



The Relevance of Psychological Capital on Individual's Perceptions of Performance, Motivation, Work-Engagement and Job-Satisfaction

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Abstract

Title

The relevance of psychological capital on individual's perceptions of performance, motivation, work-engagement and job-satisfaction

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The concept of psychological capital (PsyCap) has been a great focus of interest and curiosity from academics and practitioners. The principal purpose of the present research is to study the relevance of PsyCap and its influence in employees' attitudes, behaviors and performance. This investigation also aims to understand the importance of an authentic leader (leaders with power to influence their followers and to develop their capabilities) and the impact that the leader's PsyCap may have on their followers' dimensions (performance, motivation, work-engagement and job-satisfaction). Data was collected from both LinkedIn and from a small company operating in the transportation sector, through a customized survey. The results support the literature showing that: (a) the individual psychological capital has an influence on individuals' perceptions of performance, motivation, work-engagement and job-satisfaction; (b) the leaders' PsyCap and the goodwill between the leader and followers may cause some positive impacts on followers' perceptions of performance, motivation, work-engagement and job-satisfaction; and (c) the leaders' psychological capital may affect the followers' level of PsyCap.

Key words: *Psychological capital, authentic leadership, performance, motivation, work-engagement, job-satisfaction*

Resumo

Título

A relevância do capital psicológico nas percepções individuais de performance, motivação, compromisso e satisfação com o trabalho

Autor

Ana Isabel Veloso Barbosa

O conceito de capital psicológico (*PsyCap*) tem sido alvo de grande atenção e interesse por parte de diversos investigadores. O presente estudo tem como principal objetivo analisar a relevância do *PsyCap* e a sua respectiva influência nas atitudes, comportamentos e performance dos trabalhadores. Esta investigação tem também interesse em compreender a importância de um líder autêntico (líder com poder para influenciar os seus colaboradores e desenvolvendo as suas capacidades), bem como o impacto que o capital psicológico do líder poderá ter nas principais componentes dos seus colaboradores (performance, motivação, *work-engagement* e satisfação com o trabalho). Os dados foram recolhidos numa pequena empresa que opera no setor dos transportes e no *site* LinkedIn através de um questionário comum a ambas as amostras. Os resultados encontrados no presente estudo académico coincidem com o que tem sido apresentado na literatura, concluindo assim que: (a) o capital psicológico individual influencia as percepções dos indivíduos relativas à sua performance, motivação, *work-engagement* e satisfação com o trabalho; (b) o capital psicológico dos líderes e a boa relação estabelecida com os seus colaboradores poderá causar impactos positivos nas percepções dos colaboradores relativas à sua performance, motivação, *work-engagement* e satisfação com o trabalho; e (c) o capital psicológico dos líderes poderá afetar o nível de *PsyCap* apresentado pelos seus colaboradores.

Palavras-chave: *capital psicológico, liderança autêntica, performance, motivação, work-engagement, satisfação com o trabalho*

This thesis is dedicated to my parents.
They gave me wings to fly.

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1. Introduction

The development of human resources has been seen as a crucial basis for organization's competitive advantage, leading to better productivity and outcomes. The present research study aims to understanding the relevance and influence of one of these critical sources: the individual's psychological capital.

The psychological capital, also called PsyCap, was defined as an individual's positive psychological state of development characterized by a combination of four positive psychological resources (Luthans, Youssef, & Avolio, 2007). The crucial resources, defined as first-order constructs, are identified as: self-efficacy, optimism, hope and resilience. When combined they have been empirically determined as a second-order construct, called Psychological Capital, which represents the shared variance among all of them (Luthans, Avolio, Avey, & Norman, 2007).

It has been showed that a positive psychological capital may influence employees' attitudes, behaviors and their performances. For example, a study of Avey and his colleagues (2011) showed a positive relation between PsyCap and job satisfaction, organizational commitment, organizational citizenship behaviors and individual's performance (Avey, Luthans & Jensen, 2009; Luthans *et al.*, 2007; Youssef & Luthans, 2007). The great rewards and higher performances that PsyCap brings at individual and organizational levels may be responsible for the establishment of company's competitive advantage and for the difference in the productivity of its employees. The introduction of this concept at organizational level is therefore really important for the better future of the company.

This topic has already been discussed in literature from several approaches. The different perspectives analysed the most diverse influent factors and their interactions with psychological capital. The authentic leadership area has also been the focus of many investigations, considering its power, significance, followers' influence and their impacts in the outcomes of the organization. Some researchers showed that these topics have been seen as a promotion of employees' positive psychological capacities and individual's self-development. When followers recognize that their leaders are behaving positively, they will identify them as a role-model, increasing their level of commitment, their job satisfaction and

their own performance (Avolio et al., 2004; Avolio & Luthans, 2006; Walumbwa et al., 2008).

This subject is also very interesting and relevant at management level. The impact that it may have on global performance, the influence on final outcomes and the possibility of development of some employees' critical skills potentiating the desired behaviors constitute the main attraction lights for each organization. Thus, the investments on this area are becoming viable, rewarding and essential at the level of organization's competitive advantage (Luthans *et al.*, 2008).

The purpose of the present research is to study the consistency and relevance of psychological capital and its influence at the individual level, analysing its impacts on employees' perceptions of performance, motivation, work-engagement and job satisfaction. Another goal of this dissertation is to analyse the contribution that leaders' PsyCap and the relation established with their followers may have on followers' dimensions. It will be also examined if the leaders' psychological capital may influence their followers' level of PsyCap. The study focus will be illustrated through the following research questions:

Question 1. Does psychological capital have an impact on individual's perceptions of performance, motivation, work-engagement and job satisfaction?

Question 2a. Does leader's psychological capital have an impact on followers' perceptions of performance, motivation, work-engagement and job satisfaction?

Question 2b. Does the good relationship (goodwill) between leaders and followers have an impact on followers' perceptions of performance, motivation, work-engagement and job satisfaction?

Question 3. Does leader's psychological capital have an impact on individual's PsyCap?

To better understand this topic and to answer to the three presented research questions, it was distributed a survey that evaluated all of these points on a chosen sample. The sample consists on two different groups, a small one from the company Olano Portugal Transportes, SA and the other one composed by participations from the social network site: LinkedIn. All data collected was examined through the software IBM SPSS Statistics that allowed the analysis of the final results. The conclusions taken are really similar to what has been showed in

literature, assuring the same concept, reasoning and highlighting the importance of this subject at individual and organizational levels.

The structure of the present research study is as follows. Chapter 2 presents the empirical findings and the recent literature on the subject of psychological capital and authentic leadership. Chapter 3 explains the methodology used, instrument, sample and data collected. Chapter 4 describes the achieved results, and their conclusions are shown in chapter 5. Finally, chapter 6 presents the study limitations and suggests some topics for future research.

2. Literature review and theory development

2.1. Psychological capital and its impact in performance

2.1.1. The concept of psychological capital

The management of people has been presented as a strategic role that contributes to increase the value of each employee performance, inducing positive organizational behaviors and, consequently, creating stronger results for the organization (Crook *et al.*, 2011). Positive organizational behaviors in general, and the psychological capital, in particular, have recently been subject of considerable attention from several authors, such as Luthans & Youssef (2007) or Bakker & Schaufeli (2008). These dimensions have being perceived as crucial tools for the improvement of individual's performance through the development and management of human resource strengths and psychological capacities (Luthans *et al.*, 2007).

The foundation of the term 'Psychological Capital' comes from the social cognitive theory and it has been the centre of attention for many academics and practitioners. This state-like positive core construct is constituted by four main positive psychological resources that have been theoretically developed and empirically tested. The concept of psychological capital is specifically defined as: *"an individual's positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success"* (Avey, Luthans & Youssef, 2008, p. 4).

Also designated as PsyCap, this concept emerged to recognise the individual's psychological capacities that are connected with performance improvement (Newman *et al.*, 2014). It influences the employees' attitudes, behaviors and performances being characterized by mutual interactions between the individual, the context and past actions (Avey, Luthans & Youssef, 2008).

This multidimensional construct is a result of a synergetic relation between individual resources of self-efficacy, optimism, hope and resilience that may affect the employees' perspectives since it will enlarge alternative views, appraising situations, circumstances and

scenarios in a more positive way (Avey *et al.*, 2010; Avey, Luthans & Youssef, 2008). These four components are considered first order constructs that, together, constitute the measurably, reliable and valid second order construct, named psychological capital. This higher order construct has been shown as a better predictor of performance and satisfaction than the first order constructs individually (Cameron & Spreitzer, 2012; Luthans *et al.*, 2007), it is considered critical to the levels of motivation, success, cognitive processing, positive well-being and individual performance (Avey *et al.*, 2010; Luthans *et al.*, 2010).

2.1.2. The components of psychological capital

It is evident that individual components are related between them, suggesting that if one of these four resources is affected, the others will also be affected over time as well as if an individual is high in one of these components, he will possibly be high in the remaining ones (Avey *et al.*, 2010; Peterson *et al.*, 2011). However, while resources act as a group, they have empirically shown to have discriminant validity, proving that they are also important individually and contributing with different approaches of adding value and achieving better outcomes.

As Bandura's social cognitive theory stated, self-efficacy refers to the confidence of the individual in his own ability to progress his cognitive resources, motivation and courses of action in order to perform the given task within a specific context as well as possible (Newman *et al.*, 2014). Comparative studies concluded that this first order construct is really useful in addressing difficult challenges and control outcomes, overriding several impediments to success and guiding to higher levels of motivation, action and performance (Bandura, 2012). Abbas and colleagues (2013) found that individuals high in self-efficacy are less likely to expect failures when they are facing challenges, difficulties and uncertainties. Being considered as a more domain-specific resource with high chance of development, self-efficacy is taken as the responsible for the improvement of human accomplishments and the individual's positive well-being (Bandura, 2012).

