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UNDERSTANDING PERFORMANCE THROUGH ORGANIZATIONAL CULTURE

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<u>Acknowledgments</u>

I.   To Henrique and his/her recently announced brother/sister,

I wrote this research project in a context of great adversity, having in mind, always, how important it could be to prove to you that anything is possible if you get your mind into it.

I deeply wish that you become everything you want to be. It's up to you to want it, madly!

Love you eternally,

Dad

II.   I also would like to address a special acknowledgement to:

Prof. Luis Martins, for the patience and receptivity to all my ideas, but mainly, for guiding me and keeping me on track.

My dear Parents, I owe you everything, so this achievement belongs to both of us.

My beloved wife, my life partner, for making me want to achieve more every day. The world is ours!

My sister in law, for filling much of the gaps caused by my absence within the last months.

All the professionals I had the pleasure to lead, for teaching me so much about management and leadership.

All the professionals that responded to this questionnaire, for wanting to contribute for this small effort of improvement of our beloved working area.

Abstract

Today's businesses world is characterized by its constant rapidly changing environment, facing a very competitive economic context, making it crucial for business success to understand, timely, what drives its results, namely its performance. Organizational performance may be affected by a several number of variables and the understandment of these variables is decisive for business management.

Therefore, this research aims to address and measure organizational performance, understanding if and how much it is influenced by organizational culture, specifically by its types, in case clan culture, adhocracy culture, hierarchy culture and market culture, as well as if employee work engagement mediates the mentioned relationship. That is accomplished through formulation and testing of four research hypotheses.

For that purpose we applied a questionnaire, preceded by a pre-test procedure, to a sample composed by security professionals, receiving a total of 629 valid answers, aiming to measure organizational culture through the application of FOCUS questionnaire, based on the competing values framework, as well as employee work engagement through UWES questionnaire and organizational performance through a perceptual organizational performance questionnaire.

Our results evidence that more than one organizational culture type positively and significantly influences both organizational performance and employee work engagement, as well as that employee work engagement partially mediates the influence of all organizational culture types on organizational performance.

Resumo

O mundo dos negócios de hoje é caracterizado por um ambiente de constante e rápida mudança, num contexto económico de grande competitividade, tornando-se crucial para o sucesso dos negócios o entendimento, atempadamente, do que estimula os seus resultados, nomeadamente a sua performance. A performance organizacional pode ser afetada por várias variáveis e o entendimento destas é decisivo para a gestão de empresas.

Assim sendo, esta pesquisa tem como objetivo abordar e medir a performance organizacional, bem como perceber se e quanto esta é influenciada pela cultura organizacional, especificamente pelas suas tipologias, no caso a cultura de clã, a cultura de adhocracia, a cultura hierárquica e a cultura de mercado, bem como se o engagement[1] dos funcionários medeia a referida relação. Isso será concretizado através da formulação e verificação de quatro hipóteses de investigação.

Com esse propósito, aplicámos um questionário, precedido por um procedimento de pré-teste, a uma amostra constituída por profissionais de segurança, tendo recebido um total de 629 respostas válidas, com o objetivo de medir a cultura organizacional através da aplicação do questionário FOCUS, baseado no modelo de valores competitivos, bem como o engagement dos funcionários através do questionário UWES e a performance organizacional por via de um questionário de performance organizacional percecionada.

Os nossos resultados evidenciam que mais que uma tipologia de cultura organizacional influencia positiva e significativamente a performance organizacional e o engagement dos funcionários bem como que o engagement dos funcionários medeia parcialmente a influência de todas as tipologias de cultura organizacional na performance organizacional.

Palavras-chave: Cultura Organizacional; Performance Organizacional; Engagement dos Trabalhadores; Segurança

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[1] As stated by Teles *et al*. (2017) the word "engagement" has no correspondent word in portuguese language, therefore, following this authors perspective we opt to use the english term, granting that the reader has full understanding of the used concept.

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Glossary

AB - Absorption

AC – Adhocracy culture

CC – Clan culture

CVP – Competing values framework

DE – Dedication

DV – Dependent variable

EWE – Employee work engagement

FOCUS – First organizational culture unified search

GNR – National Republican Guard

HC – Hierarchy culture

IV – Independent variable

MC – Market culture

MLRM – Multiple linear regression model

OC – Organizational culture

OP – Organizational performance

PSP – Public Security Police

SLRM – Simple linear regression model

UWES – Utrecht work engagement scale

VI – Vigor

VIF – Variance inflation factor

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1. Research problem and objectives

Business researchers have been paying increasing attention to the understandment of what characteristics influence the general outcomes of an organization (Zheng *et al.* 2010), and, in fact, the relationship of effectiveness related outcomes and organizational culture "is relatively well established in the literature" (Gregory *et al.* 2009).

Therefore, understanding performance is crucial in managerial terms as it is the basis to ensure that the organization achieves its goals and objectives (Ghalayini and Noble, 1996), meaning that managing an organization involves, "always, in one way or another, managing culture" (Alvesson, 2013: 1), making its understandment an important prerogative when it comes to comprehend and practice business management.

Nevertheless, we found interesting the fact that literature supports that an organization's performance can be predicted by the level of employee work engagement, which gives to this research an important clue in predicting the positivity of a mediating influence of employee work engagement on the organization's performance.

Within this framework, this research project was, firstly, selected and conducted having in mind the principle that must north research projects, described by Lawler *et al*. (1999), which addresses the need for producing research that is useful to both science and practice. Allying the fact that researchers significantly increased their interest on the private security sector (Moreira *et al.* 2015) and the fact that the private security sector has a growing spectrum of intervention and, in fact and for example, in some European countries "employs more staff than the public police" (Button, 2007: 110), its crucial to understand what drives employees performance, namely because it may have a significant impact on our families and businesses lives.

Said that, as we truly believe that this research may have great importance on understanding the outcome of security prosecution activities, which are of great importance because "one of the factors most important to achieving global competitiveness is good-quality security management" (Lee *et al.* 2019: 1151), we seek to understand the impact that organizational culture has on organizational performance and if and how much employee work engagement mediates that relationship.

2. <u>Literature review</u>

Literature review on the concepts of this research will be conducted by addressing its main topics. It is essential for the depth understanding of the state-of-the-art research on its topics and to get to know where is the scientific researched limit through the analysis of literature that is "valid, reliable and repeatable" (Xiao and Watson, 2017: 1). This literature review goal is to get a picture of that limit, creating conditions to go one step beyond it.

2.1. Organizational culture

Organizational culture is a contemporary concept which has been strengthening its popularity as consensus is built on the positive effect that culture has in any business. The first insights on organizational culture promised to build understandment regarding the way that organizations operate and succeed in their businesses (O'Reilly et al., 2014), which makes it a crucial factor when it comes to understand organizations (Dauber et al., 2012; De Witte and Van Muijen, 1999).

The definition of organizational culture is not consensual (Ashkanasy *et al.* 2000; d'Iribarne, 2009; Hofstede *et al.*, 1990; Linnenluecke and Griffiths, 2010; Ruighaver *et al*., 2007) although it is pretty clear that it can operate against or in favour of the organization interests (Warrick, 2017; Westall, 1996). Due to the nature of its concept "culture very quickly became the darling of the management consulting world" (Schneider *et al.*, 2013: 369) and its impact on business can be evidenced by the fact that business historians are increasingly researching the subject in order to practice business history (Rowlinson and Procter, 1999). Within this analytic framework it is important to state that "organizational culture is often cited as the primary reason for the failure of implementing organizational change programs" (Linnenluecke and Grittiths, 2010: 359).

The concept emerged in the 1970s (Linnenluecke and Griffiths, 2010) and have been progressively studied since then. Although there is a great variety of interpretations and approaches to this concept, common ground similarities can be identified in the existent research (Parker and Bradley, 2000).

What makes organizational culture so much valuable is, among others, the fact that "the sustained superior performance" of great companies "may be, at least partly, a reflection of their organizational cultures" (Barney, 1986: 663). Even though there are many studies which positively correlate organizational cultures with employee attitudes and relationship skills, comparatively less approach the direct linkage of organizational culture with objective business outcomes (Beugelsdijk *et al.*, 2006; O'Reilly *et al.*, 2014).

There are many approaches to organizational culture, although the majority of authors define it as "a system of shared values, norms and beliefs, in direct interaction with the organization" (Camara *et al.*, 2016: 153), such as Schwartz and Davis (1981: 33) who states that organizational culture "is a pattern of beliefs and expectations shared by the organization's members", or Sachmann (1992: 140), who refers that "despite the different perspectives on culture in organizations, the focus on cognitive components such as assumptions, beliefs, values, or perspectives as the essence of culture prevails in the literature". The referred assumptions "lie beneath the conscious level for individuals" (Valmohammadi, 2015: 168).

As organizational culture has been subject for research for some decades there are many theories and methodological approaches published. We find opportune to quote Dauber *et al.* (2012: 3) on this, who states that "existing research offers a great variety of models, which attempt to explain relationships between organizational culture and related organizational constructs".

We found very comprehensible the framework introduced by Detert *et al.* (2000) as a consequence of a significant analysis of existent literature on organizational culture, which finds common ground in existent definitions for considering that practices, values, beliefs and underlying assumptions on what is an appropriate behaviour, combined, shape the concept of organizational culture.

Detert *et al.* (2000) researched on the principal dimensions approached within organizational culture research, through understandment of theorization from the main organizational culture theorists, clustering organizational dimensions into eight idealistic dimensions, namely (1) the basis of truth and rationality in the organization, (2) the nature of time and time horizon, (3) motivation, (4) stability versus change / innovation / personal growth, (5) orientation to work, task, and co-workers, (6) isolation versus collaboration / cooperation, (7) control coordination and responsibility, and (8) , orientation and focus internal and/or external.

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It is important to refer that even the segmentation or clustering of organizational culture analysis models has a wide range of scientific statements, which is comprehensively acceptable considering that "the biggest danger in trying to understand culture is to oversimplify it" (Schein, 1999: 21). For the scientific purpose of this research, in order to define a conceptual framework of organizational culture models, we are addressing the ones with extended coverage and recognition within the existent scientific research.

As an attempt to reduce the explanative complexity of the existence of various models of analysis, we could summarize that when it comes to understand organizational culture, a very simple but effective way to distinguish approaches to organizational culture is between "something the organization has" and "something the organization is" (Schneider *et al.*, 2013; Smircich, 1983).

In the "something the organization has" perspective the research focus shall be to compare organizational cultures, for example, from the most effective versus the less effective businesses. When it comes to research within the "something the organization is" perspective, researchers seek to understand the nature of the organizations culture and how it affects their function.

According to Dauber *et al.* (2012) methodological approaches to organizational culture vary within 3 categories:

a. Dimensions approaches: These approaches focus in the measurement of organizational culture within empirical scales, relating it to variables of interest which are normally dependent variables.

b. Interrelated structure approaches: These types of approaches research on the linkage of organizational culture with specific constructs of organizations.

c. Typology approach: These approaches base its framework within key organizational characteristics that define the organization, which may not reflect how these characteristics coexist.

Edgar Schein (2010) proposed that organizational culture can be examined through the analysis of different existence levels. This approach is one of the most quoted models as well as the "one that serves a high degree of abstraction and complexity reduction" (Dauber *et al.*, 2012: 4), making it a good starting point for the introduction of the most recognized organizational

culture models. These levels, aggregated, compose the organizational culture of any organization:

a. <u>Level one: Artifacts</u>: Artifacts are the exposed rituals, language, myths and other forms of something that can be immediately felt by outsiders or newcomers. This level, although, does not explain the occurrence of certain behaviours. Behaviour analysis shall occur in a deeper organizational culture level of analysis, namely the "espoused beliefs and values" level.

b. <u>Level two: Espoused beliefs and values</u>: These values are seen as the reason for the existence of the facts observed within the artifacts level. The organization management sees these values as core to the organization. Although these values may fail to describe the actual and real organizational reality, providing a secure guidance for how to deal with the unexpected (Schneider *et al.* 2013). The espoused beliefs and values can be defined as the "organization's official viewpoints" (Solms and Niekerk, 2010: 478).

c. <u>Level three: Underlying assumptions</u>. These assumptions are not observable or easily identifiable, as they tend to be formed in the early years of the organization and emerge from values and are duly inserted in the organization cultural genetic code. Underlying assumptions can be defined as the inner circle of organizational culture, as these are constructs build upon beliefs and values.
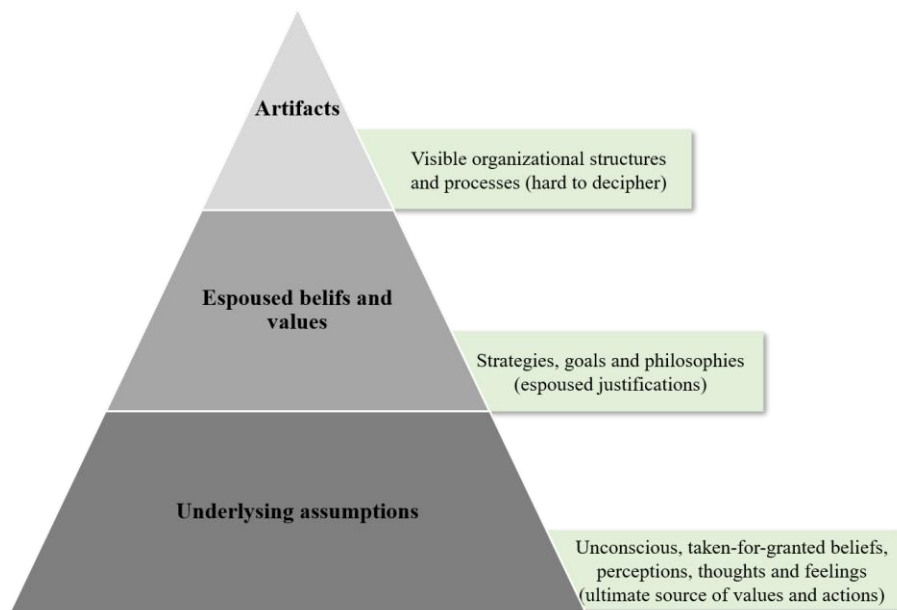
Figure 1 – Schein's model of organizational culture

(Source: Schein, 2010: 26, adapted, 2019)

Around this approach Hatch (1993) added a construct, named as "symbols", which intends to introduce research on the interpretation of organizational symbols and prevails to define the linkage processes between each cultural construct, giving Schein's model a detailed dynamic approach, answering the auto-proposed research question "How is culture constituted by assumptions, values, artifacts, symbols, and the processes that link them?".
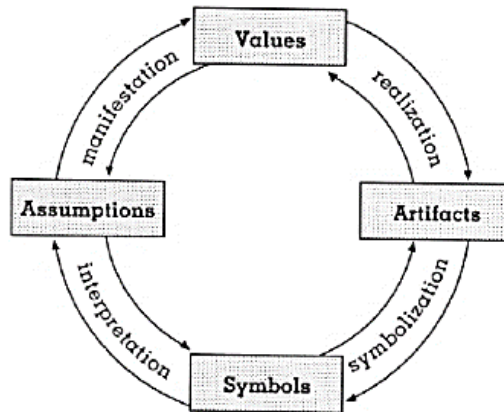
Figure 2 – Hatch's cultural dynamics perspective

(Source: Hatch, 1993: 660)

Hofstede (1990) provided practical evidence of the application of a manifestations related approach to organizational culture, proposing the following manifestations of culture: symbols (objects, words or gestures that carry a meaning to the organization), heroes (alive or dead persons that have a meaningful effect on the organization), rituals (dedicated activities that are recognized by the organization), which are described as practices and values, being subjective, not observable, alternatives to behaviour, but central to organizational culture.
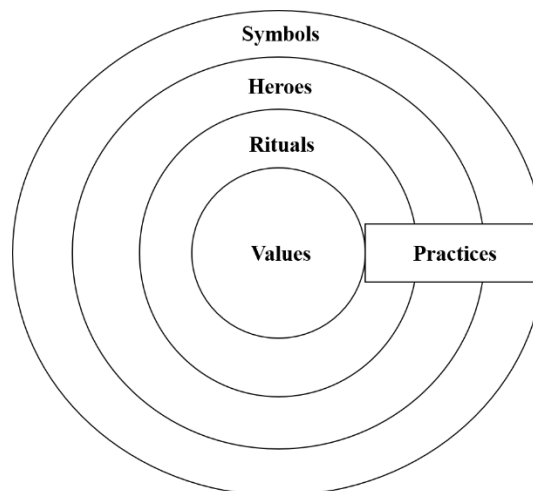
Figure 3 – Hofstede *et al.* manifestations of culture

(Source: Hofstede *et al.*, 1990: 291, adapted, 2019)

These models provide a comprehensive approach to internal environment frameworks although it fails to accept external influences on organizational culture (Dauber *et al.*, 2012).

