually helps to realize that.

As said before, this research is unique, since a relation between these two variables was not found in any literature research. Despite of that, the literature review showed that both processes require individual and collective dimensions, integration and differentiation, and,

always, cooperation as the main support for their processes, so it was predictable that our hypothesis was supported. The researches made before by Snyder and Fromkin (1980), Dos Santos (1999), and Leonardelly et al. (2010), for example, support that even if we consider both differentiation and integration as individual needs, the balance that allows for people to work together and cooperate happens simultaneously at the group level, through identification with groups that are both sufficiently inclusive and sufficiently distinct to meet both needs simultaneously. Also, Pais (2014) considers that knowledge and knowledge management are two concepts that must be supported by cooperation, commitment, engagement and active participation of all the organizational actors. Many authors (Appelbaum & Kamal, 2000; Bakker et al., 2008; Cho et al., 2006; Delaney & Huselid, 1996; Johnson & Johnson, 1975; Mayo, 1940; O'Reilly & Pfeffer, 2000; Shiraz et al., 2011) showed that workers perform better, have better cooperation, commitment and are more motivated, when they feel valued and recognized. All these researches are aligned with the results we obtained, which support our hypothesis that the individual perception of the organizational recognition of the contributive uniqueness will influence the perception of some organizational processes, namely knowledge management.

Our results also showed that the strongest prediction is between the Recognition Culture Effect and the Knowledge Centered Culture. This relation was expected because an implemented recognition culture and the consequences of recognizing one's contributive uniqueness in the worker behaviour not only improves job satisfaction and motivation (Cabo-Leitão & Dos Santos, 2011) as it can help to acknowledge what behaviours, practices or rules are better for the organization, and should be preserved, known and recognized by the organization. Thus, building an organizational culture that is focused on its core knowledge as a guide.

Regarding Tangible Recognition, the results show that it predicts negatively Knowledge Centered Culture. This is a very interesting result, because it supports the notion that it is not tangible rewards (like financial bonuses or promotions) that mainly motivates people to create and share knowledge, or act in a cooperative way.

It is seen that Openness and Acceptance do not predict a Knowledge Centered Culture. This probably happens because the recognition and acceptance of different points of view are processes focused on one trend of differentiation, and a knowledge centered culture is a dimension more focused on the integration trend. In other words, an organization can have practices and a culture that tolerates the difference, but that does not necessarily means that the different contributions are perceived as important to create, stake or share knowledge. It is a process that the organization must deliberately catalyse.

Work Colleagues' Recognition predicts, with some weight, a Knowledge Centered Culture. This means that a worker is recognized (individually) by its peers, he will better contribute to the cooperative (which is, by nature, a collective process) construction and sharing of knowledge, benefiting the organization. Theory supports these results because identity would derive from the need of each one to feel unique and different, but also the need for validation and similarity to others (Leonardelly et al., 2010); also, Dos Santos (1999) state that the recognition of one's uniqueness contributes for cooperation and is valuable for the group where it is included.

Competitive Orientation is shown to be predicted by the effect of Recognition Culture Effect. This may show that the consequences of recognizing one's contributive uniqueness, more specifically in learning, development and performance improvement, eases the acknowledgment

of what is the valuable knowledge (in all its forms) and thus can lead to better prepared individuals and a better prepared organization to compare themselves to the exterior.

Results also show that Tangible Recognition can predict Competitive Orientation. This may be due to the fact that if people feel the tangible recognition is positive, they will try to act in a way that their organization keeps evolving and perform better, in order to gain competitive advantage in relation to the competitor organizations. Only an organization that is better than the others and persist, will allow for more and better tangible recognition.

An interesting result we obtained was the negative prediction of Competitive Orientation, from Openness and Acceptance. This might mean that in the organizations where exists a culture of openness and acceptance, in this specific case may translate into a somewhat also tolerant attitude towards the exterior, even more cooperative. More or less as if the internal values of tolerance and integration would contaminate the external approach, removing the focus from the *we against the others* emphasis that is underlying the competitive orientation.

Also pretty much interesting is the relation between Work Colleagues' Recognition and Competitive Orientation. In this case, the focus changes again for the "we against the others" emphasis, and acts more to reinforce the internal bonding and internal cooperation, which can also translate to a higher bias of the organization to protect itself from the exterior. In other words, the workers have a competitive orientation, are alert if the competitors are better or not, but at the same time they recognized themselves and are focused on internal cooperation (which includes the recognition from their colleagues) to better compete externally. Brun and Dugs (2008) propose that recognition is perceived as a method to positively reinforce actions and behaviours considered advantageous for and by the organization, which is in line with these results.

Concerning Formal Practices of Knowledge Management, the results show that they can be predicted by all the four Organizational Recognition of Contributive Uniqueness Questionnaire factors. Researches from Snyder and Fromkin (1980), and Leonardelly et al. (2010) support that even if we consider recognition as an individual need, the balance that allows for people to work together and cooperate happens simultaneously at the group level. This allows it to be analyzed and coordinated at the organizational level, which can be translated to formal practices of knowledge management.