The component "optimism" refers to the individual's expectancy of positive results (Newman *et al.*, 2014) and provides a more positive outlook on stressful situations (Rego *et al.*, 2012b). An optimistic person tends to be oriented toward evaluation of past and most recent events (Avey *et al.*, 2010), practicing positive emotions and increasing the levels of motivation to manage challenges, looking for creative ways to solve it and taking advantage from these

opportunities (Luthans *et al.*, 2007; Tibbs *et al.*, 2015). This resource is also seen as an attributional style that attributes the results of positive events to personal, permanent, internal and pervasive causes while the outcomes of negative events are explained by external, temporary, specific and unstable ones (Avey *et al.*, 2010). Following Peterson and his colleagues (2011) there are strategies that make optimism a developable resource, being designated by Seligman as “learned optimism”.

“Hope” is characterized as the capacity to identify, simplify and pursue the way to success and consists in two major conceptual foundations: agency and pathways. While the agency component refers to an individual’s motivation to accomplish the desired effect within a specific context, the pathways include the identification of goals and the establishment of alternative ways to reach them in order to guarantee that task will be accomplished (Youssef & Luthans, 2007). This aptitude to develop different pathways to achieve goals is gotten as a consequence of the individual’s goal-directed energy, which is characteristic from people high in hope (Newman *et al.*, 2014). In sum, hopeful individuals tend to be recognized as risk-takers persons and they are really determined in pursuing goals in order to find the best way to implement and to reach their aims (Tibbs *et al.*, 2015). Luthans and his colleagues (2007) highlighted the study of Adams (2002) that was based in a survey that concluded individuals with high level of hope tend to be more successful on their job. Youssef and Luthans (2007) found this component is directly related with job satisfaction, work happiness and organizational commitment. Similarly with the previous first order constructs, hope is also a developable resource (Luthans *et al.*, 2007).

Last of all, “resilience” refers to the ability to rebound or bounce back from adversity, uncertainty, conflict, risk, failure or even positive events like progress or an increase of responsibility (Avey, Luthans & Youssef, 2008). The concept of adaptability is inherent to the concept of resilience for the reason that individuals high in resilience tend to be more flexible, adapting easily when facing adversity, negative experiences or changes in external context (Newman *et al.*, 2014). This component is also possible to develop, as Luthans and his colleagues (2007) showed, because each time they bounce back from a previous setback they are producing higher levels of resilience and increasing the individual’s satisfaction, commitment and happiness (Youssef & Luthans, 2007).

Each psychological construct presents different fields, similar aims and singular features that make them complementary to each other. Hope and self-efficacy are considered the most

important in terms of work-related outcomes because it allows individuals to believe in their cognitive resources and in their abilities to mobilize motivation. While these components are more specific to a particular domain, optimism is more general and constitutes a global positive expectation of success (Tibbs *et al.*, 2015). The indicators of perseverance are more common in components like self-efficacy and resilience whereas the proactivity ones are expressed by resources as self-efficacy, hope and optimism (Peterson *et al.*, 2011).

Luthans and his colleagues (2007) found that individuals high in self-efficacy will be more resilient to new challenges while individuals high in hope tend to have higher levels of resilience and self-efficacy and they are more confident at developing specific tasks. For instance, people high in hope set their goals while the most effective individuals accept challenges with an optimistic expectation of success, increasing their motivation and their level of effort. Like a cycle, if someone is defining several pathways (i.e., hope) to resiliently rebound from setbacks and can achieve success from alternatives previously defined, it will induce in a continuous optimistic expectation. These mentioned synergies, among the four resources, help to explain the great impact of the construct of psychological capital on performance and desired behaviors (Avey, Avolio & Luthans, 2011). Like this, the second order construct of PsyCap represent the common source of variance linking the four distinct psychological constructs that have in common the main processes driving the expected motivation and the desired attitudes (Luthans *et al.*, 2007).

2.1.3. The impact in performance

The core construct of psychological capital has a great impact on the quality of individuals' work and even in their personal lives, being conceptually and empirically assured their relation with employees' performance (Baron, Franklin & Hmieleski, 2013; Luthans *et al.*, 2007; Walumbwa *et al.*, 2010, 2011). Similarly, Gooty *et al.* (2009) and Luthans *et al.* (2010) found that individuals high in PsyCap have more resources to remain engaged with goal attainment activities, to persist when facing challenges and to achieve their goals, having better levels of performance. The higher order construct of psychological capital is so consistent due to the special and unique contribution given by the four positive psychological constructs, which are based on their cognitive and motivational processes. The merger of these first order constructs will generate the principal support of employees' positive work-related cognitions, motivations and behaviors guiding them to judge the difficult situations so

positively as possible, increasing, at last, the probability of successful outcomes (Luthans *et al.*, 2007).

In order to perform well in their specific tasks and to increase their job satisfaction and commitment with the organization, people high in PsyCap are always applying the maximum effort and higher levels of perseverance, keeping the willpower to generate the best solutions for problems and to answer positively to adversity (Avey, Avolio & Luthans, 2011). They have not only a strong confidence in their own abilities to deal and to overcome the several challenges but also the cognitive capacity of self-regulation that guarantees initiative, pro-activeness and self-discipline to achieve their goals, being more likely to help co-workers and to support the organization, reducing the possibility of leaving the job (Abbas *et al.*, 2014; Gooty *et al.*, 2009; Luthans *et al.*, 2007). Higher level of psychological capital capacities, such as hope, resilience, self-efficacy and optimism, drives to development of positive emotions and increases the levels of confidence, determination and pathways of thought (Avey, Luthans & Youssef, 2008). Empirical studies has supported the linear connection between psychological capital and the previous referred employees' attitudes and behaviors, such as: job satisfaction, organizational commitment, work happiness and staying intentions (Avey *et al.*, 2011).

The concept of psychological capital and its respective impacts at the organization level have been subject to considerable attention from several authors. In the investigation of Avey and his colleagues (2010), it was observed that employees high in PsyCap tend to adopt extra-role behaviors like positive well-being or organizational citizenship behaviors (OCB). Although this type of desirable behaviors, for example altruism, conscientiousness, civic virtue, courtesy, staying late to help a colleague or support a newcomer to the group, are not part of the employees' task requirements, it benefits organization promoting its effective functioning and using others as the main character (Gooty *et al.*, 2009). Overall, OCBs are predicted through motivation and positive personality traits of individuals, not being directly related with the formal reward system (Luthans & Youssef, 2007).

People with high levels of positive psychological resources tend to be more skilful, original and confident, exercising a bigger effort to maintain a balance when facing challenges and environmental stressors (e.g., organizational politics) (Abbas *et al.*, 2014; Avey, Avolio & Luthans, 2011). It has also been showed the strong positive relation between psychological capital and several specific and really important variables, for instance: levels of relaxation,

core self-evaluations, extraversion, conscientiousness, capacity to develop their own skills and consequently job satisfaction, employees' well-being and individual's performance (Baron, Franklin & Hmieleski, 2013; Luthans *et al.*, 2007; Peterson *et al.*, 2011).

If, on the one hand, the psychological capital has power to influence some variables and final outcomes, on the other hand it is also affected by some important moderators. The individual's identification with a specific firm, the impact of an authentic leader, the organizational features, such as strategy, structure, culture or recent changes and the individual-level antecedents, like personality traits, physical health or previous life experiences are moderators of the individual psychological capital, its development and its consequent impacts on workers' performance (Avey, Luthans & Youssef, 2008; Gooty *et al.*, 2009; Larson *et al.*, 2013).

2.2. Authentic leader's PsyCap and followers' performance

2.2.1. The concept of authentic leadership

A strong and positive association between the leadership behavior and the levels of psychological capital have been highlighted in the body of literature, proposing that more authentic and transformational leaders will be more impactful in their followers' motivational tendencies and in their final performances (Gooty *et al.*, 2009; Luthans *et al.*, 2007; Rego *et al.*, 2012b; Walumbwa *et al.*, 2010; Woolley, Caza & Levy, 2010). It has been proposed that authentic leaders has the power to influence their followers and to develop their capabilities, invigorating them with positive psychological states that leads individuals to achieve higher levels of performance and better final outcomes (Wang *et al.*, 2014).

Represented by positive psychological capacities, the essence of authenticity is based on to recognize, accept and remain true to oneself, to the core values, identities, preferences and emotions (Avolio *et al.*, 2004). The concept of authentic leadership was defined as "*a pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development*" (Walumbwa *et al.*, 2008, p. 94).

The four categories of authentic leaders' behaviors have an imperative contribute on the process by which they influence the followers' psychological capital and subsequently their

behaviors and performances. While the component of balanced processing refers to the analysis of relevant information to make a final decision, the internalized moral perspective implies behaviors based on moral standards and values. The personal disclosures are due to relational transparency and self-awareness. It means the leaders' recognition of how followers view their leadership, motives, strengths and weaknesses (Wang *et al.*, 2014). In sum, it is possible to characterize authentic leaders as those individuals who recognize that their thoughts and behaviors affect those around them and who are deeply aware of their own and others' moral perspectives, values, knowledge and strengths, being recognized as people high on moral character, confidence, optimism, hope, resilience and conscious of the work-context in which they operate (Avolio *et al.*, 2004; Clapp-Smith, Vogelgesang & Avey, 2009).