This idea that results, achievements, success and effectiveness, are related to organizational culture was the first step on making organizational culture such a central management topic. It's within this frame of ideas that Quinn and Rohrbaugh (1983) published the work that would set "competing values framework" (CVF) as "one of the most influential and extensively used models in the area of organizational culture research" (Yu and Wu, 2009: 37).

The CVF has two axes of competing values that cover the principal discussions found in the organizational literature regarding organizational culture and its impact on effectiveness (Cameron and Quinn, 2006: 33-34). It is important to refer that effectiveness and organizational performance are deeply related concepts as the term effectiveness is considered as a measurement of goals accomplishment through an organization's performance (Kirchhoff, 1977).

One of these CVF axes aims to address the focus of the organization and represents the dimension of "flexibility, discretion and dynamism" versus "stability, order, and control" (Cameron and Quinn, 2006: 34). The other axe is related with the orientation of the company productive efforts, contrasting internal focus and integration with external focus and differentiation (Cameron and Quinn, 2006). The organization characterization in terms of the referred cultural types shall describe it as belonging to one of four possible quadrants of cultural types, namely clan culture, adhocracy culture, hierarchy culture and market culture.
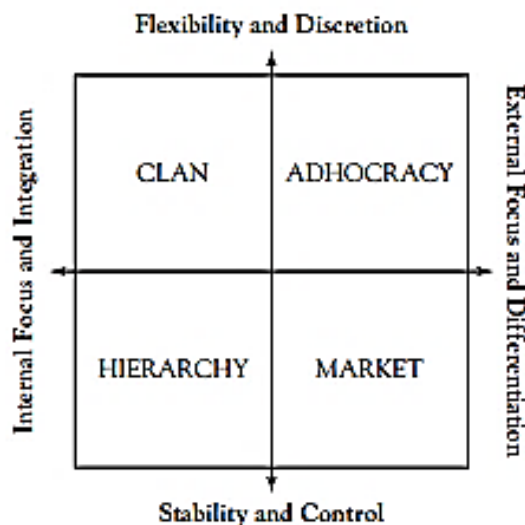
Figure 4 – The competing values framework

(Source: Cameron and Quinn, 2006: 35)

Each of these culture types has, as seen before, associated assumptions, beliefs, values and artifacts, associated with effectiveness criteria considered related to each cultural type.

Culture Type	Assumptions	Beliefs	Values	Artifacts	Effectiveness Criteria
Clan	Human affiliation	People behave appropriately when they have trust in, loyalty to, and membership in the organization	Attachment, affiliation, collaboration, trust and support	Teamwork, participation, employee involvement and open communication	Employee satisfaction and commitment
Adhocracy	Change	People behave appropriately when they understand the importance and impact of the task	Growth, stimulation, variety, autonomy and attention to detail	Risk-taking, creativity and adaptability	Innovation
Hierarchy	Stability	People behave appropriately when they have clear roles and procedures are formally defined by rules and regulations	Communication, routinization, formalization and consistency	Conformity and predictability	Efficiency, timeliness, and smooth functioning
Market	Achievement	People behave appropriately when they have clear objectives and are rewarded based on their achievements	Communication, competition, competence and achievement	Gathering costumer and competitor information, goal setting, planning, task focus, competitiveness and aggressiveness	Increased market share, profit, product quality and productivity

Table 1 – The competing values framework's culture types detailed
(Source: Hartnell *et al.*, 2011: 679, adapted, 2019)

Eijnatten *et al.* (2015: 563) describe the main ideals of each culture type as the following:

a. Clan culture: "Do things together, collaborate (dominant values: flexibility and internal focus)";

b. Adhocracy culture: "Do things first, create (dominant values: flexibility and external focus)"

    c. Hierarchy culture: "Do thing right, control (dominant values: control and internal focus)";

    d. Market culture: "Do things fast, compete (dominant values: control and external focus)";

It's important for the purpose of this research to highlight the fact that organizations, under the light of the competing values framework, incorporate, always, a mix of different types of cultures, that are present in the organization, although "usually one type is more dominant than the others" (Skerlavaj *et al.*, 2006: 348).

The competing values framework has been widely used, and validated, within highly recognized academic publications with the intention to describe organizational culture (Harris and Mossholder, 1996; Hartnell *et al.*, 2011; Howard, 1998; Lee *et al.*, 2016).

2.2. Organizational performance

"For the strategy researcher, the option to move away from defining (and measuring) performance or effectiveness is not a viable one" (Venkatraman and Ramanujam, 1996: 801), as it "lies in the heart of all organizational models" (Martz, 2013: 387), meaning that its study has major importance when it comes to address organizational success (not necessarily in financial terms). Organizational performance is therefore considered as a "fundamental construct in strategic management" (Hamann *et al.* 2013: 67), although there is no conceptual unanimous and authoritative definition of organizational performance (Huang, 2010).

The impact of labour force activities and actions on organizational performance has been object of study for many years, and many studies report a positive association between this practices and perceptual measures of performance (Huselid, 1996).

In fact, due to the immensely fast changing pace that organizations and businesses face, organizations tend to put its best efforts to achieve high performance, in order to attain outcomes such as financial success or economic survival. In this framework it is important to address the fact that along with the growing complexity of businesses and its environment, the analysis criteria of performance had to, naturally, expand its coverage (Tangen, 2004; Valmohammadi and Roshanzamir, 2015).

As seen organizational performance has major importance when it comes to assess business related success, but constructs, measurements, instruments and even concepts vary depending on a range of contextual perspectives.

A wide number of approaches have been used by organizations to measure financial performance. In fact, and in line with the scientific object of this research, happens that "when reviewing the engagement literature, the problem is magnified since different research traditions define "performance" in different ways" (Demerouti and Cropanzano, 2010: 148).

For the purpose of this study and for a holistic and deeper understandment of its concept, we hereby address the main approaches for measuring organizational performance on a non-exclusively financial point of view, which shall give the content and spirit for understanding the concept and the importance of organizational performance.

The "balanced scorecard" is the dominant instrument for measuring performance in large organizations (Hubbard, 2009). It was built upon the belief of Kaplan and Norton (1992) that integration of intangible assets into performance measurements was crucial for a complete assessment.
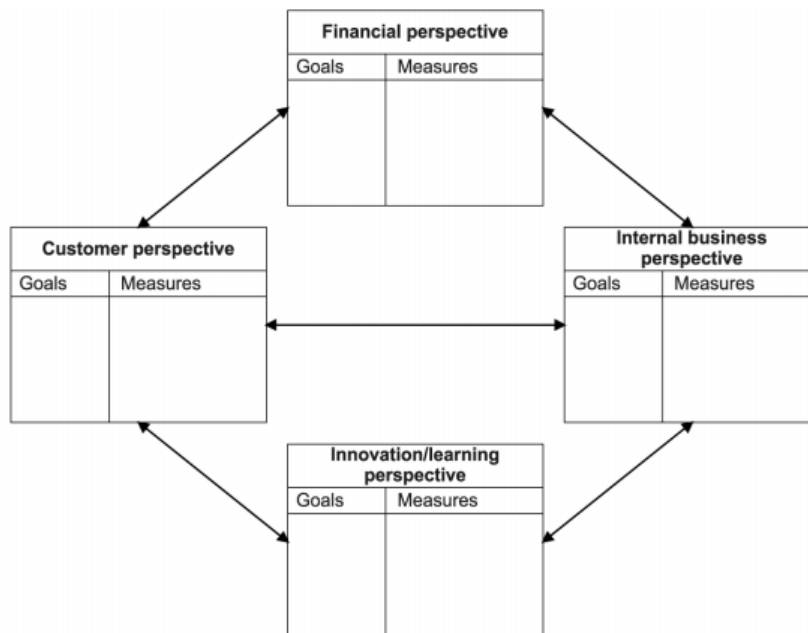
Figure 5 – Balance scorecard

(Source: Cameron and Quinn, 2006: 35)

Although, the "balance scorecard" measures performance excluding the perspective of consensual performance enablers such as the employees, suppliers and the community, as well as a top-down hierarchy process instead of a two-way process (Mooraj *et al.*, 1999).

However, in order to achieve the so-called high-performance, organizations shall understand what affects its organizational performance (Nikpour, 2017). Curiously it happens that when it comes to understand organizational performance financial outcomes are not, at all, the main analysis dimension (Carter and Greer, 2013; Morrow and McElroy, 2007). Surprisingly, this vision is even subscribed within accounting related scientific researches (Vaivio, 1999).

Existing approaches seek to study performance through its process or its outcomes. Processes based approaches aim to understand the behaviours adopted in order to achieve a performance related result, and outcome based approaches aim to understand performance contrasting the achievements with the strategic goals of the organization (Demerouti and Cropanzano, 2010).

On a strategic point-of-view, as described by Venkatraman and Ramanujam (1996), business related performance analysis research presents it's measurements attending to three domains, namely (from a narrowest to a wider perspective): 1) Financial performance domain; 2) Financial + Operational performance; and 3) Organizational Effectiveness (the scientific object of this research and its organizational performance framework of analysis fits within this domain).
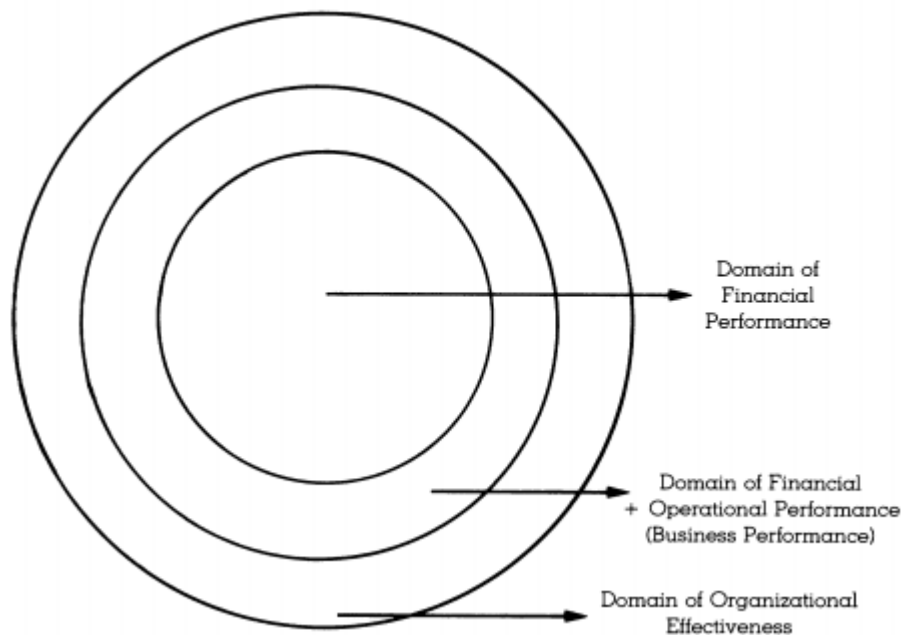
Figure 6 – Domains of business performance
(Source: Venkatraman and Ramanujam, 1986: 803)

A core and very interesting finding about perceived organizational performance is that a substantive amount of produced research reveals that perceptual inferences on organizational performance are moderately to strongly correlated with objective measures of organizational

performance (Delaney and Huselid, 1996; Harris and Ogbonna, 2001; Lee *et al.*, 2019; Park *et al.,* 2015; Reisel *et al.*, 2007).

Said that and given the spirit of the above described theoretical framework, as well as its purpose, organizational performance may be described as a metric of accumulated results that converge to the achievement of the organization goals (Hamon, 2003; Ho, 2008; Robbins and Coulter, 2012; Valmohammadi, 2012; Valmohammadi and Roshanzamir, 2015).

2.3. Employee work engagement

Employee work engagement is relatively little studied although the concept has received a great amount of interest within the past recent years (Saks, 2006), and it is part of the role of key concepts that may lead an organization to success and competitiveness (Gruman and Saks, 2011). Its authorship is attributed to William Kahn (Gruman and Saks, 2011; Schaufeli and Baker, 2010; Teles *et al.*, 2018) which highlighted, by that time, the potential of employee work engagement to boost performance (Kahn, 1990).

The concept is quite new in terms of definition and may be defined as a positive state of mind that opposes to the state of burnout although the literature partially contests the absolute validity of this condition (Teles *et al.*, 2018). Despite the fact that does not exists one universal definition of this term, it happens that the desirability of employee work engagement, as an organizational purpose, is current common ground in its definition (Macey and Schneider, 2008).

The terms "employee engagement" and "work engagement" are similar in its meaning and, therefore, normally used indiscriminately, although, the term "work engagement" is more specific (Schaufeli and Bakker, 2010), due to the fact that "employee engagement" is also framed by the linkage of the employee with the organization itself. Therefore, for the purpose of this research we will use the term "employee work engagement", following the steps of Breevart *et al.* (2014), Demerouti and Cropanzano (2010), Hassan and Ahmed (2011), Hsieh and Wang (2015), and Tims *et al.* (2011).