The Recognition Culture Effect also predict the Informal Practices of Knowledge Management. This relation (the third strongest between ORCUQ and KMQ-SF) might mean that recognizing one's contributive uniqueness can happen through informal and simple quotidian discursive practices, as Pais (2014) acknowledge. This is something that the literature review shows as an area that needs deepening, but it seems to point in the direction that an organizational culture that promotes the easiness of recognizing good practices through compliments (for example) can be an incredibly low cost manner to increase satisfaction, motivation and productivity. As it was said before, some authors (Delaney & Huselid, 1996; Johnson & Johnson, 1975; Mayo, 1940; O'Reilly & Pfeffer, 2000; Shiraz et al., 2011) developed studies that state the human resource is one of the most important assets of an organization, and that the success of it strongly relies in realizing that the members of an organization perform better when they feel supported, actively pursuing the organizations goals, and with an increase of job involvement and with decreased negative behaviours (like absenteeism).

Furthermore, Tangible Recognition does not predict Informal Practices of Knowledge Management, which seems coherent as most of its items are more linked to a formal type of recognition practices.

As we wrote before, Openness and Acceptance has a more singularizing nature. On a first moment, it belongs to the differentiation trend. However, Informal Practices of Knowledge Management belong to the integration and collectivization trend, as a movement of collective construction of a common language that creates a shared identity. Hence people tend to perceive that when there is a culture of openness and acceptance, there is not as much a collective and standardization movement. In other words, the more we accept ourselves and our differences, less we feel that we share a common language and framework. This might explain why Openness and Acceptance does not predict Informal Practices of Knowledge Management, because they seem to be expression of the struggle within the differentiation and integration continuum.

Finally, Work Colleagues' Recognition seems to predict Informal Practices of Knowledge Management. The peer's recognition can be expressed by the horizontal level of recognition, in which the recognition of one's work is developed between colleagues and members of the working team (Brun & Dugas, 2008). We could also add that Voswinkel (2005, quoted by Nierling, 2007) considers this type of recognition is reflected in a micro level (interpersonal recognition). Along these lines, we can understand Work Colleagues' Recognition to be more located in the collective trend (even as Informal Practices of the Knowledge Management) and that mainly happens through the daily informal relation between co-workers.

The exploratory analysis we developed to find if there's evidence of moderator effects gave us some hints. Results show that Openness and Acceptance interacts in the prediction of Knowledge Centered Culture, from Work Colleagues' Recognition. This might mean that a knowledge centered culture is stronger when both work colleagues' recognition and openness and acceptance in the organization are higher. This is understandable because, on one side, Work Colleagues' Recognition is an eminently integrating process, while Openness and Acceptance is



an eminently differentiating process; and, on the other side, as we showed before in the literature review, knowledge and knowledge management are dynamic processes which depend on this individual and collective continuum. Thus, it is predictable that when openness and acceptance practices are higher, the work colleagues' recognition will be higher too (because people will feel more comfortable in express their recognition towards others, and compliment), increasing a knowledge centered culture.

At the same time, it is seen that Culture Recognition Effect interacts in the prediction of Openness and Acceptance, from Informal Practices of Knowledge Management. As we stated before, Openness and Acceptance belongs more to the differentiating scope; and, at the same time, Informal Practices of the Knowledge Management, as a way of creating and sharing a common language, situates in the integration scope. Our regression results corroborated this theoretical assumption, which translates into the fact that when we feel more openness to realize, accept and tolerate each other's differences and particularities, we do not feel as much the construction of an organizational common framework. However, this moderator test showed that a recognition culture has the effect that, when the openness and acceptance (a more "individualistic" process) is higher, also the informal practices of knowledge management (a more "collectivist" process) are higher too. In other words, the openness and willingness to recognize and accept the other, by itself, does not contribute to the collective dimension. However, if contextualized in a collective process of systematically recognizing and value the other, it can improve collective processes like the informal practices of knowledge management.

Regarding sociodemographic moderators, it is seen that gender has a moderator effect on the relation between Tangible Recognition and Informal Practices of Knowledge Management. On men there is a big difference between high and low Tangible Recognition in relation to the

Informal Practices of Knowledge Management. In women there's the same tendency, but the difference is lower: on one side when their Tangible Recognition is lower they tend to have a much bigger perception of Informal Practices of Knowledge Management than men; and on the other side when their Tangible Recognition is higher their perception of Informal Practices of Knowledge Management is lower than men. It seems to show that men are more sensible to tangible recognition.

Finally, it is seen that gender has a moderator effect on the relation between Openness and Acceptance and Informal Practices of Knowledge Management. Women have a bigger fluctuation depending on Openness and Acceptance, than men. Comparatively, it seems women are more sensible to it, thus having more Informal Practices of Knowledge Management when they feel accepted and recognized. Men, in turn, have closer levels of Informal Practices of Knowledge Management, either the Openness and Acceptance is high or low.

### **Limitations and further directions**

The present study has some limitations that should be brought into discussion.

First of all, the research was based on a transversal study, and a longitudinal one would be more dynamic and allow to more consistently empirically test theories and relations. In particular, it would be interesting to conduct a longitudinal study to verify the influence of a recognition program (before and after the implementation) in workers' perceptions of the recognition of their contributing uniqueness, and also the effect it had in the perception of knowledge management processes.