2.2.2. The impact on followers' performance

The leaders' set of values, convictions and principles leads them to do what is fair and right for them and their followers in order to build credibility and a climate of trust between them, building a valuable network and inspiring diverse viewpoints and creative answers to organizations' challenges (Wang *et al.*, 2014). Trust is not only viewed as a critical component of any successful business connection but also as a crucial element in leaders' effectiveness, as that it is associated with the followers' willingness to cooperate with the leader to benefit the organization and as well with several organizational outcomes, such as: commitment, organizational citizenship behaviors, satisfaction with supervisors, belief in information and intention to remain in the same job (Clapp-Smith, Vogelgesang & Avey, 2009).

Trust, hope and positive emotions also constitute important variables to build a long-term relationship between the leader and followers. While hopeful and trustworthy leaders have power to establish the followers' determination, increasing the levels of hope and self-efficacy, leaders that work through the emotional support invest in the development of novel lines of thought for action, in flexibility of responses and in creative thinking, improving the process of decision making, the well-being of organizations, the levels of engagement and consequently, building positive emotional states (Avolio *et al.*, 2004). The feature of authenticity gives to the leaders the ability of processing self and others' information with greater accuracy, which diminishes biases, distortions and exaggerations, allowing them to gain trust, gratitude, goodwill and appreciation from their followers (Cameron & Spreitzer, 2012).

In order to implement this high-quality relationship with followers, leaders have adopted a direct and open dialogue to share relevant information, to accept others' inputs and to disclose their personal values and feelings, being available to know the followers' limitations and commitment to success (Walumbwa *et al.*, 2010). To enrich the leader-member exchange, it is also important to allow valuable social connections to the followers, by giving them favourable assignments, inducing challenging tasks, protecting them from unfairness, rewarding who shows satisfactory levels of honesty, integrity and loyalty and providing empathy and job feedback (Clapp-Smith, Vogelgesang & Avey, 2009; Wang *et al.*, 2014). As opposed to criticism, feedback mechanisms (that could be written, verbally or even so behaviorally) are useful tools to develop employees' psychological capital reassuring motivations, offering paths to goal attainment and contributing to a more optimistic, resilient and confident worker (Avey, Avolio & Luthans, 2011; Newman *et al.*, 2014). It has been shown that who received higher levels of supervisor support and an encouraging feedback, from leaders, peers or from the job itself, has higher levels of psychological capital, performing better (Liu *et al.*, 2013).

The feedback mechanisms provided by leaders, their own confidence and the creation of personal identification with followers and social identification with the organization as a whole, represent the effective tools through which authentic leaders are able to increase the levels of motivation, engagement, satisfaction and commitment required from followers (Avolio *et al.*, 2004). Leading by example and inducing in positive social exchanges on an environment of credibility, trust and respect, authentic leaders facilitate followers' ability to set goals, generate positive expectation for the future, create confidence in followers' capabilities and teach to bounce back from adversity, achieving then successful followers' performances (Avolio *et al.*, 2004; Gooty *et al.*, 2009).

Empirical evidence supports that it is possible to develop followers' positive psychological states and resources via the own role modelling of authentic leaders (Gooty *et al.*, 2009). More specifically, the leaders' PsyCap influences employees' psychological capital level which will make impacts on employees' final outcomes (Tibbs *et al.*, 2015). Several studies showed positive correlations between the leaders' PsyCap, as a predictor of leaders' authentic leadership, and the followers' levels of job satisfaction, organizational citizenship behaviors, work engagement and job performance, demonstrating that the impact is bigger among followers with low rather than high levels of psychological capital (Avey, Avolio & Luthans,

2011; Avolio *et al.*, 2004; Clapp-Smith, Vogelgesang & Avey, 2009; Wang *et al.*, 2014). In that way, Walumbwa and his colleagues (2010) concluded that leaders' psychological capital has enough power to influence their followers' PsyCap, increasing the work outcomes at individual and team levels.

2.3. The effect at group's level

It has been shown that psychological capital is important not only at individual level but also at group level of analysis, being its influence on team's outcomes a current topic of discussion in literature (Luthans *et al.*, 2007; Walumbwa *et al.*, 2010, 2011). Walumbwa *et al.* (2011) suggested the concept of 'collective PsyCap', defining it as a group's shared psychological state of development characterized by interactive exchanges between members of the same group achieving the desired collective goals. This version of PsyCap is positively related with team-level performance and it is mediated by the relation between authentic leadership and organizational citizenship behaviors (Newman *et al.*, 2014).

While followers' perceptions of authentic leadership may influence their individual levels of motivation, engagement, satisfaction and final performance, the shared perceptions of this type of leadership will have similar impacts at groups level, inducing in positive collective behaviors and increasing the levels of effort, commitment and demand. Each individual observe the others' attitudes, positive behaviors and their levels of loyalty and dedication, increasing his/her own as a response, and improving, consequently, respective work and performance outcomes (Clapp-Smith, Vogelgesang & Avey, 2009).

The degree of individuals' enthusiasm embracing workgroup challenges depends on the presence, or not, of collective efficacy. This key characteristic consists on the group's confidence in its set of capabilities to execute and organize the given tasks within the required levels of attainment. Teams that present an upper sense of collective efficacy tend to perceive setbacks as challenges, facing them with higher levels of creativity, resiliency and commitment in order to achieve the pre-defined performance goals. Leaders may cause a positive impact on levels of collective efficacy exposing their confidence, encouraging the followers' beliefs in their own skills, establishing organizational structures and designs that allow the group to make the most use of their skills and influencing the ways in which individuals interpret relations between the group-members, their environment and their behaviors. (Cameron & Spreitzer, 2012)

A work environment, as described above, will make the individual feel part of a group, building a social identity with the organization and with the rest of the team, feeling pride to belonging it. This process of social identification is characterized by the individuals' knowledge that belongs to a specific group with emotional significance to him/her, which encourages employees to put an extra effort to achieve better results for the organization (Avolio *et al.*, 2004). Furthermore, the individual's knowledge, skills and abilities are also developed due to this collective human capital resource, increasing the final outcome at individual, team and organizational levels (Ardichvili, 2011).

2.4. Development of psychological capital and its limitations

The investments done in the development of human capital has been seen as a very important source of value at managerial and individual levels, founding a key factor on the explanation of why some firms outperform the others (Crook *et al.*, 2011). Specifically, the psychological capital is a human asset that can be developed and sustained in short training interventions, for instance by technology mediated delivery, with high potential to generate competitive advantage (Luthans, Avey & Patera, 2008; Luthans *et al.*, 2007). The development of PsyCap could also be through simple norms implemented by organization, such as setting approach goals, encouraging future-oriented thinking, defining job-related tasks or anticipating the pathway planning for potential complications. Instead of PsyCap to be directed for “what you know” or “who you know”, it is focused in “who you are” and “who you are becoming” in the future, assuming that employees' psychological capabilities are highly stimulated and developed in their workplace (Cameron & Spreitzer, 2012). Their development, both in supervisors and their followers, should be integrated in the general human resources development and even in performance management programs to provide more resources and a strong influence in the subsequent performance (Luthans, 2012).

There are some gaps in literature and limitations in the research about the concept of psychological capital. The relevance of psychological capital, theory and study of its impacts as well the effects of authentic leadership are still emerging.

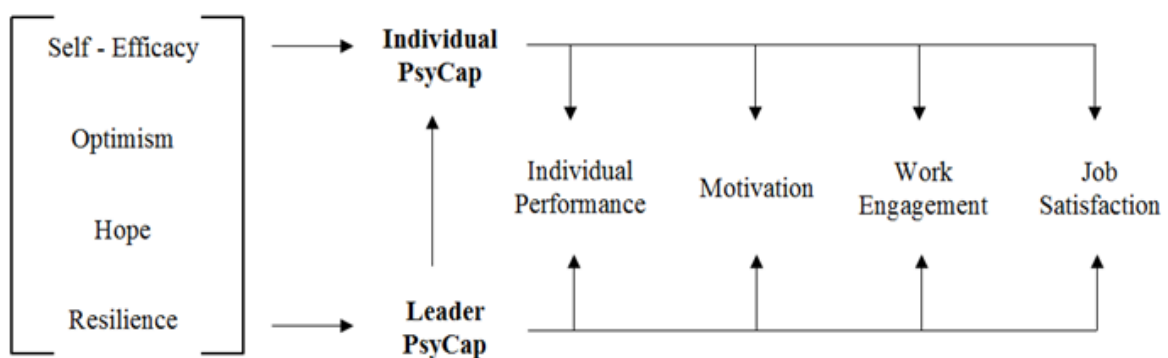
2.5. Research Questions

On the previous sections it was discussed the structure, relevance and influence of psychological capital on employees attitudes and behaviors. Four crucial psychological components (self-efficacy, optimism, hope and resilience) contribute to the building of a high,

complete and more powerful PsyCap, developing employees' capabilities and levels of performance. It was shown the influence of Psychological capital on employees' job satisfaction, perseverance, work happiness, commitment with the organization, and quality of work (Luthans *et al.*, 2007). Leaders' psychological capital and the good relationships that they establish with their followers may also have effects on individual's PsyCap and in some significant individual dimensions like motivation, work-engagement and performance (Avolio *et al.*, 2004). Authentic leaders may develop their followers' capabilities, confidence and ambition, inducing them to accept new challenging tasks, expanding their knowledge and skills (Wang *et al.*, 2014).