Given the mentioned framework, we can define employee work engagement as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication and absorption" (Schaufeli *et al.* 2002b: 74).

In order to give the appropriate framework for employee work engagement conceptualization it is important to address the fact that existing literature, in fact, finds common ground in the notion that highly engaged employees present high levels of energetic behaviour (vigor), as well as an emotional (dedication) and cognitive (absorption) relationship with their work (Schaufeli and Bakker, 2010).

Employee work engagement is not limited to a particular event or behaviour, by the contrary it is a progressively desirably deeper emotional and cognitive state (Schaufeli *et al.*, 2002b), but certainly humanistic reasons are not the only ones to justify leaders desire to pursue it (Xu and Cooper-Thomas, 2011).

Employee work engagement have been found to be an effective dimension in achieving revenue growth (Banks, 2006; Harter *et al.*, 2002), productivity (Harter *et* al., 2002), employee retention (Harter *et al.*, 2002), customer satisfaction (Banks, 2006; Harter *et al.*, 2002) customer loyalty (Salanova *et al.*, 2005), employee performance (Alagaraja and Shuck, 2015, Medlin and Green, 2009; Salanova *et al.*, 2005), as well as reducing turnover intention (Schaufeli and Bakker, 2004), operating expenses (Banks, 2006), and, finally but evidently not least, employee burnout (Schaufeli *et al.*, 2002b; Schaufeli *et al.*, 2006).

2.4. Security sector

It's increasingly evident that security breaches may cause severe disruptions in our lives and in our businesses and every organization is, in fact, exposed to risks (Torabi *et al.*, 2016). Therefore organizations shall seek to protect its critical assets, which can be normally characterized as one of the following types of critical assets: "1) Personnel; 2) Infrastructure; 3) Equipment; 4) Information; 5) Activities and operations; and 6) Goodwill, meaning, the incorporeous potential of the company" (Torres, 2015: 24).

As risks cannot be fully eliminated (Krahmann, 2011), businesses often and increasingly seek for private security service providers (Dorn and Levi, 2007; Van Steden and Sarre, 2007) as specialized partners which core business is, in fact, to help mitigate others risks, namely in the spirit of the principles that north the contraction of services in an outsourcing regime, through trusting non-core competencies to specialized companies in order to "explore better its strategic competencies" (Rego *et al.,* 2015: 691).

The Portuguese private security market is worth about 700.000.000,00€ (Norinha, 2019). Considering that Portuguese gross domestic product was evaluated, reporting to 2018, in 203.896.177.000,00€ (PORDATA, 2019), it means that Private Security represents almost 0,34% of the Portuguese gross domestic product (PORDATA, 2019).

In the end of 2017, 37.871 security guards were registered as having a contractual relationship with a private security entity (Private Security Council, 2018), contrasting with the number of 19.413 Agents and Chiefs of the Public Security Police (PSP) and the 21.885 Guards and Sergeants of the National Republican Guard (GNR) (Office of the Secretary General of the Internal Security System, 2018), which are the most significant law enforcement entities (in terms of effective and geographical coverage). It is, thus, affirmable that private security companies have a significant operative capital.

The Annual Report on Private Security (Private Security Council, 2017) also states that private security services activity is being developed in all the national territory, which means that along with a very significant work force, private security companies have significant geographical coverage.

Unlike what is observed in all around the world, in Europe generally police effective outnumber private security officers and Portugal is no exception (Button and Stiernstedt, 2018; Steden and Sarre, 2007). Meanwhile, private security officers are outnumbered by a minimal percentual piece in relation to the public security effective.

The first Portuguese private security company was founded in 1965 (Rodrigues, 2011). In the end of 2017 were registered as being active 87 companies that perform any kind of private security activity, and it is important to refer that 67% of the security personnel is employed by the 10 bigger companies (Private Security Council, 2017).

The activity is legislated by Law 46/2019 of 8th July as well as other specific subsidiary diplomas, and even though the usage of private security services is generally allowed, some types of industries are obligated to adopt security systems that require the disposal of security officers, such as financial institutions, large commercial facilities, professional sportive events, and others.

For the upcoming years private security services tend to cover lower risk functions of our public polices and the public polices tend to focus on the response to the most violent types of

criminality. Therefore, public security and private security shall intensify its cooperation and as a natural consequence private security services will have a more critical role in our society and within our businesses (Gomes, 2008; Rodrigues, 2011).

As in other sectors, private security companies expanded "by responding to a series of fluctuations in the laws of supply and demand" (White, 2011: 96-97), and Portugal is no exception. Although there are some similarities between public and private security services, what deeply distinguish private from public security organizations is that they exist with the objective to serve private interests (Shearing and Stenning, 1981). This position reinforces that today businesses rely its critical assets security to private companies, and, therefore society tend to increasingly rely on these services. Said that, understand private security guard's performance is a subject of the greatest social and economic relevance.

It is also of great significance to allude that private security services tend to keep growing and have a crucial importance to the Portuguese corporative sector, namely because through the contraction of private security services companies have some kind of control over the provision of the service and public policies are not vacationed to provide a security service that has the companies and its interests as a main preoccupation, which makes it, naturally, very desirable for business managers (Rodrigues, 2011).

In order to approach the linkage of this sector with the perceived pertinence of this research, as well as to highlight its relevance for managers and researchers, we address previous research based upon the application of a mistake-proofing framework to security management, which identifies four security approaches, that compose comprehensively the concept of security management, and its corresponding components.

Security approach	Components
Managerial security	Policy, standards and guidelines
	Risk management
	Composing security organization
	Partner management
Physical security	Physical protection devices
	Physical security system
	IT security recovery
Technical security	Network/server security
	Operation security
	Access control

Human security	Recruitment/retirement
	Human resource management
	Education
	Organizational culture

Table 2 – Security management approaches
(Source: Lee *et al.*, 2019: 1156, adapted, 2019)

As seen, the mentioned research highlights the importance of organizational culture as having an impact on the outcome of security management, namely throughout the human security perspective, which focus on the occurrence of incidents by the action or inaction of employees.

This same framework of analysis of security management evidenced that the errors types that more often and significantly have an impact on organizational culture are wilful errors and lack of standards, followed by amateur behaviour, inadvertent action or sloppiness and slowness (Lee *et al.*, 2019).

In the spirit of the above mentioned it is of great importance to study organizational culture effect on organizational performance and if employee work engagement mediates this relationship.

3. Research design, objectives and hypothesis

In the spirit of the topic of this research, which aims to, among others, establish a scientific relationship between organizational culture and a desirable outcome, in case, positive performance, it is crucial to address the importance of our question, once it is what motivates "readers to be more engaged with the material" (Bartunek, 2006: 10). As important we mean valuable for the management practitioners and scholars' community, which, as before mentioned, we strongly believe it is.

The research question that drives the conduction of this research is:

Do organizational culture types influence organizational performance and is this influence mediated by employee work engagement?

In order to validate this research question we purpose to evaluate the validity of the four proposed research questions, which are duly described in the purposed research model and are consequently theoretically framed in order to address its academic validity and relevance.

Hypothesis	Description
H1	One or more organizational culture types positively and significantly influence organizational performance
H2	One or more organizational culture types positively and significantly influence employee work engagement
H3	Employee work engagement positively and significantly influences organizational performance
H4	The influence of all organizational culture types in organizational performance is mediated by the level of employee work engagement

Table 3 – Summary of the research hypothesis

(Source: The author, 2019)

The research model adopted may de contextualized through the following figure:
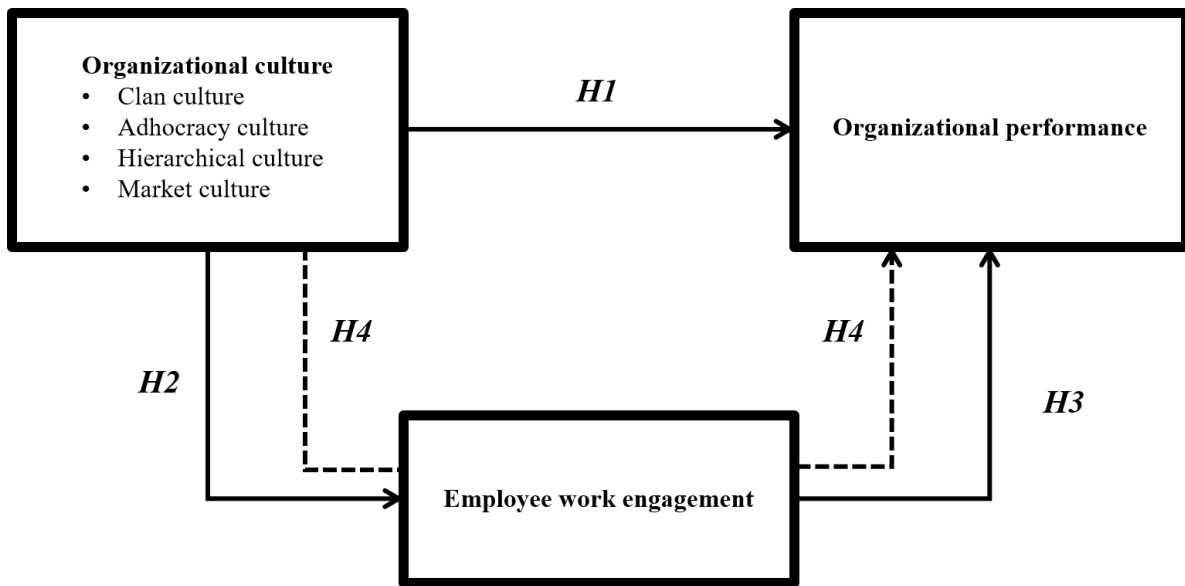
Figure 7 – Dissertation's research model

(Source: The author, 2019)

3.1. Organizational culture and organizational performance

Organizational culture is undeniably related with organizational security management, as security policy development is deeply influenced by organizational culture (Ruighaver et al., 2007) and it is identified as an important component of organizational security management (Lee *et al.* 2019), which comprises the direct outcome of the service provision of security personnel. Said that, in order to understand how to potentiate the outcome of security personnel, it is of particular interest to understand the effect of organizational culture on organizational performance (which is evidently affected by the referred outcome).

Previous researches concluded the existence of a high and significant relation between organizational culture and organizational performance (Naranjo-Valencia *et al.*, 2016; Zheng *et al.* 2010). Literature evidences that organizational culture has a strong influence on organizational performance, advising managers to amplify the addressing of culture as a mean to improve performance, as the organizations efficacy its proportional to the homogeneity and strength of its organizational culture (Camara *et al.*, 2016) and "most scholars and observers now recognize that organizational culture has a powerful effect on the performance and long-term effectiveness of organizations" (Valmohammadi and Roshanzamir, 2015: 170), as "cultures are important determinants of firm performance" (O' Reilly *et al., 2014: 596).

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Existent literature, specifically the one related with our research, describes that organizational culture affects directly the organizational performance (Denision and Mishra, 1995; Gonçalves, 2017; Gregory *et al.*, 2009; Huang, 2010; Lau and Ngo, 2004; Naor *et al.*, 2010; Nikpour, 2017; Schein, 2010; Uzkurt *et al.,* 2013) and others point organizational culture as a crucial concept to consider within future analysis of performance frameworks (Perry-Smith and Blum, 2000), as it clearly is condition for the existence of awareness about the organization performance (Kotter, 2012) and both of the concepts are clearly affiliated (Koperman *et al.* 1990).Said that, it's of crucial importance to managerial practice and security improvement to understand the validity of the following hypothesis:

H1. One or more organizational culture types positively and significantly influence organizational performance.

3.2. Organizational culture and employee work engagement

A great variety of studies establish a relation between the organizational culture and employee work engagement, (Krog, 2014; Naidoo and Martins, 2014; Parent and Lovelace, 2015; Sarangi and Srivastana, 2012; Singh and Mehrzi, 2016; Song et al., 2014), and even that there is a bidirectional effect relationship between this concepts (Devi, 2009).

Nevertheless, organizational culture affects the way employees perceive the organization, meaning that some culture types shall have a positive impact on work engagement and other will have a negative impact (Krog, 2014). In fact, its proven that a work engaged employee presents higher disposal to support the organizations culture (Sundaray, 2011).

Research also has proven that organizational culture has an impact on employee well-being at work (Conceição, 2013), which combined with the fact that employees which perceive that the organization strives for their well-being tend to become more engaged (Saks, 2006), builds an undeniable relationship between organizational culture and employee work engagement.

Based on the above arguments, given the importance of this relationship for a comprehensive understandment of our research model, we propose to validate if:

H2. One or more organizational culture types positively and significantly influence employee work engagement.

3.3. Employee work engagement and organizational performance

The impact of employees on organizational performance is a subject duly addressed in academic researches (Delaney and Huselid, 1996) and previous studies regarding employee work engagement establish the high relevance of this concept when it comes to study organizational outcomes (Bakker and Schaufeli, 2008).

As a matter of fact, inclusive definitions of employee work engagement even tend to address its linkage to performance, such as the one addressed by Kahn (1990: 694), which states that employee work engagement is "the harnessing of organization members selves to their work roles, in engagement, people employ and express themselves physically, cognitively and emotionally during role performances".

As well, integrative approaches to employee work engagement and organizational performance concepts can be often found in academic research (Alagaraja and Shuck, 2015, Medlin and Green, 2009; Salanova *et al.* 2005) as well as positive correlations between this concepts (Bakker and Bal, 2010; Bakker *et al.*, 2004), and can be even described as having a bidirectionally influential behaviour (Mone and London, 2010). Research reveals that employee work engagement is, in fact, a high-level predictor of organizational performance, nevertheless because engaged employees are enthusiastic about the company's success (Markos and Stridevi, 2010).

The fact that employee work engagement leads to enhanced performance is "supported by a growing number of studies demonstrating a positive relationship between engagement and individual performance" (Gruman and Saks, 2011: 133), meaning that in high levels of organizational performance high levels of employee work engagement shall be identified.

Considering the importance of this relationship for a comprehensive understandment of our research model, we propose to verify the validity of the following hypothesis:

H3. Employee work engagement positively and significantly influences organizational performance.

3.4. Organizational culture, organizational performance and employee work engagement

This tripartite relationship of concepts has been studied before (Nwachukwu, 2016; Rofcanin *et al.* 2017). A high level of employee work engagement delivers results that outcome the organizations expectations (Harter *et al.*, 2002), which means that being performance management a high attention dimension of results improvement analysis (Buchner, 2007), is of great relevance to understand how employee work engagement affects the relation between organizational culture and organizational performance. In addition, employee work engagement has been researched before, successfully, as a mediator in the achievement of high levels of organizational performance (Song *et al.* 2014).

Therefore, we purpose ourselves to prove that:

H4. The influence of all organizational culture types in organizational performance is mediated by the level of employee work engagement.