Also, during the data analysis, we noticed that people had some difficulty in answering properly about the sector where they work, usually choosing the option "Other" and then writing an option that was already available before. In future researches it is recommended to have this

in account and try to understand if it was specific of our sample or something that needs improvement.

We should also point that the answers we got were about workers' perceptions, both of their organizational recognition of contributive uniqueness and knowledge management. Because perceptions are subjective (both to the individual that has it and the organization where he is) further researches must be done in order to better understand and confirm the results obtained.

Finally, since this is the first time the relation between organizational recognition of contributive uniqueness and knowledge management is being studied, it would be important to conduct further researches that could sustain the presently achieved results. Also, we feel that one interesting path to follow could be to try to identify which intangible mechanisms of recognition have more impact at creation (or perception of creation) of an organizational knowledge management culture.

### **Practical Implications**

Literature review showed that organizational recognition (and in particular the organizational recognition of the contributive uniqueness) makes members of an organization perform better, increases job involvement with decreased negative behaviours, enhances motivation, satisfaction, and has a positive impact on organizational productivity. Besides, it also showed that knowledge management is one of the most valuable factors that contributes to the sustainable success and management of the organization. This said, our results can have important practical implications in the organization management and productivity.

They indicate that the organizational recognition seems to influence the knowledge management processes. Organizations should promote a culture of recognition because it deeply helps in the perception of a knowledge centered culture. This is fundamental for an organization

that wants to succeed in the era we are living in, because being able to create, identify and share its core knowledge is primordial to be sustainable and successful in the market (Cardoso, 2003, 2007, 2014). At the same time, our results also reinforce that it is not money (or other types of tangible recognition) the strongest or more significant factor that motivates people to create knowledge and to cooperate. And because knowledge and cooperation are the best ways to achieve better organizational results, organizations should realize that better productivity and competitiveness do not rely solely on tangible rewards, and must have this in account when planning their strategy.

Another practical implication is the notion that having an open and tolerant environment does not automatically promotes a propitious environment to create and share knowledge. The organization must deliberately want to use both integration and differentiation trends and processes in its benefit. Finally, to promote colleagues' recognition improves the construction and sharing of knowledge. Thus, organizations must promote individual recognition and advocate for social recognition, in order to build up a better knowledge centered culture.

In this sense, a recognition culture leads to people more able to perceive what is more relevant and positive in their organization, in order to evolve it and to be better than its competitors. This can be reinforced through tangible recognition, which can lead people to feel that if they keep on helping towards organizational goals, they will have better rewards, and understand that it is only possible if the organization is better than its competitors. However, organizations should not forget that besides tangible recognition, to promote colleagues' recognition will allow a better internal orientation to cooperate in order to better compete externally, and to accomplish sustainable competitive edges.

Also, to implement a culture of recognition can improve the proliferation of informal practices of knowledge management, which will promote a good social climate and increase organizational performance. This can be done through colleagues' recognition, and it is more effective than to use formal methods to promote those practices. Our results also highlight that the promotion of openness and acceptance in the organization increases the probability of the colleagues' recognition, which enhances the knowledge centered culture.

Still about openness and acceptance, it can have a significant effect in the relation between colleagues' recognition and a knowledge centered culture, so it must be taken in account that taking measure to promote it can increase those two factors.

Our results also show that a recognition culture can have the effect of channelling individualistic behaviours and attitudes towards more collective processes and consequences. This means that the compliment and appreciation might be some of the less costly and most effective ways to increase performance, satisfaction and sense of belonging to a group.

Finally, organizations can have in account that, when perceiving informal practices, men are more sensitive to tangible recognition than women, but women are more sensitive to openness and acceptance.

## **Conclusion**

The present research had the main aim to analyse in what the extent the organizational recognition of the contributive uniqueness has impact in knowledge management processes. Results showed that the organizational recognition of the contributive uniqueness has a positive impact in knowledge management processes. Furthermore, some interesting results emerged from this study, both from the theoretical point of view and the practical implications it can have for organizations. We can conclude that there are indicators that point to the recognition of

worker's contributive uniqueness to be of utmost importance in the prediction of knowledge management processes. This said, the organizational recognition of contributive uniqueness can be an important asset to make the bridge between the individual and unique contribution of each worker and the collective goals the organizational actors share. Thus, it can facilitate the ever growing tension, in the world and in the organizations, between individual and collectivizing trends, allowing to better achieve organization goals and general well-being through recognition and cooperation.

### References

- Almeida, L., & Freire, T. (2003). *Metodologia da Investigação em Psicologia e Educação*. 3ª edição. Braga: Psiquilíbrios Edições.
- Appelbaum, S. H. & Kamal, R. (2000). An analysis of the utilization and effectiveness of non-financial incentives in small business. *Journal of Management Development*, Vol. 19, Issue 9, 733 - 763.
- Aguinis, H. & Gottfredson, R. K. (2010). Best-practice recommendations for estimating interaction effects using moderated multiple regression. *Journal of Organizational Behavior*, 31, 776-786. DOI: 10.1002/job.686
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park: Sage.
- Alavi, M. & Leidner, D.E. (2001). Review – Knowledge management and knowledge management systems: conceptual foundations and issues. *MIS Quarterly*, Vol. 25, No. 1.
- Arbuckle, J. L. (2008). *Amos 17 user's guide*. Chicago, IL: SPSS Inc.
- Arbuckle, J. L. (2009). *Amos 18 Reference Guide (Version 18) [Computer Software]*. Chicago, IL:SPSS Inc.
- Bakker, A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008). Work Engagement: an emerging concept in occupational health psychology. *Work & Stress: An International Journal of Work, Health & Organizations*, 22:3, 187-200. Routledge.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.