Given the wide findings and their need of development, it was considered pertinent, for this study, to examine the influence of psychological capital on several individual components that are considered significant to individual and organizational outcomes. In addition, the authentic leadership, its consequences and results were also pointed as relevant topics to study. To analyse the relevance of an authentic leader in their followers' perceptions of performance it was also examined the impacts of the leaders' PsyCap on the employees' psychological capital, as well on their perceptions of performance, motivation, engagement and satisfaction. Figure 1 illustrates the focus of the present research study, highlighting the interactions that will be questioned.

Figure 1. Synthesis of the study focus



To investigate and quantify these effects, correlations and the power of each connection, it was defined three major research questions based on previously stated hypothesis that will be confirmed, or not, over this study.

First of all, it emerged a question about the impact that the individual's psychological capital may have on four defined significant variables, such as: individual performance, motivation, work-engagement and job satisfaction. The individual's performance is based on employees' perceptions of its own performance through, for example, the compliments that they receive. The levels of motivation, work-engagement and job satisfaction are translated in individual's behaviors. The indicators of these components are, respectively, the energy and enthusiasm of employees at developing their work, the trust and loyalty with the organization, and their happiness doing their specific tasks. It was considered relevant to study this type of analysis, examining the influence that the level of psychological capital will have on the mentioned individuals' variables. Thus, taking into account the empirical evidence presented, it will be specified the following hypothesis:

Hypothesis 1: The individuals' psychological capital is positively related with the following components: individual's perceptions of performance, motivation, work-engagement and job satisfaction.

Numerous studies are trying to understand the influence that an authentic leader may have on their followers' behaviors, attitudes and thoughts, emphasizing the stimulus that a leader may cause on followers' performance. In order to contribute for this research, it was also introduced in this study the analysis of the leader's psychological capital and respective effects on some significant followers' components (followers' perceptions of performance, motivation, work-engagement and job satisfaction). However, also the establishment of good and solid relationships between the leader and followers may cause great impacts on the development of the previously mentioned followers' variables. So, to consider these crucial components on this study, it will be presented the following hypotheses:

Hypothesis 2a: The leaders' psychological capital is positively related with their followers' perceptions of performance, motivation, work-engagement and job satisfaction.

Hypothesis 2b: The good relationship (goodwill) established between the leaders and their followers is positively related with the followers' perceptions of performance, motivation, work-engagement and job satisfaction.

Research had investigated not only the impacts of leaders on some individuals' behaviors and attitudes but also, specifically on their followers' PsyCap and respective components, such as: employees' optimism, resilience, hope and self-efficacy. Consequently, the third and last

question is just about the impact that leaders' psychological capital may have on their followers' level of PsyCap. It was considered pertinent examining this simple and clear relation, formulating the following hypothesis:

Hypothesis 3: The leaders' psychological capital is positively related with their followers' level of psychological capital.

The specified hypotheses will be tested and examined on the following sections of the present study. Following a common sample and process, it will be given a specific answer for each question, confirming or not the statements of the presented hypotheses.

3. Methodology

3.1. Instrument

To answer the prior stated research questions and their hypotheses, it was done an online survey. The questionnaire was written in Portuguese and it was shared in the company Olano Portugal Transportes, SA and via LinkedIn.

Given the few time available to develop the present research study and particularly to answer the several presented research questions, it was selected the survey as a methodology instrument, due to its simple development process and its flexible mode of administrate. The survey was shared within the company and in LinkedIn to optimize data collection procedures and to reduce total survey error, improving coverage, collecting better responses and making the most use of time (Leeuw, 2005). In that way, the set of two sources of data would constitute a more complete sample, allowing to test consistently all questions that had been made not only in the present academic study but also in literature in general, analysing the correlations of the studied variables and making, consequently, more reliable and clean conclusions.

3.2. Survey description

When participants were invited to complete the survey, they were informed of the purpose of this academic study. They were also provided with a direct link to the survey hosted online.

The questionnaire was divided into four groups. An introductory part, to inform participants about some key details of the study; the second group with PsyCap's evaluation (questions about their levels of hope, resiliency, self-efficacy and optimism); the third part included questions related with the perceptions' of employees regarding authentic leadership, motivation, work-engagement, individual and group performances and job satisfaction; and the last group asking for some demographic data (gender, age, position in the enterprise, firm's dimension and operating sector). (Appendix 1)

In the core of the survey it was used a 6-point Likert-type scale. The anchors ranged from 1 = 'Strongly Disagree' to 6 = 'Strongly Agree', plus an added seven option in the case of employee had not lived that experience before (7 = 'Not Applicable').¹

In order to maximize its reliability and validity, the scale was defined based on common principles and norms defined by Gliem & Gliem (2003), such as: containing multiple items, having an underlying quantitative measurement for each individual anchor, requiring a specific statement to represent each distinct item and not being defined “right” or “wrong” answers. Given that the 6-point Likert-scale implemented meets all these requirements, it is possible to conclude that it fits the focus of this academic research, favouring the interpretation of implemented tests. It also enforces participants to choose a specific side-position (at least between the third and fourth options) not being possible to be neutral and avoiding their propensity to choose the centre’s alternative on unpaired Likert-scales (Chang, 1994).

3.3. Measurement

Because the original Psychological Capital Questionnaire, that has been demonstrated to have reliability and construct validity (Luthans, Youssef & Avolio, 2007), was unavailable, it was defined similar prepositions with this survey’s questions to analyse the first-order constructs that constitute PsyCap. The level of each component (hope, resilience, self-efficacy and optimism) was measured based on 6 items per factor, resulting in 24 statements that were mixed throughout the survey, avoiding the identification of the evaluated concept and the risk of biased answers.

To measure the level of hope, respondents had to answer statements as: “If I should find myself in a jam at work, I could think of many ways to get out of it” or “At the present time, I am energetically pursuing my work goals”. Resilience was tested following statements like: “I usually manage difficulties one way or another at work” or “When I have a setback at work, I have trouble recovering from it, moving on”. To analyse employees’ level of self-efficacy, they had to choose their degree of agreement with 6 prepositions, for instance: “I feel confident in representing my work area in meetings with management” or “I feel confident contacting people outside the company to discuss some problems”. Finally, to examine individuals’ optimism they faced statements as: “When things are uncertain for me at work, I usually expect the best” or “I always look on the bright side of things regarding my job”. The reverse statements were presented to emphasize the feeling in some behaviors and to ensure the concentration of participants. They were subsequently adjusted in data treatment. All of these items were selected from literature, based on examples and models that were shared by

some authors on their studies about PsyCap (Luthans *et al.*, 2006; Nunes, 2010; Peterson *et al.*, 2011; Woolley, Caza & Levy, 2010).

Participants evaluated each of the 24 items in accordance with their level of agreement. The respondents' answers were transformed into numbers, introduced in the software and then calculated the average of the 6-items of each group, allowed the creation of individual variables for each component. The most important variable of the present academic study, "PsyCap", was generated from the equal weighted average of these previous mentioned new variables. It was defined that all of them have the same significance on delineation of individual's psychological capital.

On the second part of the survey, and with the same type of scale, participants were asked about 21 mixed items describing behaviors in which they or their leaders could engage in. In the impracticality of aggregate and test all variables considered relevant on literature for this type of studies, it was selected the easiest variables to measure by surveys and that are connected with the levels of individual's psychological capital: individual's motivation (3 items), work-engagement (3 items), job satisfaction (1 item), individual performance (4 items), group performance (1 item), goodwill with the leader (4 items) and leader's PsyCap (5 items).

Similarly to the assessment of psychological capital, participants also had to rate their degree of agreement with several statements related to the previous dimensions. To analyse how motivated they feel, respondents had to answer statements as: "I feel efficient and recognized at my work" or "I enjoy working with my colleagues". However to test their level of work-engagement, they were faced with statements like: "I am proud to belong to this company" or "I know that doing my job well makes a difference to the company's results". Individual and group performances were measured with support on precise described behaviors, for instance: "In the last three months I received a praise of supervision for the quality of my work" or "My team is recognized throughout the organization as having an excellent professional performance". Due to unavailability of original Authentic Leadership Questionnaire, validated by Walumbwa *et al.* (2008), leader-member exchange, goodwill of employees with their leader and leader's PsyCap were analysed following statements as: "I trust my hierarchy", "When things are going bad at work, my supervisor always believes that there will be a solution" or "My superiors value my work". Lastly, job-satisfaction was evaluated with the simple statement: "In general, I am satisfied with my work". As in the case of the first

group, also these items were selected following surveys and models of previous published studies that discussed subjects about PsyCap and authentic leadership (Walumbwa *et al.*, 2008; Woolley, Caza & Levy, 2010).

The management of these variables was really similar to which that had been explained in the group of individual psychological capital evaluation. Also these components were measured based on the weighted average of respective items allowing then, the creation of the mentioned variables, tagged in this case as: "Motivation", "WorkEngagement", "JobSatisfaction", "IndPerformance", "GroupPerformance", "LMX" and "PsyCapLeader".

Because it was a customized survey, it was considered essential to test if the variables studied present adequate internal reliability. This internal consistency refers to the degree of correlation between the items of the questionnaire and the research general result. The Cronbach's alphas is the most common reliability measure and range from 0 to 1, being frequently used on surveys with multiple Likert questions. Thus, all studied variables were exposed to this test (table 1).