4. <u>Methodology</u>

4.1. Data collection method

Academic researches shall base its conclusions on theoretical based propositions regarding a determined sample, which can only be achieved through the usage of data "from a sample of individuals to make some inference about the wider population" (Kelley *et al.* 2003: 261). There are three possibilities in terms of research approaches, namely qualitative, quantitative or a combined approach (Williams, 2007). We chose to use a quantitative approach, therefore aiming to collect and work on data statistically in order to support or deny hypothetical conclusions based on academically centred hypothesis (Williams, 2007).

The excellence tool for gathering data within quantitative analysis framework is the application of a questionnaire, which is in fact, the most used instrument for data gathering (Wilkinson and Birmingham, 2013).

Given the existence of time and resources constraints we used a non-probabilistic sample, and the questionnaire was distributed through its publication and publicization in social networks and through dissemination to the professionals and companies representative Portuguese bodies. The questionnaires were built up and answered on Qualtrics platform.

The questionnaire was made available in Portuguese language, once it is the mainly used language of the respondents (access to private security profession requires Portuguese nationality or residence authorization, therefore we conclude that all possible respondents are fluent in Portuguese language) and was distributed online. The selected measurement instruments were widely used and validated before in Portuguese language, excepting the instrument that addresses organizational performance, which was subjected to a back-translation process explained in detail in section 4.4.2.

From the 1380 participants that responded to our questionnaire, only 629 participants answered all the questionnaire questions and therefore only these ones are considered as valid for further analysis.

4.2. Pre-test procedure

Immediately before publicization of the questionnaires we conducted a pre-test validation of the questionnaire, as it is the recommended procedure to discover format or content errors (Cooper and Schindler, 2013), ensuring that the final questionnaire is the best possible version of itself (Nichols and Childs, 2009). We applied the purposed questionnaire to a sample of 11 participants, of which 8 of them are Security Guards, 2 of them are Security Directors and one of them is a Security Coordinator. The characterization of the pre-test sample may be consulted in Annex III (Annex III - Pre-test questionnaire sample characterization, the author, 2019).

The pre-test was carried out as an observed session with the respondents, which is highly recommended in order to understand latency measurements that may be useful to improve the questionnaire administration (Czaja, 1998)., and resulted in the following adaptations:

- The introductory question of the instrument used in order to assess organizational culture was developed in order to clarify the respondents of what are these questions intentions in terms of positioning of both the respondent and the organization;

- The classification scale of answers in the web-based questionnaire only appeared once in the head of the question. As questions have up to 16 items, respondents suggested that the information regarding applicable classification of answers should be repeated in the middle of the question, which was done in accordance;

- The original instrument used in order to assess organizational performance, in its original format, intends to evaluate the perception of employees regarding a whole spectrum of corporative dimensions. For example, it aims to assess employee's perception regarding the organization commercial assets, such as services, products and programs, as well as assess satisfaction of both business-to-business and business-to-costumer end users. Therefore, we adapted this questionnaire in order to fit the object of study, namely security personnel working in private security companies;

- The sociodemographic question regarding the educational level of the participants had an answer option for those who have an education inferior than basic education. It happens that private security law imposes that security personnel must have, at least, the minimum national mandatory education, which, in any case, is inferior than basic education. Therefore, this option was removed from the questionnaire;

4.3. Sample design

Our sample is constituted by 629 participants, which makes this the biggest sample of Portuguese private security personnel ever researched. Other researches have addressed the Portuguese private security personnel before (Moreira *et al.*, 2015; Silva and Dias, 2016) but with smaller samples. Our sample is even bigger than the one used by Private Security Council (2018) in order to assess satisfaction with the services provided by the Private Security Department (the regulatory institution for the private security sector).

In terms of gender, 88 are female participants and 541 are male participants.

Graph 1 – Questionnaire participants characterization – Gender

(Source: The author, 2019)

The average age of the participants is 41 years old and range from 20 to 65 years old, having the following distribution:
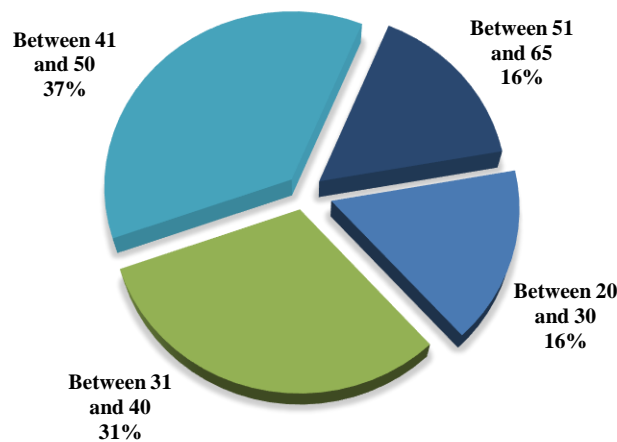
Graph 2 – Questionnaire participants characterization – Age

(Source: The author, 2019)

The great majority of the participants are licensed security guards, meaning 602 of the participants. Regarding the rest, 15 participants are licensed Security Coordinators and 12 participants are licensed Security Directors.
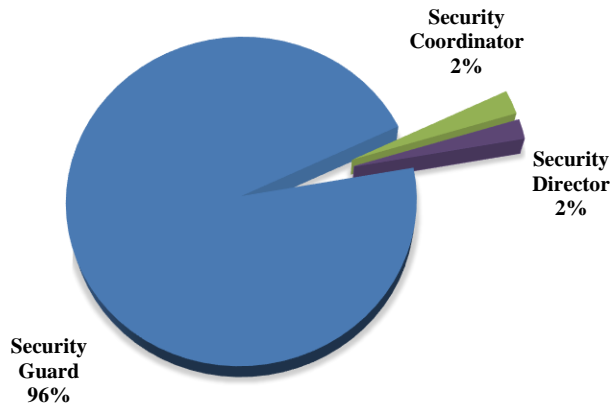
Graph 3 – Questionnaire participants characterization – Function

(Source: The author, 2019)

Regarding the educational level of the participants, we concluded that the great majority, specifically 501 participants, holds secondary education. Regarding the remaining, 72 of the participants hold basic education, 44 hold a bachelor's degree, 10 hold a master's degree and 2 hold a doctoral degree.
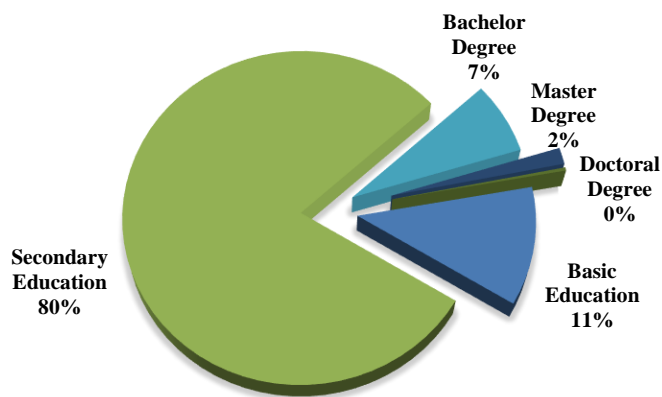
Graph 4 – Questionnaire participants characterization – Education

(Source: The author, 2019)

Participants were also asked about their professional experience and we received answers ranging from less than a year up to 36 years, being the average set in 11 years of professional experience.
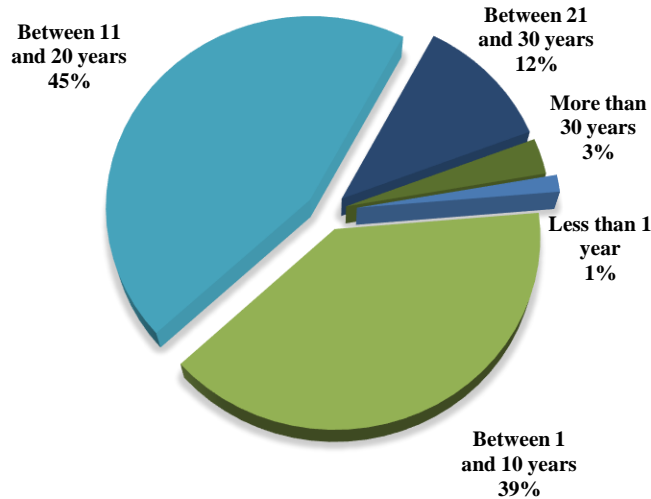
Graph 5 – Questionnaire participants characterization – Professional experience

(Source: The author, 2019)

4.4. Measurement instruments

We built up a questionnaire composed by 37 items. 16 items aim to measure and characterize organizational culture, 9 items aim to measure and characterize employee work engagement, 7 items aim to address organizational performance, and the rest 5 items aim to socio-demographically characterize the participants sample.

The questionnaire may be consulted in English language in the Annex I (Annex I - Questionnaire in English language, the author, 2019) and in Portuguese language in Annex II (Annex II – Questionnaire in Portuguese language, the author, 2019).

4.4.1.   Organizational culture – First organizational culture unified search

The assessment of organizational culture has been applied to several industries, such as telecommunications (Ahmed and Shafiq, 2014), educational institutions (Ng'and'a and Nyongesa, 2012), insurance companies (Gordon and DiTomaso, 1992), restaurant industry (Øgaard *et al.* 2005), logistics (Pepe, 2016), and to the banking industry (Nwachukwu, 2016). Research has also been conducted with focus on specific professional classes, such as police

officers (Gonçalves and Neves, 2011), nurses and professors (Santos and Gonçalves, 2011) and project management practitioners (Yazici, 2011). Others chose to focus on the industry maturity in order select the analysis sample (Calori and Sarnin, 1991) or on the company's dimension (Rose *et al.* 2008).

One transversal certainty that arises from past research, is that "individuals are the enablers, the markers of the organization and its culture" (De Witte and Van Muijem, 1999: 591) therefore it's natural to centre the organization culture analysis on the individuals' level.

The selected instrument to assess organizational culture is the "first organizational culture unified search questionnaire", thereafter, referred as "FOCUS". FOCUS questionnaire (Van Muijen *et al.*, 1999), finds its theoretical framework within the previously addressed competing values framework (Neves, 2000), which have been, in fact, the dominant framework when researching organizational culture (Kwan and Walker, 2004).

This will allow this research to perform what De Witte and Van Muijen (1999) defined as an organizational culture total analysis type, as it analyses person-level organizational culture, not considering as analysis variables the ones related with organizational membership.

This questionnaire suffered several improvements over the years, although, originally, consisted of 40 descriptive and 35 characteristic items (Van Muijen, 1999). Its native framework purposes that the characteristic items shall be answered in a 6-point scale, and we opt to keep this scale as originally purposed.

The selection of FOCUS questionnaire is based upon the fact that it reproduces the structures that frame the competing values framework concepts, which is of great relevance since, as seen, this theory is consensually effective in assessing and characterizing organizational culture.

For the purpose of this research we will use a 16 items questionnaire based on FOCUS, therefore a shortened version, developed and adapted to the Portuguese population by José Gonçalves das Neves (Gonçalves, 2011).

These items are categorized within the four culture types that compose the competing values framework, namely clan culture (Items 2, 11, 12 and 14), adhocracy culture (Items 1, 5, 9 and 15), hierarchy culture (Items 7, 8, 10 and 16) and market culture (Items 3, 4, 6 and 13). The culture type is assessed, through calculation of the mean of the correspondent items, based on the organizational values that individuals consider to match with their organization.

Culture types	Correspondent items
Clan culture (CC)	2, 11, 12 and 14
Adhocracy culture (AC)	1, 5, 9 and 15
Hierarchy culture (HC)	7, 8, 10 and 16
Market culture (MC)	3, 4, 6 and 13

Table 4 – Organizational culture types questionnaire correspondence
(Source: The author, 2019)

This exact same instrument was also used with focus on Portuguese correspondents by Chagas (2018), Conceição (2013), Costa (2018), Felício (2007), Gonçalves and Neves (2011), Gonçalves (2011), Lopes and Baioa (2011), and Pepe (2016).

4.4.2. Organizational performance – Perceived organizational performance

A variety of researches approach the existence of a strong and positive correlation between subjective and objective assessments of organizational performance (Dess and Robinson, 1984; Dollinder and Golden, 1992; Guest *et al.* 2003; Singh, 2004). The subjective ones have been widely used in order to assess performance within organizational contexts (Perry-Smith and Blum, 2000), and applied to specific industries, such as the health care industry (Berberoglu and Secim, 2015).

Shea *et al.* (2012) studied the adoption of perceptual measures of organizational performance and found that, among the studies that opted to use an existent scale, 69% chose to use the one developed by Delaney and Huselid (1996), which makes it the best instrument in order to measure perceived organizational performance. It also has the benefit of taking on consideration the fact that performance must attend to the unique conditions of the respondent's company (Reisel *et al.* 2007).

Delaney and Huselid (1996) developed a questionnaire composed by seven items that aim to address the respondent's perception of their company's performance over the past three years, having in consideration that the answer shall be based upon comparison with similar organizations. These items, together, aim to assess important metrics such as service quality, new business development, capability to retain and attract talent, client satisfaction and organizational relations.

As this questionnaire doesn't have a validated and translated to Portuguese version we adopted the back-translation method from Brislin (1970), which foresees, in this case, the translation of the original questionnaire into Portuguese and then, consequently, we translated it back, by recurring to two linguistic experts, into the source language, granting full technical compliance and literal accuracy.

Given the fact that odd-numbered Likert scales are generally preferred by respondents (Colman *et al*., 1997), as these are the "most commonly used psychometric scales for examining self-reported perceptions and attitudes" (Ho, 2017: 676), and that several researchers successfully assessed perceived organizational performance through the usage of a 5-point Likert scale (Ostroff, 1992; Som, 2008), we opted to use a 5-point Likert-scale, ranging from 1 (much worse) to 5 (much better).

4.4.3.   Employee work engagement – Utrecht work engagement scale

The Utrecht work engagement scale (UWES) was originally developed by Schaufeli *et al*. (2002a) and aims to measure work engagement analysis, through three fundamental aspects, namely vigor, dedication and absorption. Later Schaufeli *et al*.(2006) developed a shortened version, composed by 9 items, therefore entitled by its authors as "UWES-9", facing the need for a smaller version of the questionnaire and maintaining its scientific and operational validity.

When it comes to understand the prospective behavioural outcome of these dimensions, it is important to clarify the following assumptions: 1) High levels of vigor means that the employee presents high levels of energy and availability to put the best effort on a given task; 2) High levels of dedication means that the employee feels a connection with his work and perceives it as important and meaningful; and 3) High levels of absorption equals being immersive and positively enthralled with one's work (Schaufeli *et al*., 2002b).

UWES is currently the most used instrument in order to assess employee work engagement (Teles *et al*., 2017), and has inclusively been applied and validated with Portuguese samples (Garcia, 2012; Schaufeli *et al.*, 2002a; Teles *et al.*, 2017).