- Bentler, P. (1990). Quantitative methods in psychology: Comparative fit indexes in structural models. *Psychological Bulletin*, 107, 238-246.
- Brewer, M. B. (1991). The social self: on being the same and different at the same time. *Society for Personality and Social Psychology*, 17 (5), 475-482.
- Brown, T. (2006). *Confirmatory factor analysis for applied research*. New York: The Guilford Press.
- Brun, J. P. & Dugas, N. (2002). *La reconnaissance au travail: une pratique riche de sens*. Chair in Occupational Health and Safety Management, Quebec, Canada.
- Brun, J. P. & Dugas, N. (2008). An analysis of employee recognition: perspectives on human resources practices. *The International Journal of Human Resource Management*, 19 (4), 716-730.
- Burns, D., & Brady, J. (2001). A cross-cultural comparison of the need for uniqueness in Malasia and the United States. *The Journal of Social Psychology*, 132 (4).
- Cabo-Leitão, C. S. & Dos Santos, N. (2011). Organizational Recognition of the Contributive Uniqueness: Construction of an instrument for its assessment. *Doctoral dissertation in psychology*: University of Évora.
- Cardoso, L. (2003). Gerir conhecimento e gerar competitividade. Estudo empírico sobre a gestão do conhecimento e seu impacto no desempenho organizacional. *Doctoral dissertation in psychology*: University of Coimbra.
- Cardoso, L. (2007). Gerir conhecimento e gerar competitividade. *Estudo empírico sobre a gestão do conhecimento e seu impacto no desempenho organizacional*. Penafiel: Editorial Novembro (ISBN: 978-989-95185-9-9), 2007.



- Cardoso, L., Meireles, A., & Peralta, C. (2011). Knowledge management and its critical factors in social economy. *Organizations Journal of Knowledge Management*.
- Cho, J., Laschinger, H., & Wong, C. (2006). Workplace Empowerment, work engagement and organizational commitment of new graduate nurses. *Nursing leadership*, volume 19, 3.
- Cooke, M. (2009). Beyond dignity and difference; revisiting the politics of recognition. *European Journal of Political Theory*, 8, 76-95.
- Costa, R. F. (2003). *Persona – Manual prático de gestão das pessoas*. Lisboa: Bertrand Editora.
- Davenport, T. H. & Prusak, L. (1998). *Working Knowledge: How Organizations Manage What They Know*. Harvard Business School Press, Boston.
- Delaney, J. T. & Huselid, M. A. (1996). The impact of human resource management practices on perceptions of organizational performance. *Academy of management journal*, 39(4), 949-969.
- Demir, M., Simsek, O. F., & Procsal, A. D. (2013). I Am so Happy ‘Cause My Best Friend Makes Me Feel Unique: Friendship, Personal Sense of Uniqueness and Happiness. *J Happiness Stud* 14:1201–1224.
- Dos Santos, N. R. (1999). Identidade e cooperação: individual e colectivo em contextos organizacionais. *Doctoral dissertation in psychology*: University of Évora.
- Elkind, D. (1967). Egocentrism in adolescence. *Child Development*, 38, 1025–1034.
- Fornell, C. & Lacker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39-50.
- Fromkin, H.L. & Snyder, R.C., (1980). The search for uniqueness and valuation of scarcity. In: Gergen, J.K., Greenberg, S.M., Willis, H.L. (Eds.), *Social Exchange: Advances in Theory and Research*. Plenum Publishing Corporation, New York.

- Gagné, M., Forest, J., Vansteenkiste, M., Crevier-Braud, L., Broeck, A., Aspeli, A., Bellerose, J., Benabou, C., Chemoli, E., Guntert, S., Halvari, H., Indiyastuti, D., Johnson, P., Molstad, M., Naudin, M., Ndao, A., Olafsen, A., Roussel, P., Wang, Z., Westbye, C. (2014). The Multidimensional Work Motivation Scale: Validation evidence in seven languages and nine countries. *European Journal of Work and Organizational Psychology*.
- Gergen, K. (2001). *Social Construction in Context*. Sage Publications.
- Giddens, A., & Sutton, P. (2012). *Sociology*. 7<sup>th</sup> Edition. Polity Press.
- Gorsuch, R. L. (1983). *Factor Analysis (2<sup>nd</sup> ed.)*. Hillsdale, NJ: Erlbaum.
- Gupta, B., Iyer, L.S., & Aronson, J.E. (2000). Knowledge management: practices and challenges. *Industrial Management and Data Systems*, Vol. 100 Nos. 1/2, pp. 17-21.
- Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). *The motivation to work*. New York: John Wiley & Sons.
- Hu, L. & Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
- Hwang, A. (2003). Training strategies in the management of knowledge. *Journal of Knowledge Management*. Vol. 7 Iss: 3.
- Johnson, D. & Johnson, R. (1975). *Learning together and alone, cooperation, competition, and individualization*. Englewood Cliffs, NJ: Prentice-Hall.
- Kline, R. B. (2011). *Principles and practice of structural equation modeling (3rd ed.)*. New York: The Guilford Press.
- Lapsley, D. K. (1993). Toward an integrated theory of adolescent ego development: the “New Look” at adolescent egocentrism. *American Journal of Orthopsychiatry*, 63: 562–571. doi: 10.1037/h0079470.