Table 1. Cronbach's alpha for each variable

Variable	Number of items	Cronbach's alpha
PsyCap	4	0.852
Self-Efficacy	6	0.804
Hope	6	0.760
Resilience	6	0.755
Optimism	6	0.748
Motivation	3	0.622
Work-Engagement	3	0.519
Individual Performance	4	0.616
Leader-Member Exchange	4	0.855
Leader PsyCap	5	0.845

Analysing the results, it is possible to conclude that the most important variable of the study, PsyCap, presents a high internal reliability, as well their components and variables related

with leadership (values higher than 0.7). Some other variables relevant for the study, like work-engagement or motivation, present lower values that range from 0.5 to 0.7, being probably justified with the lower number of items that they involve. The group performance and job satisfaction variables were not possible to test given that they have just one item on their constitution, not fitting the requirements needed for this type of analysis.²

3.4. Sample and procedures

Olano Portugal Transportes, SA is a subsidiary of the Olano's group and it operates on the temperature-controlled storage of products in transit in the food chain. It has about 120 refrigerated trucks. As a growing business, with clear evolution and well-structured business with Spain and France, it holds a strong experience and a vast knowledge in this specific corporate sector. (Appendix 2)

Initially, a preliminary test was distributed to a small group of people, with different ages and backgrounds, to identify possible mistakes and understanding's gaps that may limit the survey's interpretation and allow the adjustment of some sentences, making them more simple and clear. As soon as the final version was concluded, the survey was addressed to the Human Resources department, it was analysed by the company's administration and forwarded to the employees of support services. The individuals that work on the distribution sector (the majority of the organization's employees) were not included in the study because they are not in the company's offices, they are scattered all over Europe without access to electronic instruments.

For that reason, sample of Olano, SA comprises 14 participations (n=14), from a group of 26 employees, with 57.1% belonging to the younger group (from 18 to 30 years old) and 28.6% to the group of 41 to 50 years old. The majority of surveys were answered by women (92.9%) and there are a preponderance of the operational function (64.3%) over the 35.7% of employees which take management and supervision functions.

To get a greater sample the same survey was also shared through LinkedIn in a consultant's page (potential sample of 800 people).

The LinkedIn sample is composed by 44 responses (n=44), with a well-adjusted distribution between men and women (48.8% Male and 51.2% Female), 37.2% with ages between 31 up to 40 years old and 25.6% belonging to the group of 41 to 50 years old. The majority of

participants of this sample works on big enterprises (55.8%) and 30.2% in medium-size firms. Between the 17 different sectors of activity, the human health activities and social support (20.9%) and the division of consulting, scientific, technical and similar activities (11.6%) are the areas that collected more participants. The functions developed by responders are also balanced distributed: 48.8% of them are exercising management and supervision functions, while 51.2% are working on operational functions.

3.4.1. ANOVA Test

Since the data was collected using two different samples, to check if there were differences in the variables of both groups and test the possibility of analysing them together, it was done a One-way ANOVA with the central variable of the study, PsyCap. With the presented values of ANOVA test ($p\text{-value} = 0.495 > 0.05$), it is possible to conclude with a significance level of 5%, that there is no statistically significant difference in the mean of PsyCap between Olano's group and the group of LinkedIn. The Levene's test for homogeneity of variances ($p\text{-value} = 0.073 > 0.05$), determined homogeneous variances, i.e., within each of the groups, the variability of PsyCap is just due to random causes.³

Then, the merger of the two samples is completely viable because both groups represent similar employees' behaviors and perceptions. (Appendix 3)

Combining both samples, we worked with 58 participations ($n=58$), 61.4% of women, 38.6% of men and 57.9% between 30 and 50 years old. A large part of respondents work on big enterprises (42.1%) or in small companies (35.1%), 54.4% has operational functions while 45.6% adopt supervision tasks. (Appendix 4)

4. Results

To discuss the research questions and to confirm or reject the exposed hypotheses, it was conducted a detailed and exhaustive analysis through the data collection and respective treatment, based mainly on several regression models.⁴

4.1. Factor analysis

Before using regression models to answer the research questions, it was important to perform a factor analysis, testing how well the measured variables represent the number of constructs.⁵

In the current study, the component matrix just exhibited one component extracted, which means that there is just one factor representing the data. All attributes and variables considered in this academic research are reflecting the same point and contributing for the analysis of the same idea. The higher the absolute value of the components, the more factors contribute to the variable. In this case correlations vary from 0.70 to 0.89, representing therefore acceptable and reliable coefficients. (Appendix 5)

To examine the degree of correlation and the dependence level between the variables, it will be presented, on table 2, the correlation matrix of the variables included in the study.

Table 2. Correlation matrix for all variables

Variables	Mean	S.D	1	2	3	4	5	6	7	8
1.PsyCap	4.78	0.64	1							
2.PsyCapLeader	4.39	1.02	0,28*	1						
3.LMX	4.50	1.12	0,47***	0,84***	1					
4.IndPerformance	4.89	0.78	0,53***	0,63***	0,63***	1				
5.GroupPerformance	4.32	1.20	0,55***	0,35**	0,55***	0,55***	1			
6.WorkEngagement	4.89	0.81	0,57***	0,64***	0,71***	0,53***	0,52***	1		
7.Motivation	4.63	0.93	0,65***	0,58***	0,73***	0,66***	0,67***	0,71***	1	
8.JobSatisfaction	4.46	1.36	0,46***	0,60***	0,65***	0,45***	0,50***	0,65***	0,65***	1

N = 57

*p < .05. **p < .01. ***p < .001

Analysing the previous correlation matrix table, it is possible to perceive just positive coefficients and some with high values of correlations, presenting significance levels of, at least, 5%. This means that none of them causes a negative impact on another, showing sometimes a strong dependence between each other. These shared values go in the same direction as literature and, at least having a look at the table, it is possible to confirm the previously stated hypotheses. For instance, the individual's PsyCap has a notable influence on the motivation level of employees, presenting a correlation value of 0.65, which means that an individual higher in PsyCap will be more motivated in his or her job and in respective allocated tasks. The PsyCap of leader has a strong impact on leader-member exchanges (correlation of 0.84). Leaders with a high level of psychological capital are proficient in creating good relationships with followers, inducing high levels of interactions between them. To test more of these curious effects and to answer the main research questions, it will be shown the results of the regression models used in this study.

4.2. Hypothesis testing

It was run several linear regression models to give a clear and quantitative answer for each of the three key investigation's questions.⁶ The next tables present the values of linear regression tests.⁷

Table 3. Regression analyses of the effect of psychological capital (PsyCap) on individual's performance (IndPerformance), motivation, work-engagement and job satisfaction

		R²	B	S.E. B	B
PsyCap	IndPerformance	0.28	0.65	0.14	0.53***
	Motivation	0.42	0.95	0.15	0.65***
	WorkEngagement	0.32	0.72	0.14	0.57***
	JobSatisfaction	0.22	0.99	0.26	0.46***

N = 57

*p < .05. **p < .01. ***p < .001

The first research question focused the effect caused by the independent variable, PsyCap, on dependent variables like individual performance, motivation, work-engagement and job satisfaction. Examining table 3 it is possible to conclude that all the impacts tested on this first question are confirmed and statistically significant. The individual psychological capital has

positive influence on the four tested variables: individual perception of performance ($\beta = 0.53$), motivation ($\beta = 0.65$), work-engagement ($\beta = 0.57$) and job satisfaction ($\beta = 0.46$). For instance, for every 1 unit increase in the level of PsyCap, the individual performance increases by 0.65 units, with a standard error of 0.14.

Based on the first model (which studies the impact of PsyCap on individual performance), it is possible to conclude that PsyCap explains 28% of the variance of individual performance variable, presenting a correlation coefficient, R^2 , of 0.28. The highest correlation coefficient of the four regressions presented on table 3, belongs to the second model (impact of PsyCap on motivation), where it is concluded that the level of PsyCap explains 42% of the variance of motivation. The individual level of psychological capital justifies 32% of the variance of employee's work-engagement and 22% of the variance of job satisfaction, as exposed by the correlation coefficient of the third and fourth models respectively (the third model analyses the impact of PsyCap on work-engagement and the fourth one analyses the impact of PsyCap on job satisfaction).

Table 4. Regression analyses of the effect of leader's psychological capital (PsyCapLeader) and leader-member exchanges (LMX) on individual's performance (IndPerformance), motivation, work-engagement and job satisfaction

	R²	PsyCapLeader			LMX		
		B	S.E. B	β	B	S.E. B	B
IndPerformance	0.43	0.27	0.15	0.36	0.23	0.13	0.33
Motivation	0.54	- 0.12	0.16	- 0.13	0.70	0.14	0.84***
WorkEngagement	0.51	0.11	0.14	0.14	0.43	0.13	0.59**
JobSatisfaction	0.43	0.23	0.26	0.17	0.62	0.23	0.51

N = 57

*p < .05. **p < .01. ***p < .001

The influence of leaders' psychological capital on individual's characteristics, attitudes and behaviors has been a relevant topic of investigation in empirical studies. For that reason, it

was important to test if the leader's PsyCap and its relation with their followers have significant impacts on individual levels of performance, motivation, engagement and satisfaction.

According to the results shown in table 4, the relation established between leaders and followers has significant impacts on individual's levels of motivation and work-engagement (assuming β values of 0.84 and 0.59, respectively). Every time the level of leader-member exchanges increases by 1 unit, the motivation increases by 0.70 units (s.e. = 0.14) and the level of work-engagement rises 0.43 units (s.e. = 0.13). However the effects of leader-member exchanges on individual perceptions of performance and job satisfaction did not present statically significant values. It was also tested the impacts of the leader's psychological capital on individual performance, motivation, work-engagement and job satisfaction and it was not find statically significant values.