According to its authors Schaufeli et al. (2006), the UWES scale can be applied as a unidimensional one-factor model, which measures employee work engagement as an unidimensional and aggregated construct, through its nine items, as well as a three-factor model

which measures employee work engagement through its dimensions (vigor, dedication and absorption) as a multidimensional model.

Dimensions	Correspondent items
Employee work engagement (EWE)	1 to 9
Vigor (VI)	1, 2 and 5
Dedication (DE)	3, 4 and 7
Absorption (AB)	6, 8 and 9

Table 5 – Employee work engagement dimensions questionnaire correspondence

(Source: The author, 2019)

The adoption of one of the mentioned models of researching on employee work engagement have been subject of various and different interpretations in terms of its validity. The UWES authors state that "practically speaking, rather than computing three different scores for VI, DE, and AB, researchers might consider using the total nine-item score as an indicator of work engagement" (Schaufeli *et al.*, 2006: 712), as it, between others, can avoid problems of multicollinearity, which is as well supported (and advisable when applicable the estimation of multiple regressions) by Kulikowski (2017).

As well, Bruin and Henn (2013: 797) conclude that "In summary, the results provide explicit empirical support (…) that researchers should use the total score for the UWES–9, rather than separate subscale scores", as so does Seppälä *et al.* (2009), suggesting the usage, for any practical application except for the estimation of structure equation modelling of confirmatory factor analysis, which is also supported by Kulikowski vision that "there is some evidence that the one-factor structure might be more valid than the three-factor one" (2017: 169).

As introduced, following the option adopted by previous researches (Sonnentag, 2003), the UWES scale, considering the objective purpose of this research, will be therefore considered through its unidimensional characterization, thus adopting the one-factor model of analysis.

The original purposed scale and followed within the research is a 7-point scale comprehended between 0 (Never) and 6 (Yes, everyday).

5. <u>Results</u>

The research results were analysed using IBM SPSS Statistics software (Version 26), following the above-mentioned structure of analysis.

5.1. Reliability analysis

In order to estimate the internal consistency of the purposed scales we used the Cronbach's alpha (Cronbach, 1951), since it is was conceived with the proposition that it should be applied to attitude scales and it is, in fact, "the statistic which is most widely used today for estimating internal consistency" (Gardner, 1995: 285).

This shall be the first estimation of this process as it "absolutely should be the first measure one calculates to assess the quality of the instrument" (Churchill, 1979:68). Although the minimum acceptable value for this statistic has some associated subjectivity, the minimum acceptable range shall be considered to be between .65 and .70 (DeVellis, 1991).

Given the Central Limit Theorem and according to our sample size there is no need for the execution of normality tests (Pestana and Gageiro, 2014: 564), although we highlight that no significant deviation from normality has been observed.

Within this framework we have also performed an item-scale correlation in order to understand items convergence and consequently internal consistency problems, achieving results pointing to a substantial correlation, supported by literature as being recommendable correlations when above .40 (Hays and Hayashi, 1990) although acceptable above .30 (Norusis, 1993), or even .25 (Laureano and Botelho, 2017).

Scales/dimensions	Nº of items	Item-scale correlations (minimum value)	Cronbach's alpha (α)
CVF	16		
Clan culture	4	.495	.857
Adhocracy culture	4	.323	.679
Hierarchy culture	4	.564	.838
Market culture	4	.498	.820
UWES	9	.445	.875
Perceived organizational performance	7	.755	.938

Table 6 – Questionnaire results internal consistency analysis

(Source: The author, 2019)

All the measurement scales present acceptable values for item-scale correlations, meaning that the results evidence acceptable distinctiveness in answers given by participants.

Hill and Hill (2009) presented a classification scale usable for classifiable measurement of Cronbach alpha's, which will be used within this framework to classify our results.

Cronbach's alpha (α)	Level of internal consistency
Lower than .6	Unacceptable
Between .6 and .7	Weak
Between .7 and .8	Reasonable
Between .8 and .9	Good
Higher than .9	Excellent

Table 7 – Cronbach alpha levels of internal consistency
(Source: Hill and Hill, 2009: 149, adapted, 2019)

When it comes to addressing the reliability level of the studied culture types, clan culture (α=.857), hierarchy culture (α=.838) and market culture (α=.820) present a good internal consistency value, and adhocracy culture presents a weak (tending to reasonable), although acceptable, internal consistency (α=.679).

The UWES scale reveals a good (almost excellent) internal consistency (α=.875) and the instrument used in order to measure the perceived organizational performance reveals to have an excellent internal consistency (α=.938).

5.2. Descriptive analysis

We have estimated the value that characterizes each dimension under the scope of analysis.

	Min.-Máx.	Mean	Std. deviation
Organizational culture (OC)			
Clan culture (CC)	1-6	3.543	1.176
Adhocracy culture (AC)	1-6	3.360	0.984
Hierarchy culture (HC)	1-6	3.734	1.170
Market culture (MC)	1-6	3.906	1.083
Employee work engagement (EWE)	**0-6**	**3.057**	**1.518**
Organizational performance (OP)	**1-5**	**2.972**	**0.954**

Table 8 – Descriptive statistic results
(Source: The author, 2019)

When it comes to characterize organizational culture we have found low differentiated perceptions among organizational culture types, being market culture the most representative one (M=3.906), followed by hierarchy culture (M=3.734), then clan culture (M=3.543), and adhocracy culture is the least representative organizational culture type (M=3.360).
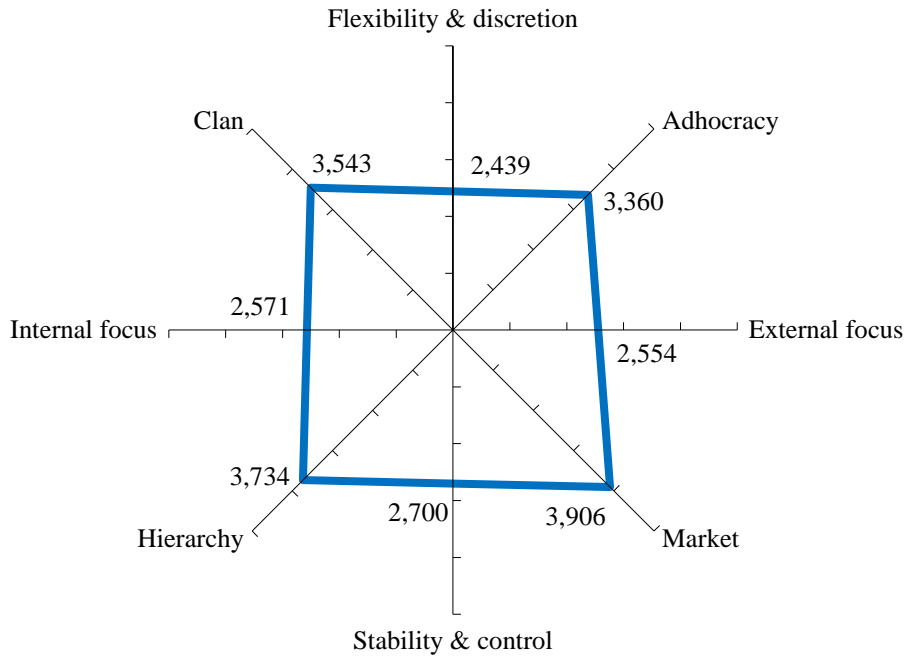
Graph 6 – Characterization of the sample's organizational culture

(Source: The author, 2019)

Although our model of analysis of employee work engagement follows a one-factor model scope, we find interesting and even advisable to analyse the responses given in order to characterize employee work engagement, realizing that vigor is the predominant dimension identified by the respondents (M=3.243), followed by dedication (M=2.979) and, not by far, by absorption (M=2.950). Therefore, the mean of general employee work engagement is 3.057.
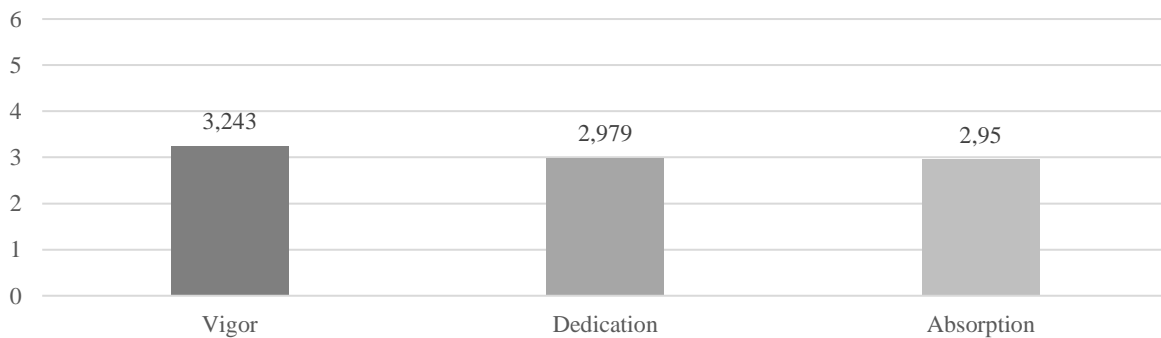
Graph 7 – Employee work engagement dimensions mean

(Source: The author, 2019)

Organizational performance presents a mean value of 2.972, being the dimension with the lowest standard deviation.

5.3. Correlational analysis

Correlational analysis aims to study the nature of a relationship between two (or more) variables. For this purpose, we estimated the Pearson correlation coefficient, which is a parametric correlation, which was found to be the adequate analysis for studying the correlational relationship between the variables of this research (Hill and Hill, 2009). Correlation coefficient values vary between -1 and 1, being -1 a negative and perfect correlation, and 1 being a positive and perfect correlation (Pinto and Curto, 2010).

	1	2	3	4	5	6
1. Clan culture	1	.719***	.719***	.725***	.318***	.498***
2. Adhocracy culture		1	.652***	.735***	.272***	.403***
3. Hierarchy culture			1	.730***	.226***	.405***
4. Market culture				1	.283***	.399***
5. Employee work engagement					1	.314***
6. Organizational performance						1

*** Correlation is significant at the .001 level

Table 9 – Pearson correlations

(Source: The author, 2019)

Pestana and Gageiro (2014) suggest that it is possible to classify linear associations according to its correlation value, although this criterion is normally used in research fields where science is more developed, meaning that in social sciences this classification might not be so linear. Although, for the purpose of this study, we will adopt this classification criteria in order to characterize the intensity of the estimated correlations.

Correlation value	Linear association classification
Lower than .2	Very weak
Equal or higher than .2 and lower than .4	Weak
Equal or higher than .4 and lower than .7	Moderated
Equal or higher than .7 and lower than .9	High
Equal or higher than .9	Very High

Table 10 – Linear association classification

(Source: Pestana and Gageiro, 2014: 748, adapted, 2019)

We observe positive highly significant correlations ($\rho<.001$) of moderated intensity between all organizational culture types and organizational performance (rCC=.498; rAC=.403; rHC=.405; and rMC=.399 [market culture presents a value marginally inferior to .4, therefore is considered, for qualification as a moderated intensity correlation, as being equal to .4]). Therefore, clan culture, adhocracy culture, hierarchy culture and market culture tend to be associated, with moderated intensity, to organizational performance and the opposite happens with equal validity.

As well, we conclude that all organizational culture types reveal positive highly significant correlations ($\rho<.001$) of weak intensity with employee work engagement (rCC=.318; rAC=.272; rHC=.226; and rMC=.283), being clan culture the culture type with higher intensity relation. Therefore, clan culture, adhocracy culture, hierarchy culture and market culture tend to be associated, with low intensity, to employee work engagement and the opposite happens with equal validity.

Employee work engagement and organizational performance reveal to have a positive highly significant ($\rho<.001$), with low intensity, correlation (r=.314), revealing that employee work engagement and organizational performance tend to be mutually associated.

5.4. Linear regression analysis

The purpose of a linear regression is to analyse the relationship between a dependent variable (Y) and one or more independent variables (X). If the analysis is done considering one independent variable it is called a simple linear regression model (SLRM), or if it considers more than one independent variable it is called a multiple linear regression model (MLRM) (Pestana and Gageiro, 2014).

We started every hypothesis testing by confirming that all of the conditions required for the estimation hold the required compliance, specifically the followings (Laureano, 2019):

   a) Linearity in β parameters must be observed within the relationship of both dependent and independent variables;
   b) The residual errors can have positive or negative values, although its mean shall be zero;
   c) Errors variance is always constant for any value of the independent variable, therefore verifying homoscedasticity condition

d) Errors shall be distributed independently within its similar;

e) Errors values follow a normal distribution;

f) No multicollinearity exists within our independent variables.

Those conditions were verified compliant both through graphical analyzation of the standardized residuals assuring distribution normality and constant variation, as well as through analysis of the Durbin-Watson (required ≈ 2) and the variance inflation factor (VIF) statistics (required <5). For the purpose of the following tests we consider significant the p values inferior than .05.

Referring to our hypothesis 1, the MLRM has revealed to be statistically significant ($F_{(2, 626)}=105.838$, $p<.001$), presenting as significant predictors of organizational performance two of the total four types of organizational culture, namely clan culture (B=.347, t=8.607; $p<.001$) and hierarchy culture (B=.080, t=1.968; $p<.05$).

The adhocracy culture and market culture have been excluded from our model for not explaining significantly organizational performance ($p>.05$).

Clan culture and hierarchy culture types explain 25% of organizational performance variance ($R^2_{Ajust.}=.250$).

	Variables *	B	SE	Beta (b)	p
Included	*Constant*	1.444	.115		.000
	Clan culture (CC)	.347	.040	.428	.000
	Hierarchy culture (HC)	.080	.041	.098	.049
Excluded	Adhocracy culture (AC)	.071			.169
	Market culture (MC)	.046			.409

* Dependent variable: Organizational performance ($R^2_{Ajust.}=.250$; $F_{(1, 626)}= 105.838$, $p<.001$)

Table 11 – MLRM for OP (IV: OC)

(Source: The author, 2019)

Clan culture is the organizational culture type that reveals higher influence (by far) on organizational performance ($\beta=.428$) followed by hierarchy culture ($\beta=.098$). These estimations may be characterized by the following equation:

$$OP = 1.444 + 0.347 * CC + 0.080 * HC \qquad (1)$$

Equation 1 – Predictive equation of OP (IV: OC)

(Source: The author, 2019)

These findings can be represented through the following graphic description:
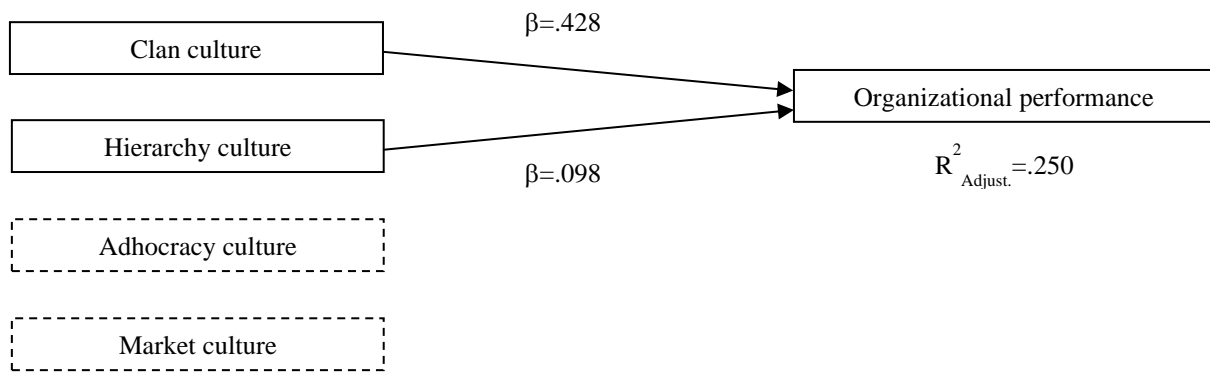
Figure 8 – Representation of OC types influence on OP

Source: (The author, 2019)

We are now in conditions to conclude that all organizational culture types positively influence organizational performance, being the clan culture and hierarchy culture types the ones that significantly influence organizational performance, meaning that **H1 is accepted**.