- Lapsley, D.K. & Rice, K.G. (1988). The new look at the imaginary audience and personal fable: Toward a general model of adolescent ego development. *Self, ego, identity: Integrative approaches*, 109-129. New York: Springer.
- Leonardelli, G. J., Pickett, C. L., & Brewer, M. B. (2010). *Advances in Experimental Social Psychology*. Vol. 43. Academic Press.
- Lynn, M. & Snyder, C. R. (2002). Uniqueness seeking. *Handbook of positive psychology*, 395–410. Oxford: Oxford University Press.
- Maeve, C. (2008). Beyond Dignity and Difference: Revisiting the Politics of Recognition. *European Journal of Political Theory*, vol. 8: 76. SAGE Publications.
- Maroco, J. (2011). *Análise estatística com o SPSS Statistics (5ª ed)*. Pero Pinheiro.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 370-396.
- Mayo, E. (1949). *Hawthorne and the Western Electric Company*. The Social Problems of an Industrial Civilization. Routledge.
- McCutcheon, L., Pope, T., Garove, A., Bates, J., Richamn, H., & Aruguete, M. (2015). Religious Skepticism and Its Relationship to Attitudes about Celebrities, Identification with Humanity, and the Need for Uniqueness. *North American Journal of Psychology*.
- Moldovan, S., Steinhart, Y., & Ofen, S. (2014). “Share and scare”: Solving the communication Dilemma of early adopters with a high need for uniqueness. *Journal of Consumer Psychology*.
- Nierling, L. (2007). The recognition of work. *Enterprise and Work Innovation Studies*, 3, 55-65.
- Nunnally, J. (1978). *Psychometric theory*. New York, NY: McGraw-Hill.
- Pais, L. (2014). Gestão do conhecimento. *Medidas do comportamento organizacional. Ferramentas de diagnóstico e de gestão*. Porto Alegre: Artmed.

- Pickett, C. L., Silver, M. D., & Brewer, M. B. (2002). The impact of assimilation and differentiation needs on perceived group importance and judgments of group size. *Personality and Social Psychology Bulletin*, 28, 546–558.
- Roulin, N., Bangerter, A., & Yerly, E. (2011). The Uniqueness Effect in Selection Interviews. *Journal of Personnel Psychology*. Hogrefe.
- Sano, Y. & Kuroishi, N. (2009). The effect of being “middle” in Japan: from the perspective of the self-improving motivation. *Jpn. J. Interpers. Soc. Psychol. Res.* 9.
- Schumacker, R. E. & Lomax, R. G. (1996). *A beginner's guide to structural equation modeling*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Shiraz, N., Rashid, M., & Riaz, A. (2011). The Impact of Reward and Recognition Programs on Employee's Motivation and Satisfaction. *Interdisciplinary Journal Of Contemporary Research In Business*, Vol 3, no 3.
- Simsek, O. F. & Yalinçetin, B. (2010). I feel unique, therefore I am: The development and preliminary validation of the personal sense of uniqueness (PSU) scale. *Personality and Individual Differences*, 49.
- Snyder, C. R. & Fromkin, H. L. (1977). Abnormality as a positive characteristic: The development and validation of a scale measuring need for uniqueness. *Journal of Abnormal Psychology*, 86, 518-527.
- Snyder, C. R. & Fromkin, H. L. (1980). *Uniqueness: The human pursuit of difference*. New York, NY: Plenum Press.
- Tabachnick, B. G. & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Boston: Allyn and Bacon.

- Tajfel, H. (1981). *Human groups and social categories*. Cambridge, England: Cambridge University Press.
- Takeuchi, H., Taki, Y., Nouchi, R., Sekiguchi, A., Kotozaki, Y., Miyauchi, C. M., Yokoyama, R., Iizuka, K., Hashizume, H., Nakagawa, S., Kunitoki, K., Sassa, Y., & Kawashima, R. (2012). A voxel-based morphometry study of gray and white matter correlates of a need for uniqueness. *NeuroImage*, 63, 1119–1126.
- Taylor, F. W. (1991). *The Principles of Scientific Management*. New York. Harper & Brothers.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: Self-categorization theory*. Oxford, UK: Blackwell.

## Appendix

### A1: Completion Guidelines for Knowledge Management Questionnaire – Short Form (Pais, 2014) and Organizational Recognition of Contributive Uniqueness Questionnaire (Cabo-Leitão & Dos Santos, 2011)

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#### Instruções

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As questões que se apresentam destinam-se ao estudo da forma como as pessoas se sentem e percebem em geral e ao modo como percebem o seu superior imediato e outros aspetos diversos do seu trabalho.