To understand these results, opposed to previous empirical evidence, it was used a new regression model with the same variables but examined independently from each other. As shown in table 5, these new models allow identifying statistically significant values.

Table 5. Individually regression analyses of the effect of leader's psychological capital (PsyCapLeader) and leader-member exchanges (LMX) on individual's performance (IndPerformance), motivation, work-engagement and job satisfaction

		R²	B	S.E. B	B
PsyCapLeader	IndPerformance	0.40	0.48	0.08	0.63***
	Motivation	0.33	0.53	0.10	0.58***
	WorkEngagement	0.40	0.51	0.08	0.64***
	JobSatisfaction	0.36	0.80	0.15	0.60***
LMX	IndPerformance	0.39	0.44	0.07	0.63***
	Motivation	0.53	0.61	0.08	0.73***
	WorkEngagement	0.50	0.51	0.07	0.71***
	JobSatisfaction	0.42	0.79	0.13	0.65***

N = 57

*p < .05. **p < .01. ***p < .001

Analysing table 5, it is possible to conclude that, when regressions are run independently, all the impacts referred on the second research question are confirmed and statistically significant.

Similarly to the literature, it was showed that the leader's psychological capital creates a positive influence in all tested variables: individual performance ($\beta = 0.63$), motivation ($\beta = 0.58$), work-engagement ($\beta = 0.64$) and job satisfaction of their followers ($\beta = 0.60$). To illustrate some of them, for every 1 unit increase in the level of leaders' PsyCap, the motivation level of their followers increases by 0.53 units, with a standard error of 0.10. As well if the psychological capital of leader increases by 1 unit, the satisfaction of followers with their own job will increase by 0.80 units, being subject to a standard error of 0.15.

Using this statistical process, it is also possible to affirm that the level of leaders' psychological capital explains 40% of the variance of individual performance ($R^2 = 0.40$), 33% of the variance of followers' motivation ($R^2 = 0.33$), 40% of the variance of work-engagement variable ($R^2 = 0.40$) and 36% of the variance of followers' job satisfaction ($R^2 = 0.36$). Therefore, and based on presented values, it is possible to state that the exposed models present good relations between the tested variables.

Concerning the variable of leader-member exchanges, and similarly to the leaders' PsyCap, it is clear its positive impacts on all other variables. The beta values are 0.63 for the followers' perceptions of performance, 0.73 for their motivation levels, 0.71 for work-engagement and 0.65 for job satisfaction of their followers. So, whenever leader-member exchanges variable increases by 1 unit, the individual performance of their followers increase by 0.44 units (s.e. = 0.07), or similarly, for every 1 unit increase in the good relationship between leader and followers, the employees' work-engagement increases by 0.51 units (s.e. = 0.07).

Based on the first model run (impact of LMX on individual performance), the leader-member exchanges may justify 39% of the variance of followers' individual performance variable while on the second model and with the highest correlation coefficient ($R^2 = 0.53$), the leader-member exchanges variable (LMX) explains 53% of the variance in employees' motivation levels. Finally, and also presenting good and suitable values of correlation coefficients, the good relationship between leader and followers describes 50% of the variance of followers' work-engagement ($R^2 = 0.50$) and 42% of the variance in job satisfaction levels ($R^2 = 0.42$).

With the second method of analysis, it was possible to take reliable conclusions that support the literature. The incongruence between the two methods of analysis may be just due to the small sample size that did not allow doing a reliable statistical treatment or due to the correlation values between the studied variables. It is one of the issues that need further research.

Table 6. Regression analyses of the effect of leader’s psychological capital (PsyCapLeader) on followers’ psychological capital (PsyCap)

	PsyCapLeader			
	R²	B	S.E. B	B
PsyCap	0.08	0.17	0.08	0.28*

N = 57

*p < .05. **p < .01. ***p < .001

We considered valuable to analyse distinctly the influence of leaders’ psychological capital on their follower’s level of PsyCap, stating the third and last research question. Examining table 6, it is possible to conclude that the level of leader’s psychological capital has positive impacts on the individual’s PsyCap, presenting a beta of 0.28 with statically significance. In more detail, for every 1 unit increase in the level of leader’s psychological capital the follower’s PsyCap rises in 0.17 units, it is subject to a standard error of 0.08. The leaders’ PsyCap explains 8% of the variance of the psychological capital of their employees, presenting a low but reliable coefficient of determination ($R^2 = 0.08$).

In summary, the statistical process developed and the regression models it were run showed the positive effects of the individual psychological capital, the leader’s PsyCap and the leader-members exchanges on the individual crucial variables: individual’s perceptions of performance, motivation, work-engagement and job satisfaction. The impact of individuals’ psychological capital is greater in employees’ job satisfaction, even though presents significant values in all other variables. Through the second method of analysis, it was concluded that also leaders’ PsyCap and leader-member exchanges have high effects on the individual components, showing higher effects on individuals’ motivation and job satisfaction. It was also disclosed the clear relation between the psychological capital of

leaders and their followers' level of PsyCap, highlighting its positive and favourable influence.

The previous conclusions are aligned with past studies. The answers to the research questions and the conclusions taken from them support the findings of literature, showing the influences stated and presenting a similar approach. The present study and the empirical research in general showed the relevance and the significant influence of the topic "Psychological Capital", requiring further research essential for the development of these findings.

5. Conclusions

The focus of this academic research was to understand and explore the well-known concept of psychological capital, as well as its relevance, dimension and influence at the individual level.

One of the main motivations was to analyse how this construct may affect the organization through the development of individual's specific skills (self-efficacy, hope, optimism and resilience). To know more about that, it was considered important to study the influence of psychological capital level on some individual's perceptions of essential dimensions (performance, motivation, work-engagement and job satisfaction).

The authentic leadership was also a matter of considerable attention, trying to recognize their influence on individuals' main dimensions and, specifically, on their followers' psychological capital level. It was studied how some specific leaders' characteristics and the good relationship established with their followers may influence the individuals' crucial components (performance, motivation, work-engagement and job satisfaction).

Firstly, it was examined the relation between the individual psychological capital and individual levels of performance, motivation, work-engagement and job-satisfaction. The second question was about the influence of leaders' PsyCap and their good relationship with followers on followers' perceptions of performance, motivation, engagement and job-satisfaction. It was also considered interesting to ask if the psychological capital of leaders affects directly the individual's PsyCap, it was investigated through the third and last research question.

Based on regression models, regarding the first question, it was possible to state that the individual psychological capital had a positive impact on all considered variables. High individual PsyCap contributes to more motivated and satisfied employees, with better perception of performance and higher levels of work-engagement. There was a notable effect of PsyCap on employee's job-satisfaction, followed decreasingly by the impact on motivation, work-engagement and individual's performance. Therefore, it was possible to confirm the hypothesis underlying this question, evidencing the positive influence of PsyCap on individual's crucial dimensions. These impacts support what has been shown in literature, for instance by Avey and his colleagues (2011), Bakker & Schaufeli (2008) and Luthans and his colleagues (2007).

To answer the second question the regression models were run separately, in order to study the impacts of leaders' psychological capital and leader-member exchanges on individual's perception of performance, motivation, work-engagement and job-satisfaction. These effects were showed on the current research study and all of them exhibited positive values, which means that an increase in the level of leaders' PsyCap or in the LMX will cause an increase in the levels of explanatory variables (performance, motivation, work-engagement and job satisfaction). The leader's psychological capital had a higher influence on their followers' job-satisfaction level, showing notable effects on the remaining three considered variables. In case of a good relationship between leaders and followers, its strongest impact was also in the followers' levels of job-satisfaction and motivation. As shown in previous research studies, the leadership may have a robust, significant and relevant effect at individual level, influencing their followers (Chen & Bliese, 2002; Liu *et al.*, 2013; Wang *et al.*, 2005). The hypotheses 2a and 2b were also confirmed.

It was also possible to share the positive impact that the leaders' psychological capital may have on their followers' PsyCap, supporting therefore the third and last question of this investigation. Although the effect was not so strong, it was positive, credible and accurate, confirming the underlying hypothesis. Therefore, if leaders present higher levels of psychological capital, they will be like an example for their followers, transmitting their principles, values, energy and persistence, inducing in more developed levels of psychological components (self-efficacy, hope, resilience and optimism) in their followers. The third hypothesis was supported not only with this study, but also with some other researches previously done that found the same influence (Rego *et al.*, 2012a; Walumbwa, Avolio & Hartnell, 2010; Woolley, Caza & Levy, 2010).

The conclusions taken from this study were lead in the same direction of the empirical evidence. All findings are supported with this sample data, allowing taking similar reasoning and conclusions. However, more research about the second research question is needed in order to understand the reason of its unexpected values. Then, in general the power of individual's psychological capital and leaders' PsyCap was illustrated in this present research study, highlighting the relevance of these topics and the influences that it may have on employees' crucial components, contributing at the same time to empathize the past literature.

If the organizations are aware of the relevance and the impact of these constructs, it may adopt some strategies and principles that allow taking competitive advantage. The company

may increase its final outcomes through simple changes like using the employees' psychological capital, choosing authentic leaders high in PsyCap, implementing methods of PsyCap's development or just adopting feedback mechanisms between leaders and followers. If companies were aware of the relevance of this topic and if they cared about the design of the work-environment and some crucial practices, the development of employees' psychological capital would be much more simplified, eventually benefiting the company and its final results (Wang et al., 2014).

6. Limitations and further research

This study also has some limitations that are considered pertinent for the analysis and generalization of results, as well some points that need further future research.