Referring to our hypothesis 2, the MLRM has revealed, as well, to be statistically significant ($F_{(2, 626)}=37.365$, $p<.001$), presenting as significant predictors of employee work engagement, two of the total four types of organizational culture, namely clan culture (B=.307, t=4.323; $p<.001$) and market culture (B=.155, t=2.017; $p<.05$). Clan culture and market culture explain 10,4% of organizational performance variance ($R^2_{Ajust.}=.104$).

The adhocracy culture and hierarchy culture have been excluded from our model for not explaining significantly organizational performance (p>.05).

	Variables *	B	SE	Beta (b)	P
Included	*Constant*	1.365	.217		.000
	Clan culture (CC)	.307	.071	.237	.000
	Market culture (MC)	.155	.077	.111	.044
Excluded	Adhocracy culture (AC)	.051			.406
	Hierarchy culture (HC)	.065			.283

* Dependent variable: Employee work engagement ($R^2_{Ajust}=.104$; $F_{(2, 626)}= 37.365$, $p<.001$)

Table 12 – MLRM for EWE (IV: OC)

Source: (The author, 2019)

Clan culture is the culture type that reveals higher influence (by far) on organizational performance ($\beta=.237$) followed by market culture ($\beta=.111$). These estimations may be characterized by the following equation:

$$EWE = 1.365 + 0.307 * CC + 0.155 * MC \qquad (2)$$

Equation 2 – Predictive equation of EWE (IV: OC)

Source: (The author, 2019)

These findings can be represented through the following graphic description:
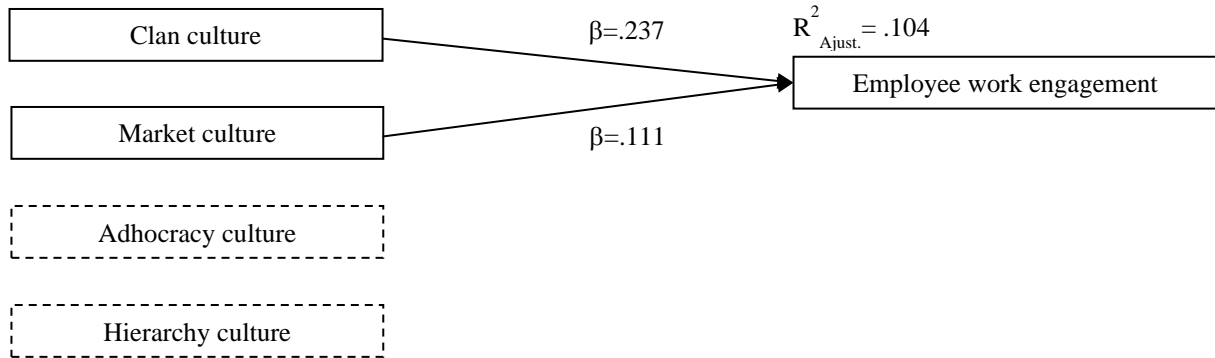
Figure 9 – Representation of OC types influence on EWE

Source: (The author, 2019)

After the above-mentioned estimations, we are in conditions to affirm that all organizational culture types positively influence employee work engagement, being the clan culture and market culture the ones that significantly influence employee work engagement. Therefore, **H2 is accepted**.

Referring to our hypothesis 3, the SLRM reveals to be statistically significant (B=.197, t=8.281; $p<.001$), therefore employee work engagement is a significant predictor of organizational performance, influencing it significantly (β=.314), explaining 9,7% of organizational performance variance ($R^2_{Ajust.}$=.097).

Variable *	B	SE	Beta (b)	P
Constant	2.269	.081		.000
Employee work engagement (EWE)	.197	.024	.314	.000

* Dependent variable: Organizational performance (R^2_{Ajust}=.097; $F_{(1, 627)}$= 68.569, $p<.001$)

Table 13 – SLRM for OP (IV: EWE)

Source: (The author, 2019)

These estimations may be characterized by the following equation:

$$OP = 2.269 + 0.197 * EWE \qquad (3)$$

Equation 3 – Predictive equation of OP (IV: EWE)

Source: (The author, 2019)

These findings can be represented through the following graphic description:
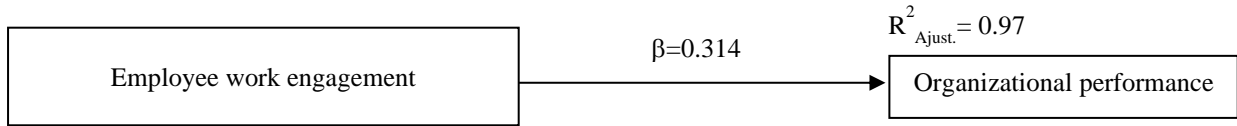
Figure 10 – Representation of EWE influence on OP

Source: (The author, 2019)

We are now in conditions to conclude that employee work engagement positively and significantly influence organizational performance. Thus, **H3 is accepted**.

Referring to our hypothesis 4, in order to understand the mediating effects of employee work engagement on the influence that organizational culture types have on organizational performance we base our mediation model on the conceptualization originally proposed by Baron and Kenny (1986: 1177) for analysis of similar frameworks.

Steps	Description	Expectable outcome for confirming mediational hypothesis	Correspondence to Path (as constructed by Baron and Kenny (1986)
First	"Regressing the mediator on the independent variable"	"The independent variable must affect the mediator"	Path A
Second	"Regressing the dependent variable on the independent variable"	"The independent variable must be shown to affect the dependent variable"	Path C
Third	"Regressing the dependent variable on both the independent variable and on the mediator"	"The effect of the independent variable on the dependent variable must be less" than in the second step	Path B and Path C'

Table 14 – Baron and Kenny mediation model

(Source: The author, 2019)

For proper systematization of our estimations it is important to define our variables according to its function within this framework:

Variables identification	Variables classification
Organizational culture	Independent variable
Employee work engagement	Mediating variable
Organizational performance	Dependent variable

Table 15 – Mediation model variables identification and classification

(Source: The author, 2019)

This sequence of constructs leads us to the construction of a mediation model which can be, based on the research developed by Preacher and Hayes (2004), duly characterized as the following:
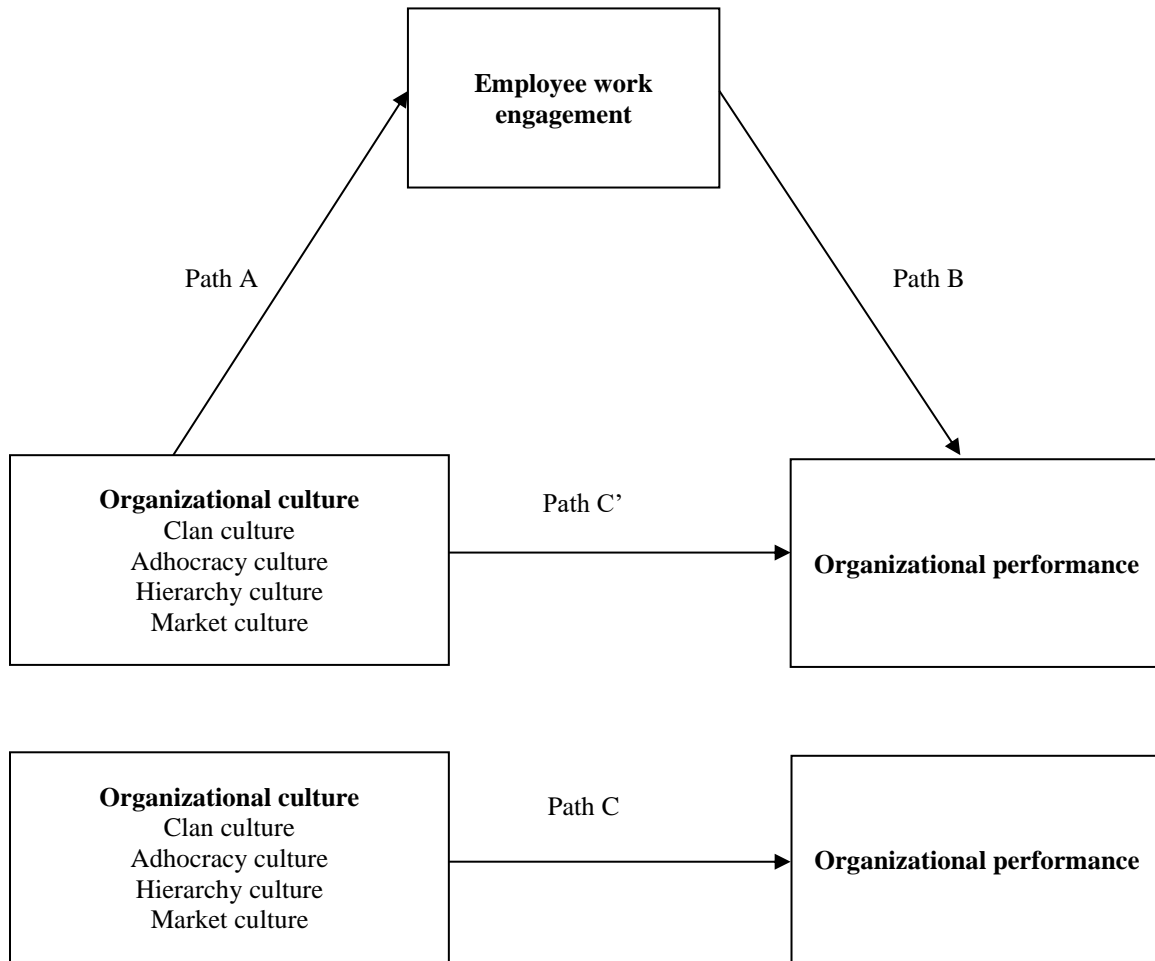
Figure 11 – Mediation model

(Source: The author, 2019)

Summarizing the conditions previously introduced for mediation to occur, given the fact that the variables described in Table 15 must have a significant influence on the ones related with the mediation model, occurs that B regression coefficients must be significantly different from 0, and cumulatively have *p* values higher than .05.

Our mediation model variables shall also be characterized by its effect on the dependent variable and its relationship within the mediation model. Therefore, we characterize the typology of effect within our mediation model according to the interaction between the paths described in figure 11.

Mediation Path's (according to figure 11)	Mediation model effect
Path C	Total effect
Path C'	Direct effect
Path A + Path B	Indirect effect

Table 16 – Mediation model effects

(Source: Hayes, 2009: 718, adapted, 2019)

For the purpose of this hypothesis testing we used "PROCESS" macro in IBM SPSS Statistics Software, specifically its model 4, as being the adequate for the purpose of our hypothesis testing (Hayes, 2013). Estimations have been performed considering a 5.000 bootstrap and a 95% confidence level. The ahead reported B coefficients are non-standardized.

Aiming to fully address our research question we estimated the mediation model by setting all of the four types of organizational culture as independent variables, expecting to understand the mediation effect of employee work engagement on the relational influence of each organizational culture type on organizational performance.

Considering clan culture as an independent variable, it reveals, in its total effect, to have a significant influence on organizational performance $(F_{(1, 627)}=206.854, p<.001)$ and explains 24,8% of the variation of organizational performance $(R^2=.248)$, influencing it positively $(B=.404, t=14.383, p<.001)$.

Evidence is found that, referring to the direct effect, clan culture positively and significantly influences employee work engagement $(B=.410, t=8.386, p<.001)$, which, in turn, influences positively and significantly organizational performance $(B=.109, t=4.829, p<.001)$.

Clan culture direct effect influence on organizational performance is significative as well $(B=.360, t=12.345, p<.001)$. This effect significantly $(F_{(2, 626)}=118.766, p<.001)$ explains 27,5% $(R^2=.275)$ of the variation on organizational performance.

The indirect effect of this mediation model reveals to be positive and highly significant $(B=.045, p<.001, 95\%$ Boot CI=.026, .068). In this case, this effect explains 7,2% of the variation on organizational performance $(R^2=.072)$

Predictive variables	Employee work engagement		Organizational performance	
	B	SE	B	SE
Total effect				
Constant			1.540***	.105
Clan culture			.404***	.028
			R^2=.248	
			$F_{(1, 627)}$=206.854	
Direct effect				
Constant	1.604***	.183***	1.365***	.109
Clan culture	.410***	.049***	.360***	.291
Employee work engagement			.109***	.225
	R^2=.101		R^2=.275	
	$F_{(1, 627)}$=70.317		$F_{(2, 626)}$=118.766	
Indirect effect				
	B	SE	Inf. 95% Bootstrap CI	Sup. 95% Bootstrap CI	R^2
	.045***	.011	.026	.068	.072

*** Correlation is significant at the .001 level

Table 17 – Mediation model regression results (IV: Clan culture)

(Source: The author, 2019)

Given the mentioned results we are in conditions to affirm that clan culture has a positive and highly significant effect on organizational performance, being this relationship partially mediated by employee work engagement.
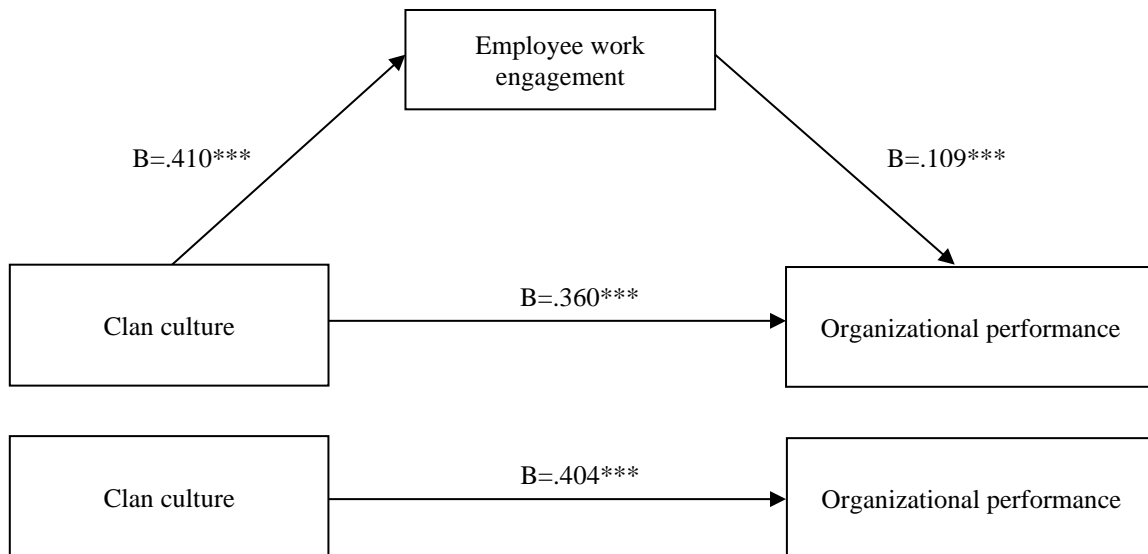
*** Correlation is significant at the .001 level

Figure 12 – Mediation model graphic characterization (IV: Clan culture)

(Source: The author, 2019)

<u>Considering adhocracy culture as an independent variable,</u> its total effect on organizational performance evidences to have a significant influence ($F_{(1, 627)}$=121.720, $p<.001$) and explains 16,3% of the variation of organizational performance (R^2=.163), influencing it positively (B=.391, t=11.033, p<.001).