A sua participação é voluntária. Caso aceite responder pedimos que responda a todas as questões, pois a ausência de respostas compromete a inclusão do seu questionário nos resultados.

O questionário completo com as suas respostas é confidencial e irá ser tratado estatisticamente com os restantes. Como não se identifica individualmente, as suas respostas serão também anónimas.

Os resultados serão utilizados para fins de investigação, e caso pretenda receber uma síntese conclusiva deixe o seu endereço de email com o aplicador.

Não existem respostas certas ou erradas. Espera-se que cada pessoa responda com sinceridade, não necessitando de perder tempo a refletir para dar a sua resposta.

Se se enganar numa resposta, risque por cima da resposta enganada e preencha a que pretende, colocando um círculo à volta da nova resposta.

Antes de iniciar esclareça todas as dúvidas. Se tiver questões adicionais, envie um pedido de esclarecimento para o seguinte endereço: [leonorpais@fpce.uc.pt](mailto:leonorpais@fpce.uc.pt)

**Obrigado pela sua participação!**

**A2: Knowledge Management Questionnaire – Short Form (Pais, 2014)**

**4** Apresentamos-lhe de seguida uma lista de afirmações. Leia atentamente cada uma delas e diga em que medida se aplica verdadeiramente à sua empresa/organização. Assinale, por favor, a sua resposta rodeando-a com um círculo, de acordo com a seguinte escala:

**1 = Quase nunca se aplica**  
**2 = Aplica-se pouco**  
**3 = Aplica-se moderadamente**  
**4 = Aplica-se muito**  
**5 = Aplica-se quase totalmente**

1. Falamos uns com os outros sobre assuntos que não compreendemos bem	1	2	3	4	5
2. Pensamos na forma como resolvemos problemas no passado (nos nossos sucessos e insucessos)	1	2	3	4	5
3. Juntamo-nos em grupo para resolver alguns problemas	1	2	3	4	5
4. Falamos das nossas funções	1	2	3	4	5
5. Sabemos que os nossos concorrentes têm informações sobre nós	1	2	3	4	5
6. Cada um de nós tem uma função a cumprir	1	2	3	4	5
7. Somos encorajados a tomar a iniciativa	1	2	3	4	5
8. Estamos atentos ao que os nossos concorrentes vão fazendo (por exemplo, adotamos os melhores “truques”)	1	2	3	4	5
9. O que sabemos vê-se naquilo que fazemos melhor do que os nossos concorrentes	1	2	3	4	5
10. Agimos de acordo com a forma como estamos organizados	1	2	3	4	5
11. Passamos informação uns aos outros em reuniões de trabalho	1	2	3	4	5
12. Contamos uns aos outros histórias engraçadas que se passaram no nosso trabalho	1	2	3	4	5
13. Procuramos toda a informação que possa melhorar a qualidade do que fazemos	1	2	3	4	5
14. Agimos de acordo com certos princípios	1	2	3	4	5
15. Falamos da nossa empresa	1	2	3	4	5
16. Assistimos a seminários/conferências, lemos o que se publica ou contratamos especialistas	1	2	3	4	5
17. Frequentamos cursos de formação ou temos formação no posto de trabalho	1	2	3	4	5
18. Todos somos responsáveis pelo que devemos saber para trabalhar com qualidade	1	2	3	4	5
19. O que sabemos vê-se na forma como produzimos	1	2	3	4	5
20. Conversamos sobre o trabalho quando casualmente nos encontramos (por exemplo, no intervalo do café)	1	2	3	4	5
21. São recompensados aqueles que partilham o que sabem	1	2	3	4	5
22. O que sabemos é uma “arma” fundamental para ultrapassarmos os nossos concorrentes	1	2	3	4	5