The limitations found in the generalizations of the current results are mainly related with the sample. The data was collected from a convenience sample and not from a random sample, becoming the main restriction of the study.

Olano S.A. company is installed in the central zone of the country and consequently subject to its particular culture, lifestyle and all remain specificities of that region, influencing the survey's answers in a way or another. An interesting topic for future research is trying to understand how the individual's antecedents, life experiences, age, gender, principles or the context in which they live may influence the level and development of psychological capital components. Future research should also be directed to the contribution of the organization's culture for the level of PsyCap, as well its intrinsic values, societal context or even the work tasks developed by the employee.

However, the main limitation related to this survey method is the unavailability of the certified Psychological Capital Questionnaire. This customized survey was done following some validated questionnaires and subsequently translated to Portuguese, consisting on vulnerable aspects that may be responsible for some lapses on shared survey. However, all tests done in the software to examine the reliability of the variables and the survey as a whole showed acceptable and good results, assuring the reliability of the questionnaire applied.

The survey's questions would be useful for the framing of the main variables of the study. Some of these variables are composed based on a low number of items that may be not enough to represent the individual level of the respective evaluated component, for instance the variable "Group Performance" that would not be introduced in the study. However, it is also important to understand the relation between psychological capital and team-level outcomes. It would be really useful if, in the future, the variables examined were not just analysed through the answers of the survey but also through interviews that give more detailed information, through observational methods or even with official organization's reports that may translate this type of data allowing replacing the lack of variables with a few items involved. With these types of gathering data, the achieved results would be based on the

real values of the individual's components and not just based on the individual's perceptions of their essential dimensions, giving more reliable and credible conclusions.

To specify this type of limitation, the individual performance variable was just measured through the survey's answers of employees consisting just on their own individual perceptions of performance. It would be important if it can be combined with any other type of performance evaluation method, like having access to reports about employees' performance assessment or other types of sources with this information. For future research, the application of multiple sources to gather data is really important to reduce the possibility of method bias and decrease the imprecise data collection.

Future research should also examine how authentic leadership could influence the development of psychological capital of followers, understanding when and how these impacts happen, how is its dynamics and in what conditions these effects have more power. The way the leader interacts with their followers, the level of power-distance and the number of team members, are components that may cause some impacts on the development of individual's psychological capital (Avey, Avolio & Luthans, 2011). Also, some other details like the extent to which followers identify themselves with their leaders or even the relevance of a feedback, its frequency and method should be examined in future research to see if there are some effects in the level of PsyCap development. These particular characteristics, that could appear insignificant, has the required power to accelerate the development of the individual's psychological capital, allowing employees to increase their own value and making the difference for the organization as a whole (Luthans et al., 2007).

In sum, it is crucial to know more about the applications of PsyCap, its underlying mechanisms and the possible factors that may moderate its connection with individual, team and organizational outcomes.

7. Final Notes

1. The Likert scale is mostly used in this type of surveys being also extended to all cases of measuring attitudes, opinions or preferences (Leung, 2011).
2. When alpha takes values higher than 0.95 it is not so good because it may suggest that questions and items could be redundant, testing the same idea but with a different appearance. By other side when a variable consists on a small number of items or questions it may induce in a low value of alpha, not being acceptable in the terms of literature (usually when it is less than 0.5). (Tavakol & Dennick, 2011)
3. This parametric test of variance analysis allows the comparison between two or more independent groups to examine if there is statistical evidence that the associated population means are significantly different. The dependent list, which is the dependent variable, consists on the main variable of the study, that is the variable whose means will be compared between the samples used on the study. (Lim & Loh, 1995)
4. All of this process, the treatment of data and the regressions that will be presented later were accomplished through the software IBM SPSS Statistics version 23.
5. A factor analysis consists on grouping similar variables into dimensions, identifying at the same time latent variables. This explorative analysis is a statistical technique that allows not only reducing data to a smaller set of summary variables, but also specify the number of factors required to represent it. (Tavakol & Dennick, 2011)
6. The linear regression models is a basic and common predictive analysis used to describe data. It explains the relationship between one dependent variable and one or more independent variables. Usually, regression estimates take the following form:

$$Y = c + \beta_1 * X + \varepsilon,$$

where Y is the dependent variable, c is the constant, representing the value of Y independently of the explanatory variables added, X is the independent variable, β_1 represents the effect of explanatory variable on the dependent variable and finally the ε is the error term, which is the regression residual.

Therefore, regression analysis assumes a dependence or causal relationship between one or more independent variables and the dependent one, fitting the analysis' needs of this study. (Tavakol & Dennick, 2011)

7. Beyond the independent and dependent variables' names, it will be presented the R squares of each model, which is the proportion of variance in the dependent variable that can be justified by explanatory variables, illustrating the strength of association between these two different types of variables. The unstandardized beta (B) represents the slope of the line between the dependent variable and the predictor one and its standard error (SE B) is a standard error of the regression coefficients, being similar to the standard deviation for a mean. To close, the last symbol presented is called as standardized beta, it works similarly to a correlation coefficient and range from 0 to 1, when the effect is positive and 0 to -1 otherwise, having a stronger relationship between the variables when the beta's value is closer to these extreme values.

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9. Appendices

Appendix 1. Survey

Caro(a) participante,

O presente questionário insere-se no âmbito de uma dissertação do Mestrado em Gestão pela Católica *Lisbon School of Business and Economics* e tem como principal objetivo analisar a forma como as características individuais influenciam o compromisso do trabalhador com a entidade empregadora.

Os dados recolhidos serão tratados de forma estritamente anónima e confidencial, sendo apenas utilizados para o referido estudo académico.

O questionário levará, no máximo, 10 minutos a ser respondido e é muito importante que o finalize. Não existem respostas certas ou erradas, pelo que lhe peço que responda de forma espontânea e genuína.

Para facilitar a resposta ao questionário, pode recordar a sua experiência profissional nos últimos 6 meses e responda em função do estado de espírito que teve mais frequentemente durante esse período.

Peço-lhe, por favor, que responda até ao dia 11 de Novembro.

Agradeço desde já a sua colaboração.

Estarei disponível para esclarecer qualquer questão que lhe possa surgir.

Cordialmente,

Ana Isabel Barbosa

e-mail: anaisabel.vbarbosa@gmail.com

Grupo 1

Neste grupo, são-lhe apresentadas afirmações que podem descrever o que pensa sobre si próprio(a) neste momento. Indique, por favor, o seu grau de concordância com cada uma das afirmações seguintes:

(1-Discordo Totalmente, 2-Discordo, 3-Discordo Parcialmente, 4-Concordo Parcialmente, 5-Concordo, 6-Concordo Totalmente, 7-Não se aplica)

	1	2	3	4	5	6	7
Se me encontrar numa situação complicada no trabalho, consigo pensar em várias formas de a resolver.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sinto-me confiante quando é necessário encontrar uma solução para um problema de longo-prazo.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Neste momento, estou a alcançar os objetivos profissionais que defini para mim.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No que respeita ao meu trabalho, olho sempre para o lado positivo das coisas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sinto-me confiante quando é necessário apresentar informação para um grupo de colegas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Normalmente, encaro com naturalidade as coisas mais stressantes do meu trabalho.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No meu trabalho atual, sinto que consigo lidar com várias solicitações ao mesmo tempo.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Habitualmente, em alturas de incerteza no trabalho, tendo a acreditar que o melhor irá acontecer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sinto-me confiante em representar a minha equipa de trabalho em reuniões com a gerência.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sou otimista acerca do que me acontecerá no futuro relativamente ao meu trabalho.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sinto-me confiante quando é necessário discutir metas e objetivos para a minha área de trabalho.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sou capaz de resolver dificuldades no trabalho, conforme elas vão aparecendo.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consigo pensar em diversas formas de alcançar os meus atuais objetivos profissionais.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sinto-me confiante em contribuir para a discussão sobre a estratégia da empresa.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Perante um contratempo no trabalho, sinto dificuldades em recuperar e seguir em frente.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Se algo puder correr mal no meu trabalho, sei que é isso que irá acontecer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Neste trabalho, sou capaz de ficar "por minha conta e risco", se tiver que ser.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As coisas nunca me correm como eu gostaria neste trabalho.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Neste momento, sigo energicamente os meus objetivos profissionais.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consigo lidar com momentos difíceis no trabalho, pois já passei por dificuldades anteriormente.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Existem várias formas de resolver o mesmo problema.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sinto-me confiante quando preciso de estabelecer contacto com pessoas fora da empresa.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No meu trabalho atual, sei que "depois da tempestade vem a bonança".	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Neste momento, considero-me bem sucedido(a) no trabalho.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Grupo 2

Agora, são-lhe apresentadas afirmações que remetem para a sua satisfação com o trabalho. Indique, por favor, o seu grau de concordância com cada afirmação:

(1-Discordo Totalmente, 2-Discordo, 3-Discordo Parcialmente, 4-Concordo Parcialmente, 5-Concordo, 6-Concordo Totalmente, 7-Não se aplica)

	1	2	3	4	5	6	7
Sinto orgulho em pertencer à organização para a qual trabalho.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quando existem dificuldades, o meu supervisor acredita sempre que haverá uma solução.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Na maioria dos dias sinto entusiasmo ao desenvolver o meu trabalho.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sinto que estou a desenvolver as minhas funções cada vez melhor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nos últimos três meses recebi um elogio da supervisão pela qualidade do meu trabalho.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sinto-me útil e reconhecido(a) no meu trabalho.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A minha chefia transmite-me otimismo e confiança mesmo em situações críticas no trabalho.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O meu trabalho é feito de acordo com os padrões de qualidade da empresa.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sei que fazer bem o meu trabalho faz diferença para os resultados da empresa.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A minha chefia mostra-se igualmente confiante ao trabalhar sobre pressão e em circunstâncias desafiantes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tenho realizado o meu trabalho dentro dos tempos previstos.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Para o mesmo problema, o meu supervisor consegue encontrar várias soluções.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Os meus superiores valorizam o meu trabalho.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quando não concordo com alguma decisão da minha chefia, sinto-me à vontade para expressar a minha opinião.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Disponho do meu tempo e exerço o máximo esforço a fim de alcançar melhores resultados para a empresa.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A minha equipa é reconhecida no conjunto da organização como tendo um excelente desempenho profissional.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Posso contar com o apoio da minha chefia direta para as decisões que tomo.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gosto de trabalhar com os meus colegas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A minha chefia dá-me feedback sobre as tarefas que desenvolvo regularmente.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confio na minha hierarquia.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Em geral, encontro-me satisfeito(a) com o meu trabalho.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Grupo 3

Por fim, é-lhe pedida a seguinte informação pessoal, necessária para posterior comparação estatística.