Evidence is found that adhocracy culture positively and significantly influences employee work engagement (B=.419, t=7.066, $p<.001$), which, in turn, influences positively and significantly organizational performance (B=.139, t=5.972, $p<.001$).

Adhocracy culture direct effect influence on organizational performance is significative as well (B=.333, t=9.286, p<.001). This effect significantly ($F_{(2, 626)}$=82.056, $p<.001$) explains 20,8% (R^2=.208) of the variation on organizational performance.

The indirect effect of this mediation model reveals to be positive and highly significant (B=.058, $p<.001$, 95% Boot CI=.035, .088). In this case, this effect explains 5,3% of the variation on organizational performance (R^2=.053).

Predictive variables	Employee work engagement		Organizational performance	
	B	SE	B	SE
Total effect				
Constant			1.658***	.124
Adhocracy culture			.391***	.035
			R^2=.163	
			$F_{(1,627)}$=121.720	
Direct effect				
Constant	1.649***	.208***	1.430***	.127
Adhocracy culture	.419***	.059***	. 333***	.023
Employee work engagement			. 139***	.036
	R^2=.074		R^2=.208	
	$F_{(1, 627)}$=49.929		$F_{(2, 626)}$=82.056	
Indirect effect				
	B	SE	Inf. 95% Bootstrap CI	Sup. 95% Bootstrap CI	R^2
	0.058***	.013	.035	.088	.053

*** Correlation is significant at the .001 level

Table 18 – Mediation model regression results (IV: Adhocracy culture)

(Source: The author, 2019)

Therefore, adhocracy culture has a positive and highly significant effect on organizational performance, being this relationship partially mediated by employee work engagement.
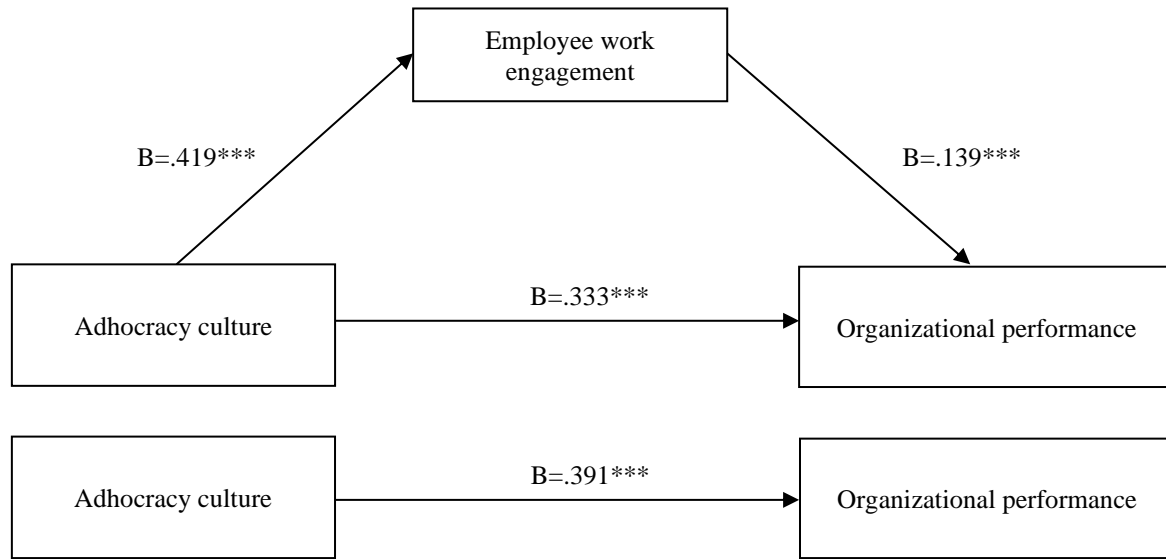
*** Correlation is significant at the .001 level

Figure 13 – Mediation model graphic characterization (IV: Adhocracy culture)

(Source: The author, 2019)

<u>Considering hierarchy culture as an independent variable</u>, its total effect influence on organizational performance evidences to be significant $\left(F_{(1,\,627)}=123.236, p<.001\right)$ and explains 16,4% of the variation of organizational performance ($R^2=.164$), influencing it positively ($B=.331$, $t=11.101$, $p<.001$).

Our estimations also reveal that hierarchy culture positively and significantly influence employee work engagement ($B=.293$, $t=5.806$, $p<.001$), which, in turn, influences positively and significantly organizational performance ($B=.147$, $t=6.454$, $p<.001$).

Hierarchy culture direct effect influence on organizational performance is significative as well ($B=.287$, $t=9.702$, $p<.001$). This effect significantly ($F_{(2,\,626)}=86.438$, $p<.001$) explains 21,6% ($R^2=.216$) of the variation on organizational performance.

The indirect effect of this mediation model reveals to be positive and highly significant ($B=.043$, $p<.001$, 95% Boot CI$=.026$, .066). In this case, this effect explains 4,6% of the variation on organizational performance ($R^2=.046$).

Predictive variables	Employee work engagement		Organizational performance	
	B	SE	B	SE
Total effect				
Constant			1.738***	.117
Hierarchy culture			.331***	.030
			R^2=.164	
			$F_{(1,627)}$=123.236	
Direct effect				
Constant	1.963***	.198***	1.449***	.121
Hierarchy culture	.293***	.051***	.287***	.022
Employee work engagement			.147***	.030
	R^2=.051		R^2=.216	
	$F_{(1, 627)}$=33.704		$F_{(2, 626)}$=86.438	
Indirect effect				
	B	SE	Inf. 95% Bootstrap CI	Sup. 95% Bootstrap CI	R^2
	.043***	.010	.026	.066	.046

*** Correlation is significant at the .001 level

Table 19 – Mediation model regression results (IV: Hierarchy culture)

(Source: The author, 2019)

Hierarchy culture has, therefore, a positive and highly significant effect on organizational performance, being this relationship partially mediated by employee work engagement.

*** Correlation is significant at the .001 level
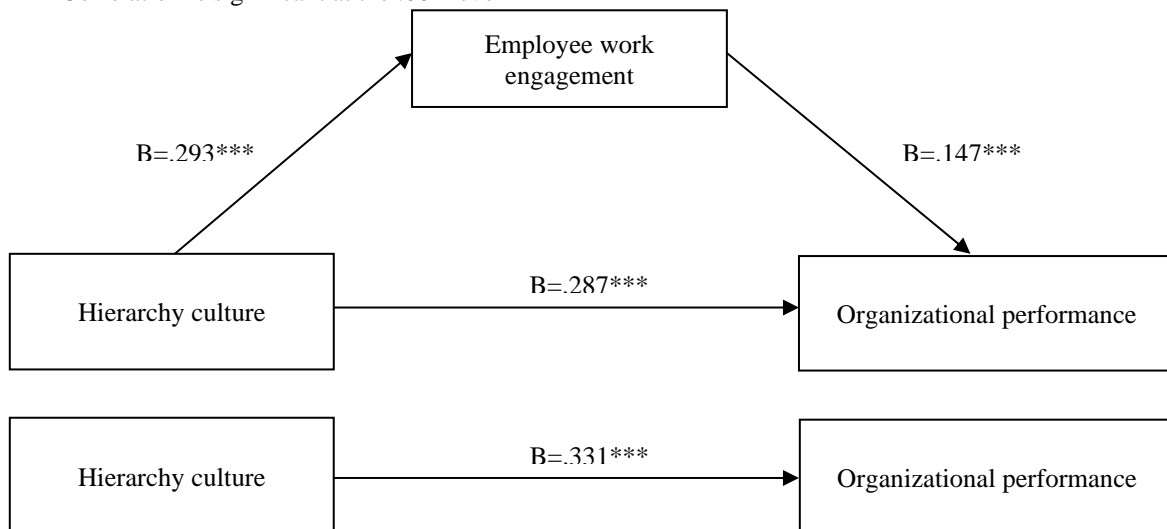
Figure 14 – Mediation model graphic characterization (IV: Hierarchy culture)

(Source: The author, 2019)

<u>Considering market culture as an independent variable,</u> our estimations resulted in evidence that, within its total effect, there is a significant influence on organizational performance $(F_{(1,627)}=118.954$, $p<.001)$ and explains 16,0% of the variation of organizational performance $(R^2=.160)$, influencing it positively (B=.352, t=10.907, $p<.001$).

Our findings also point that market culture positively and significantly influence employee work engagement (B=.397, t=7.383, $p<.001$), which, in turn, influences positively and significantly organizational performance (B=.137, t=5.876, $p<.001$).

Market culture direct effect influence on organizational performance is significative as well (B=.297, t=9.076, p<.001). This effect significantly $(F_{(2,626)}=79.919$, $p<.001)$ explains 20,3% $(R^2=.203)$ of the variation on organizational performance.

The indirect effect of this mediation model reveals to be positive and highly (B=.055, $p<.001$, 95% Boot CI=.034, .081). In this case, this effect explains 5,5% of the variation on organizational performance $(R^2=.055)$

Predictive variables	Employee work engagement		Organizational performance	
	B	SE	B	SE
Total effect				
Constant			1.597***	.131
Market culture			.352***	.032
			$R^2=.160$	
			$F_{(1,627)}=118.954$	
Direct effect				
Constant	1.508***	.218***	1.390***	.132
Market culture	.397***	.054***	.297***	.023
Employee work engagement			.137***	.033
	$R^2=.080$		$R^2=.203$	
	$F_{(1,627)}=54.505$		$F_{(2,626)}=79.919$	
Indirect effect				
	B	SE	Inf. 95% Bootstrap CI	Sup. 95% Bootstrap CI	R^2
	.055	.012	.034	.081	.055

*** Correlation is significant at the .001 level

Table 20 – Mediation model regression results (IV: Market culture)

(Source: The author, 2019)

Therefore, we affirm that market culture has a positive and highly significant effect on organizational performance, being this relationship partially mediated by employee work engagement.
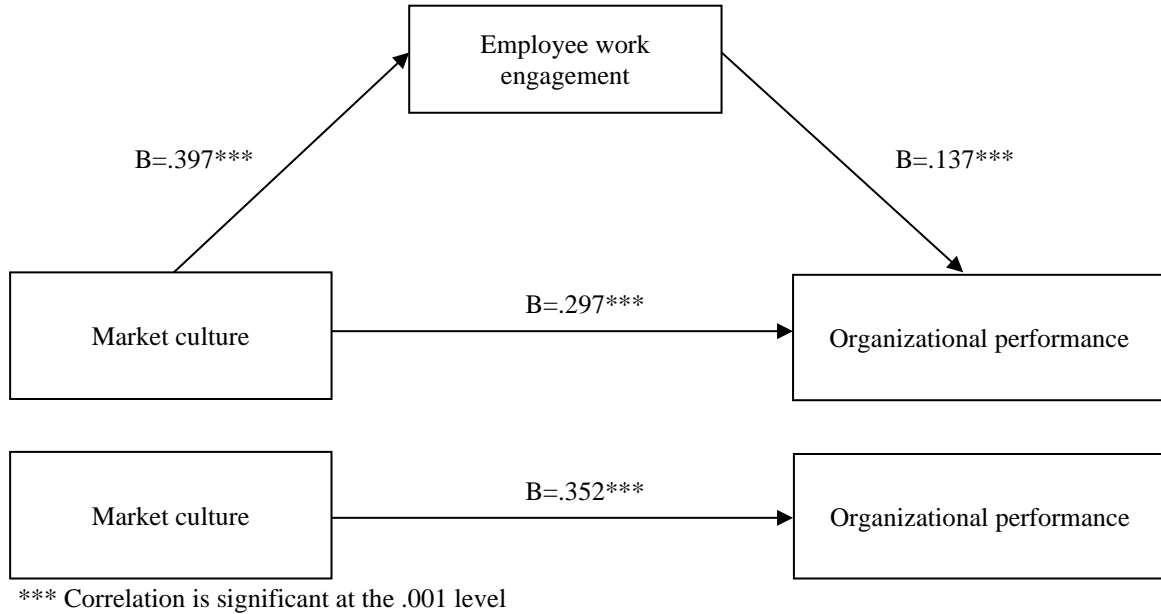
Figure 15 – Mediation model graphic characterization (IV: Market culture)

(Source: The author, 2019)

Given the mentioned estimations, we are in conditions to affirm that all organizational culture types are effectively mediated by employee work engagement within the frame of its influence on organizational performance. Consequently, **H4 is accepted.**

5.5. Research hypothesis analysis summary

In reference to the proposed research questions, basing our assumptions on the results of the estimations performed, we conclude the following:

Hypothesis	Description	Result	Conclusions
H1	One or more organizational culture types positively and significantly influence organizational performance	Accepted	All 4 types of organizational culture positively influence organizational performance. Although, only clan culture (by far) and hierarchy culture significantly influence organizational performance

H2	One or more organizational culture types positively and significantly influence employee work engagement	Accepted	All 4 types of organizational culture positively influence employee work engagement. However, only clan culture (by far) and market culture significantly influence employee work engagement
H3	Employee work engagement positively and significantly influences organizational performance	Accepted	Employee work engagement does positively and significantly influence organizational performance
H4	The influence of all organizational culture types in organizational performance is mediated by the level of employee work engagement	Accepted	All four types of organizational culture are partially mediated by employee work engagement.