### A3: Organizational Recognition of Contributive Uniqueness Questionnaire (Cabo-Leitão & Dos Santos, 2011)

<p><b>3</b> Diga até que ponto concorda com as seguintes afirmações sobre diversas práticas relacionadas com o seu trabalho, tendo como referência a organização/empresa onde exerce atualmente a sua atividade profissional ou, no caso de mais do que um local de trabalho, tendo como referência aquele que considera mais representativo da sua atividade profissional. Responda a cada um dos itens de acordo com a escala entre 1 e 7, sendo que:</p> <p style="text-align: center;"><b>Discordo totalmente    1    2    3    4    5    6    7    Concordo totalmente</b></p>							
1. Mesmo que fizesse um ótimo trabalho, isso seria ignorado na minha organização	1	2	3	4	5	6	7
2. Na minha organização, a chefia motiva-me a fazer o meu trabalho cada vez melhor	1	2	3	4	5	6	7
3. O que cada um faz poderia ser feito exatamente da mesma forma pelos outros membros da organização	1	2	3	4	5	6	7
4. Na minha organização existe reconhecimento dos trabalhadores cujos esforços fazem a diferença	1	2	3	4	5	6	7
5. Nesta organização cada um é reconhecido pela contribuição única que dá	1	2	3	4	5	6	7
6. As pessoas nesta organização recebem a oportunidade de apresentar as suas ideias	1	2	3	4	5	6	7
7. No meu trabalho, tenho oportunidade de fazer aquilo que sei fazer melhor	1	2	3	4	5	6	7
8. A nível hierárquico as diferentes contribuições das diferentes pessoas são valorizadas	1	2	3	4	5	6	7
9. Nesta organização, o facto de sermos reconhecidos na nossa contribuição, ajuda-nos a crescer como pessoas	1	2	3	4	5	6	7
10. As ideias originais dos membros são formalmente elogiadas na organização	1	2	3	4	5	6	7
11. Na minha organização existe abertura para que possa expressar as minhas opiniões	1	2	3	4	5	6	7
12. Cada membro da organização tem autonomia para ter iniciativas no trabalho	1	2	3	4	5	6	7
13. A minha organização reconhece que me dedico ao meu trabalho	1	2	3	4	5	6	7
14. É prática comum nesta organização sermos reconhecidos pelas nossas contribuições singulares	1	2	3	4	5	6	7
15. Nesta organização as críticas sobre o meu trabalho são acompanhadas de explicação sobre como melhorar	1	2	3	4	5	6	7
16. Nesta organização é frequente ouvir críticas construtivas face ao meu trabalho	1	2	3	4	5	6	7
17. A minha organização reconhece que dou um contributo que os outros não dão	1	2	3	4	5	6	7
18. Nesta organização, como somos reconhecidos pela nossa contribuição, desenvolvemo-nos mais profissionalmente	1	2	3	4	5	6	7
19. A diversidade é estimulada nesta organização	1	2	3	4	5	6	7
20. Na minha organização existe oportunidade de progressão de carreira	1	2	3	4	5	6	7
21. Sinto-me reconhecido(a) nesta organização porque a minha contribuição é valorizada	1	2	3	4	5	6	7
22. Quando sou reconhecido(a) na minha organização por um trabalho bem feito, procuro no futuro fazer ainda melhor	1	2	3	4	5	6	7
23. Sinto que os meus contributos são valorizados nesta organização	1	2	3	4	5	6	7
24. Nesta organização as pessoas sentem-se inibidas de criticar as ideias ou propostas que alguém apresentou	1	2	3	4	5	6	7
25. Recebo mensagens de agradecimento pelo meu contributo para a organização	1	2	3	4	5	6	7
26. As pessoas nesta organização sentem que as suas contribuições únicas são valorizadas	1	2	3	4	5	6	7
27. O meu superior hierárquico está envolvido na maioria dos assuntos relacionados com o meu trabalho	1	2	3	4	5	6	7
28. Na minha organização é importante elogiar um trabalho bem feito	1	2	3	4	5	6	7
29. A minha opinião é importante para o meu superior hierárquico	1	2	3	4	5	6	7
30. Sou reconhecido monetariamente pelo meu contributo para a organização	1	2	3	4	5	6	7



31. Recebo elogios do meu superior hierárquico pelo meu contributo para a organização	1	2	3	4	5	6	7
32. A minha organização valoriza os contributos extra que possa dar	1	2	3	4	5	6	7
33. Sinto que sou reconhecido(a) pelo meu trabalho no dia-a-dia	1	2	3	4	5	6	7
34. Quando dou um contributo significativo para determinada tarefa/projeto, sou reconhecido(a) por parte da organização	1	2	3	4	5	6	7
35. Nesta organização as críticas às ideias transformam-se rapidamente em críticas pessoais	1	2	3	4	5	6	7
36. Na minha organização posso ser promovido(a) pela minha contribuição única	1	2	3	4	5	6	7
37. Na minha organização os colegas reconhecem o meu contributo	1	2	3	4	5	6	7
38. Nesta organização, a minha contribuição é legitimada porque é reconhecida	1	2	3	4	5	6	7
39. Sou reconhecido/elogiado pelos clientes/utentes pelo trabalho/serviço bem feito	1	2	3	4	5	6	7
40. Nesta organização, os colegas dão valor aos contributos singulares de cada um	1	2	3	4	5	6	7
41. Nesta organização as pessoas debatem as ideias sem se sentirem reprimidas	1	2	3	4	5	6	7
42. Na minha organização, sinto que sou ignorado(a) nas opiniões que dou	1	2	3	4	5	6	7

## A4: Sociodemographic Questionnaire

Complete, por favor, respondendo às seguintes questões [assinale um X na opção(ões) correta(s)]:

[dados para fins exclusivamente estatísticos]