Sexo:

- Masculino
- Femenio

Idade:

- 18 - 30 anos
- 31 - 40 anos
- 41 - 50 anos
- 51 - 60 anos
- Mais de 60 anos

Dimensão da organização para a qual trabalha:

- Micro
- Pequena
- Média
- Grande

Setor de atividade económica da organização:

- Agricultura, produção animal, caça, floresta e pesca
- Indústrias extrativas
- Indústrias transformadoras
- Eletricidade, gás, vapor, água quente e fria e ar frio
- Captação, tratamento e distribuição de água, saneamento, gestão de resíduos e despoluição
- Construção
- Comércio por grosso e a retalho; reparação de veículos automóveis e motociclos

- Transportes e armazenagem
- Alojamento, restauração e similares
- Atividades de informação e comunicação
- Atividades imobiliárias
- Atividades de consultoria, científicas, técnicas e similares
- Atividades administrativas e dos serviços de apoio
- Educação
- Atividades de saúde humana e apoio social
- Atividades artísticas, de espetáculos, desportivas e recreativas
- Outras atividades de serviços

Função que desempenha:

- Gestão/Supervisão
- Operacional

Translated Survey:

Dear participant,

You are invited to participate in an investigation study conducted within a Master Thesis, from Católica-Lisbon School of Business & Economics. The questionnaire main objective is the analysis of the influence of individual's features on individual engagement with organization.

Your participation will involve completing a short survey that will last approximately 10 minutes. To facilitate the response to the questionnaire, you can recall your professional experience in the last 6 months and respond to the mood you had most often during that period.

Your survey responses will be strictly confidential and data from this research will be reported only in the aggregate. Please answer with sincerity and honesty, your response will be crucial for the success of the project.

Please answer until the 11th November.

Thank you very much for your time and support.

If you have questions at any time about the survey or the procedures, you may contact me.

Yours sincerely,

Ana Isabel Barbosa

e-mail: anaisabel.vbarbosa@gmail.com

Group 1

In this group, statements are presented describing what you think about yourself at this time. Please indicate your level of agreement with each of the following statements:

(1-Strongly Disagree, 2-Disagree, 3-Somewhat Disagree, 4-Somewhat Agree, 5-Agree, 6-Strongly Agree, 7-Not Applicable)

	1	2	3	4	5	6	7
If I should find myself in a jam at work, I could think of many ways to get out of it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel confident analyzing a long-term problem to find a solution.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At this time, I am meeting the work goals that I have set for myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I always look on the bright side of things regarding my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel confident presenting information to a group of colleagues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually take stressful things at work in stride.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel I can handle many things at a time at this job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When things are uncertain for me at work, I usually expect the best.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel confident in representing my work area in meetings with management.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm optimistic about what will happen to me in the future as it pertains to work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel confident helping to set targets/goals in my work area.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually manage difficulties one way or another at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can think of many ways to reach my current work goals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel confident contributing to discussions about the company's strategy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I have a setback at work, I have trouble recovering from it, moving on.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If something can go wrong for me work-wise, it will.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can be "on my own," so to speak, at work if I have to.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In this job, things never work out the way I want them to.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At the present time, I am energetically pursuing my work goals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can get through difficult times at work because I've experienced difficulty before.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are lots of ways around any problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I feel confident contacting people outside the company (e.g., suppliers, customers) to discuss problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I approach this job as if “every cloud has a silver lining”.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Right now I see myself as being pretty successful at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Group 2

You are now facing statements that point to your satisfaction with work. Please indicate your level of agreement with each statement:

(1-Strongly Disagree, 2-Disagree, 3-Somewhat Disagree, 4-Somewhat Agree, 5-Agree, 6-Strongly Agree, 7-Not Applicable)

	1	2	3	4	5	6	7
I am proud to belong to this company.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When things are going bad at work, my supervisor always believes that there will be a solution.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually feel enthusiastic in developing my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that I am developing my functions better than before.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last three months I received a praise of supervision for the quality of my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel efficient and recognized in my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When things are uncertain for me at work, my supervision gives me optimism and confidence.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My work is done according to the quality standards of the company.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know that doing my job well makes a difference to the company's results.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My supervision is equally confident in working under pressure and in challenging circumstances.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have accomplished my work tasks within the forecasted deadlines.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For the same problem, my supervisor can find several solutions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My superiors value my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I do not agree with any decision of my supervision, I feel free to express my opinion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I take my time and my maximum effort to achieve the best results for the company.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My team is recognized throughout the organization as having an excellent professional performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

My supervision usually supports the decisions that I took.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy working with my colleagues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My supervision gives me a regularly feedback on the tasks that I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I trust my hierarchy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In general, I am satisfied with my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Group 3

Finally, you are asked for the following personal information, necessary for further statistical comparison.

Gender:

- Male
- Female

Age:

- 18 - 30 years old
- 31 - 40 years old
- 41 - 50 years old
- 51 - 60 years old
- More than 60 years old

Organization's dimension:

- Micro
- Small
- Medium
- Big

Organization's sector of economic activity:

- Agriculture, livestock, hunting, forestry and fishing
- Extractive Industries
- Manufacturing
- Electricity, gas, steam, hot and cold water and cold air
- Collection, treatment and distribution of water, sanitation, waste management and depollution
- Construction
- Wholesale and retail trade; Repair of motor vehicles and motorcycles
- Transport and storage
- Accommodation, catering and similar activities
- Information and communication activities
- Real estate activities

- Consulting, scientific, technical and similar activities
- Administrative and support services activities
- Education
- Human health activities and social support
- Artistic, entertainment, sporting and recreational activities
- Other service activities

Function that performs:

- Management/ Supervision
- Operational

Appendix 2. Olano’s Characterization

Olano Portugal Transportes, SA is just a small part of the Olano’s group. The group Olano is more than 37 years old and it has operations and facilities in European and South American regions, having its headquarters in Saint Jean de Luz, France. This subsidiary of Olano's Group is dedicated to the temperature-controlled storage of products in transit in the food chain, having about 120 refrigerated trucks. Olano Portugal Transportes, SA has its offices in the Business Initiative Logistics Platform of Guarda, in Portugal, taking advantage of this strategic location to make an easy access to the rest of Europe. It is an expanding company, with clear evolution, and well-structured business with Spain and France, holding in this way, a strong experience and a vast knowledge in this sector of business. Its principal values are based on rigor, quality, transparency and competence, which are extended to all employees, business itself and through the international relationships. This firm presents a vertical organization chart, showing hierarchy as a pyramid from top to bottom, being the maximum power in the director.

Appendix 3. ANOVA Tables

Descriptives

PsyCap

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Linkedin	43		
Olano	14	4,6786	,34531	,09229	4,4792	4,8779	4,04	5,21
Total	57	4,7807	,63687	,08436	4,6117	4,9497	2,71	5,88

ANOVA

PsyCap

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	,194	1	,194	,473	,495
Within groups	22,520	55	,409		
Total	22,714	56			

Levene's Test for Quality of Variances

PsyCap

Levene's Statistics	g1	g2	Sig.
3,337	1	55	,073

Appendix 4. Descriptive Statistics

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	22	37,9	38,6	38,6
2	35	60,3	61,4	100,0
Total	57	98,3	100,0	
Omitted System	1	1,7		
Total	58	100,0		

Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	14	24,1	24,6	24,6
2	18	31,0	31,6	56,1
3	15	25,9	26,3	82,5
4	8	13,8	14,0	96,5
5	2	3,4	3,5	100,0
Total	57	98,3	100,0	
Omitted System	1	1,7		
Total	58	100,0		

Dimension

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	20	34,5	35,1	35,1
	3	13	22,4	22,8	57,9
	4	24	41,4	42,1	100,0
	Total	57	98,3	100,0	
Omitted System		1	1,7		
Total		58	100,0		

Function

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	26	44,8	45,6	45,6
	2	31	53,4	54,4	100,0
	Total	57	98,3	100,0	
Omitted System		1	1,7		
Total		58	100,0		

Appendix 5. Factor Analysis Table

Factor Matrix^a

	Factor
	1
PsyCap	,695
PsyCapLeader	,778
LMX	,882
IndPerformance	,778
GroupPerformanc e	,728
WorkEngagement	,839
Motivation	,889
JobSatisfaction	,778

a. 1 factor extracted.