<b>1 Sexo</b> <input type="checkbox"/> Masculino <input type="checkbox"/> Feminino	<b>2 Idade:</b> _____ anos	<b>3 Há quantos anos trabalha na empresa/organização?</b> _____ anos
<b>4 Situação(ões) profissional(ais)</b> (pode assinalar mais do que 1 situação) <input type="checkbox"/> Empresário <input type="checkbox"/> Profissional Liberal <input type="checkbox"/> Trabalhador do Estado <input type="checkbox"/> Trabalhador por conta de outrem <input type="checkbox"/> Trabalhador-Estudante	<b>5 Qual o vínculo que mantém com a organização?</b> <input type="checkbox"/> Prestador de serviços (recibos verdes) <input type="checkbox"/> Contrato a termo (certo ou incerto) <input type="checkbox"/> Contrato sem termo /efetivo(a)	<b>6 No seu local de trabalho desempenha alguma função de chefia?</b> <input type="checkbox"/> Sim <input type="checkbox"/> Não Se respondeu SIM, que tipo de chefia? <input type="checkbox"/> Chefia de Topo <input type="checkbox"/> Chefia Intermédia
<b>7 Grau de Escolaridade</b> <input type="checkbox"/> Sabe ler e escrever sem possuir a 4ª classe <input type="checkbox"/> 1º ciclo do ensino básico (ensino primário) <input type="checkbox"/> 2º ciclo do ensino básico (6º ano) <input type="checkbox"/> 3º ciclo do ensino básico (9º ano) <input type="checkbox"/> Ensino Secundário (12º ano) <input type="checkbox"/> Bacharelato <input type="checkbox"/> Licenciatura em curso <input type="checkbox"/> Pós-Graduação/Mestrado (pós Bolonha)/ Licenciatura Pré Bolonha <input type="checkbox"/> Licenciatura concluída (pós-Bolonha) <input type="checkbox"/> Mestrado Pré-Bolonha <input type="checkbox"/> Doutoramento	<b>8 Setor de atividade da organização onde trabalha</b> <input type="checkbox"/> Indústria Transformadora <input type="checkbox"/> Indústria Extrativa <input type="checkbox"/> Comércio por grosso e a retalho <input type="checkbox"/> Alojamento e restauração <input type="checkbox"/> Agricultura, pecuária, pescas <input type="checkbox"/> Construção <input type="checkbox"/> Produção e distribuição de eletricidade, gás e água <input type="checkbox"/> Transportes e armazenagem <input type="checkbox"/> Educação e ciência <input type="checkbox"/> Saúde humana e apoio social <input type="checkbox"/> Atividades imobiliárias, alugueres e serviços prestados às empresas <input type="checkbox"/> Artes e indústrias criativas <input type="checkbox"/> Tecnologia de informação e comunicações <input type="checkbox"/> Outra. Qual? _____	<b>9 Dimensão da organização onde trabalha</b> <input type="checkbox"/> Tem até 9 colaboradores <input type="checkbox"/> Tem entre 10 e 50 colaboradores <input type="checkbox"/> Tem entre 51 e 250 colaboradores <input type="checkbox"/> Tem entre 251 e 500 colaboradores <input type="checkbox"/> Tem entre 501 e 1000 colaboradores <input type="checkbox"/> Tem mais de 1001 colaboradores  <b>10 Indique, por favor, o seu vencimento líquido mensal (aquilo que recebe em média por mês)</b> <input type="checkbox"/> Até 500 € <input type="checkbox"/> Entre 501 e 1000 € <input type="checkbox"/> Entre 1001 e 1500 € <input type="checkbox"/> Entre 1501 e 2000 € <input type="checkbox"/> Entre 2001 e 2500 € <input type="checkbox"/> Entre 2501 e 3000 € <input type="checkbox"/> Entre 3001 e 3500 € <input type="checkbox"/> Entre 3501 e 4000 € <input type="checkbox"/> Mais de 4000 €

Obrigado pela sua colaboração!

**A5: Table 10 with descriptive statistics of sample**

Gender	Feminine	Masculine	
	60.7%	39.7%	
Age	Min	Max	
	18	69	
Years of work	Min	Max	
	1	46	
Professional Situation			
	n	%	
Entrepreneur	62	5.5	
Liberal professional	42	3.7	
State worker	262	23.3	
Worker to others	725	64.4	
Student-worker	71	6.3	
Bond to an organization			
	n	%	
Services provider	61	5.5	
Term contract	296	3.7	
No-term contract	750	23.3	
	n	%	
	No	845	75.4
Leadership	Yes	275	34.3
	Top	61	5.4

	Middle	209	18.5
School Level			
	n		%
Can read and write	5		.4
1° cycle of basic education	48		4.3
2° cycle of basic education	81		7.2
3° cycle of basic education	206		18.3
High school	366		32.6
Bachelor	29		2.6
Graduation going	114		10.2
Pos-graduation/ Master after	149		13.3
Bologna/ Graduation before			
Bologna			
Graduation after Bologna	86		7.7
Master after Bologna	31		2.8
PhD	8		.7
Dimension of the organization			
	n		%
Until 9	289		25.7
10-50	343		30.5
51-250	235		20.9
251-500	93		8.3
501-1000	65		5.8
+ 1000	98		8.7

Salary		
	n	%
Until 500	248	22.1
501-1000	543	48.4
1001-1500	228	20.3
1501-2000	67	6.0
2001-2500	21	1.9
2501-3000	8	.7
3001-3500	2	.2
3501-4000	2	.2
+ 4000	3	.3

Salary		
	n	%
Transforming Industry	112	11.0
Extractive Industry	3	.3
Wholesale and retail trade	131	11.8
Accommodation and food	72	6.5
Farming and fishing	14	1.3
Construction	48	4.3
Production and distribution of electricity, water and gas	16	1.4
Transport and storage	30	2.7
Education and science	165	14.8
Human health and social support	140	12.6

Real state, renting and consulting	12	1.1
Arts and creative industry	18	1.6
Information technology and communications	49	4.4
Other	292	26.3

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