Table 21 – Research hypothesis conclusions summary

(Source: The author, 2019)

6. <u>Conclusions</u>

Basing the following assumptions on the objectives of this research, the literature reviewed, the methodology adopted and the results achieved, we address, in an overview framework, the findings and interpretations reached, as well as the practical implications of this research, observing, in reference to theorical implications, that the results achieve the objective stated in the first paragraph of our literature review, which is to identify the scientific limit of our topic and go beyond it.

6.1. Findings and interpretations

Our research objective was to understand if and how organizational culture affect organizational performance, as well as if this influence is mediated by employee work engagement, taking, as well, the opportunity to understand the effect of organizational culture on employee work engagement, giving this research a broad conceptual framework. In order to address this topic, we defined organizational culture and the adopted conceptual framework considered, as well the concept of employee work engagement and of organizational performance, finishing this framework with an overview of the security sector, intending to give a practical nature to the research consequently performed.

One empiric finding of this research was to get to know the increasingly attention that have been given, both by academics and managers, to organizational culture and the effect that it has on the organization (Zheng *et al.* 2010), giving floor to the general construct of this research which is to satisfy the need for producing science that may be productive and useful for both science and businesses (Lawler *et al.*, 1999).

The definition of organizational culture is not, at all, consensual, neither it is its analysis or assessment scope. We addressed multiple scopes of analysing organizational culture and found comprehensive compatibility and practicality in the "competing values framework" (Quinn and Rohrbaugh, 1983), which basis the model of organizational culture research in the existence of four organizational culture types, namely clan culture, adhocracy culture, hierarchy culture and market culture. Each organizational culture type as associated assumptions, beliefs, values and artifacts, which are essential to frame the organization culture.

Organizational performance is, naturally, a key topic on management research (and practice), although it has several references in terms of its definition and measurement. Although being the financial results the ones that are intuitively related with organizational performance, it happens that the financial dimension of business outcomes is not the performance analysis framework main dimension.

In fact, organizational performance may be of proper assessment when matching the achieved outcomes (or even the latent processes or behaviours) with the organization strategic goals (Demerouti and Cropanzano, 2010). This construct has plenty of validity since the strategic goals of the organization must define the expectable outcome of its activities.

Being organizational culture highly referred by academics as having a "powerful effect on performance and long-term effectiveness or organizations" (Venkatraman and Ramanujam, 1996: 801), and being organizational performance a fundamental topic when it comes to research on strategic management (Hamann *et al.* 2013), we find of great importance to understand this influential relationship. In order to do so we defined our research objective as the study of this relationship.

However, extensive literature points a highly significant relationship between employee work engagement and organizational performance, which is as well a concept that has been receiving exponential attention, being even considered as capable to lead an organization to success and competitiveness (Gruman and Saks, 2011). Even its primary conceptualization belongs to a study that highlighted its potential on organizational performance (Kahn, 1990). Considering this finding, we found crucial to understand the effect that employee work engagement has on the influence of organizational culture on organizational performance.

We have applied this conceptual framework to an activity sector found to have immense importance on the protection of personnel, infrastructures, equipment, information, activities and operations, as well as goodwill (Torres, 2015), therefore of our businesses and even our way of life: the security sector.

People and businesses deal with risks at all time and even though risks can be managed and reduced, it is impossible to achieve a zero risks status (Krahmann, 2011), so effort must be put in the minimization and control of those risks. Private security companies, and therefore its personnel, that constitutes the sample of our research, have a significant responsibility on the protection of our businesses and may potentially, in fact, assume greater responsibilities with

the assumption of the performance of lower risk functions of the public security services (Gomes, 2008; Rodrigues, 2011).

Research developed on security management, specifically on mistake-proofing within its activities, reveal that organizational culture has a significant impact on security management, in case within a human security perspective, which includes the professionals that compose our research sample.

So, given the fact that organizational performance is a metric of greatest importance of businesses, which is extensively referred by literature as being influenced by organizational culture, thus the same happens with employee work engagement as it is a recognized predictor of organizational performance, it seems of enormous importance to understand this relationship through its estimation given a sample of people that belong to an activity which outcome (one of the metrics assessed by organizational performance) is, provenly and directly affected per organizational culture.

In order to achieve the presented research objective we formulated four research hypothesis, established a data collection method, consisting on the application of a questionnaire, and received 1380 responses, from which 629 have been considered as valid, which makes this the biggest sample ever of private security personnel reported to be studied. This questionnaire was composed by the instruments considered proper to measure our conceptual constructs (being UWES and FOCUS duly validated adapted versions), specifically the followings

Scientific concepts	Instrument
Organizational culture	First organizational culture unified search (Van Muijen *et al*., 1999)
Employee work engagement	Utrecht work engagement scale (Schaufeli *et al*., 2002a)
Organizational performance	Perceived organizational performance (Delaney and Huselid, 1996)

Table 22 – Summary of considered instruments

(Source: The author, 2019)

Before disseminating our questionnaires, we performed a pre-test procedure, aiming to improve our questionnaires, which was conducted in an observed session. The outcome of this pre-test has been properly and fully considered for the application of our final questionnaire. After appropriate application of our questionnaires we performed the necessary statistical estimations and concluded the following:

H1.   Organizational culture influences organizational performance, as it also has proven to do so in a variety of other researches (Camara *et at.*, 2016; Denison and Mishra, 1995; Gonçalves, 2017; Gregory *et al.*, 2009; Naranjo-Valencia *et al.*, 2016; O'Reilly *et al.*, 2014; Valmohammadi and Roshanzamir, 2015; Zheng *et al.*, 2010), in all its types, although only clan culture and hierarchy culture significantly influence organizational performance.

Clan culture has a much higher influence than all the other culture types on organizational performance, which analysed through the effectiveness criteria established by Hartnell *et al.* (2011), which states that employee satisfaction and commitment (which are related constructs of employee work engagement) is the main driver for predicting organizational performance in organizations that present this cultural type. Clan culture stands for "doing this together, collaborate" (Eijnatten *et al.*, 2015: 563).

In terms of influence on organizational performance, clan culture is followed by hierarchy culture, which effectiveness criteria is efficiency, timeliness and smooth functioning, which points to be a factor of production since it partially corresponds to the factor for mistake-proofing effect on organizational culture in a security management framework (Lee *et al.*, 2019).

Adhocracy culture and market culture also does have a positive influence on organizational performance, although their influence is not statistically significant, therefore not considered for this purpose. Effectiveness criteria for these culture types is innovation (referring to adhocracy culture), increased market share, profit, product quality and productivity (referring to market culture), which are conditions not greatly perceivable for operational personnel, which is the case of our research sample.

H2.   Our estimations reveal that organizational culture effectively influence employee work engagement, which has been estimated for the analysis of a research hypothesis formulated not for corresponding to our research objective, but because we found productive to have this broader vision on our research model.

This results match the results obtained by other authors within the analysis of different contextual scenarios (Krog, 2014; Naidoo and Martins, 2014; Parent and Lovelace, 2015; Sarangi and Srivastana, 2012; Singh and Mehrzi, 2016; Song et al., 2014), and

the conceptual framework that points the significance of the influence of organizational culture on employee work engagement (Denison and Mishra, 1995; Nikpour, 2017).

In this context only culture and market culture have been considered as positively and significantly predictors of employee work engagement (although clan culture has much more influence than market culture).

H3.   Employee work engagement revealed to, in fact, influence organizational performance, matching the results obtained by researchers (naturally with different scientific objects) on this relationship (Bakker and Bal, 2010; Bakker *et al*., 2004; Mone and London, 2010).

H4.   Regarding our research on the mediating effect of employee work engagement on the influence of organizational culture on organizational performance, we conclude that within the influence of all four organizational culture types on organizational performance, all reveal to be partially mediated by employee work engagement.

This result supports assumptions made on the influence of employee work engagement as a mediator of organizational performance (Song *et al*., 2014).

6.2. Practical implications

The key objective of the study of any scientific phenomenon and its expectable impact on businesses shall be to effectively set the goal of research as being capable of successfully improve businesses (McGahan, 2007). This construct, through our vision, is verified in this research.

Firstly, we address the expectable outcome of this research that it expresses and raises awareness for assessment or performance within analytic criteria broader than financial related metrics, ensuring that the organization strategy is fully accomplished and therefore that it performs what have been prospected by its shareholders.

A secondary objective of this research is related to the systematization of security (in case, the performance of security personnel) as a production factor, crucial to business and that shall be assessed, quantified and subject to improvement efforts, as "security needs and assets are unique from one organization to another" (Wheeler, 208: 230). This objective is partially

accomplished with the approach to how organizational culture is, partly, responsible for the implementation of outcome improvements, such as performance.

At last, but definitely not least, being proved that organizational performance is in fact the excellence metric in assessing the company activity related outcomes, knowing by majority of reason that labour force has a key influence on organizational performance, the understandment of how organizational culture influences the individual performance of employees is of crucial importance. If those employees are responsible for the security of your personnel, infrastructures, equipment, information, activities and operations, and goodwill (Torres, 2015), then it is critical to adapt the cultural context in which those individuals are inserted. As now known, clan culture, followed by hierarchy culture, are the cultural types that have higher effect on organizational performance, being positively influenced by high levels of employee work engagement.

Thus, managers who seek to achieve high levels of organizational performance, namely the ones that seek security (but not only) related improvements through personnel outcomes, shall understand and address organizational culture, being aware of the mediating effect that employee work engagement has on that influential relationship.

6.3. Limitations

A clear limitation of this research is the high dissemination and lack of authority definitions on the concepts approached, principally in organizational culture, given the fact that "for every definition of what culture is, there is an important contrary view" (Schneider et al., 2013: 370).

Within this context it is very opportune for the purpose of this dissertation to mention the work of Martin (2002), in which the implicit and inevitable subjectivity of any culture related research (or even hard science researches), through methods of deduction or induction, is part of the objective scientific conclusion process making. To prove a point, we want to add that even objective facts are "subjectively perceived by humans and processed by human sense making" (Martin, 2002: 34), which is, naturally and by majority of reason, a limitation.

This research aimed to assess its scientific objectives considering security personnel from all operational functions, specifically security guards, security coordinators and security directors. Although this is the biggest sample ever studied within security personnel, the respondents that

perform security coordinator or security director function were represented with a very small number of respondents. Given the fact that this type of researches must base itself on a broad range of organizational members, in order to produce more representative and richer results (Denison and Mishra, 1995), it would be desirable to have a bigger sample of respondents from other functions than security guards. It is inevitable to refer that other natural limitation of this study is the fact that our sample is a convenience sample, which does not allow this research to address the general existent population and therefore be considered as representative.

6.4. Future research

Addressing future research is particularly interesting and important given the fact that the security sector is clearly not sufficiently researches and is, therefore, under researched. Our suggestion, forming a sort of invitation, is to apply further research on this sector in order to understand it within the same measure of the importance it has, or may have, in our businesses.

There is strong evidence, namely by Chatman and Jehn (1994), that support the existence of a relationship between organizational culture and industry type, therefore for better understandment of this relational theory research shall be made within other industries.

Next researches within this framework shall give special importance to address hierarchical seniority of the respondents, in order to assess the possibility of correlating the relationship that constitutes the object of our research, with the complexity of the function of the correspondents, thus testing the hint stated by Judge *et al*. (2001), which found evidence that linkages of job satisfaction being highly correlated with the complexity of the function.

It would also be very interesting to perform the same research model although considering assessing performance in a non-perceptual framework, allowing the results to assess the general validity of the significance of perceived organizational performance as to measure organizational performance within this sector and the given sample.

This research, combining its conceptual framework and its results, clearly leads us to point that there is material and opportunity to explore specifically the interaction between organizational culture and performance related outcomes, point to something that may be, in the middle, addressed as security culture, which have been before mentioned as being "the best way to motivate staff to behave consistently in a security-conscious way" (Leach, 2003: 691).

7. **References**

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8. <u>Annexes</u>

8.1. Annex I - Questionnaire in English language

Thank you very much for agreeing to be part of this study.

The purpose of this questionnaire is to gather information regarding the perceptions of private security personnel (Security Guards, Security Coordinators and Security Directors) concerning the organizational culture of their companies and what effect this has on the way they perceive their performance, as well as what is the mediating effect of employee work engagement in this relationship.

This study has a purely academic purpose. The collected data will be treated with absolute confidentiality and all responses are completely and obligatorily anonymous.

The complete answer to this questionnaire takes no more than 5 minutes.

1. Considering the organization in which you work, indicate how often each of the situations presented is valued:

   (The answer for each item presented must be one of those listed in the figure below)

Not at all	Rarely	A little	Quite	Much	Very Much
○	○	○	○	○	○

a) Taking risks (make decisions that imply uncertainty about the results)

b) Mutual understanding (understandment between people)

c) Clear Objectives (to know the goals to be achieved)

d) Emphasis on task accomplishment (concern with achieving results)

e) Openness to criticism (acceptance of other opinions, even if different)

f) High performance standards (doing a lot and well)

g) Compliance with rules (people are encouraged to comply with rules)

h) Established procedures (formal and written rules and instructions)

i) Flexibility (adaptation to circumstances)

j) Formalization (everything is written)

k) Support colleagues (concern for co-workers)

l) Mutual trust (people trust each other)

m) Efficiency (do as much as possible with the fewest resources)

n) Support in solving work problems (mutual aid)

o) Pioneering (striving to be the first and the best)

p) Respect for the authority (respect and value the bosses)

2. To what extent do you compare the performance of your organization over the past 3 years with other organizations similar to yours in:

   (The answer for each item presented must be one of those listed in the figure below)

Never	A few times a year	Once a month	A few times a month	Once a week	A few times a week	Every day
O	O	O	O	O	O	O

a) At my work, I fill bursting with energy

b) At my job, I feel strong and vigorous

c) I am enthusiastic about my job

d) My job inspires me

e) When I get up in the morning, I feel like going to work

f) I feel happy when I am working intensely

g) I am proud of the work that I do

h) I am immersed in my work

i) I get carried away when I am working

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3. To what extent do you compare the performance of your organization over the past 3 years with that of other organizations similar to yours in, concerning the following:

(The answer for each item presented must be one of those listed in the figure below)

Much worse	Worse	Equivalent	Better	Much better
O	O	O	O	O

a) Service quality

b) Developtment of new services

c) Ability to attract employees

d) Ability to retain employees

e) Client satisfaction

f) Relations between management and employees?

g) Relations among employees in general?

4. Please indicate your gender

    a. Male

    b. Female

5. Please indicate your age (in years)

_____

6. Please indicate your role in your organization

a) Security Guard

b) Security Coordinator

c) Security Director

7. Please indicate your educational qualifications (last completed course of study)

a) Basic Education

b) Secondary Education

c) Bachelor's degree

d) Master's degree

e) Doctoral Degree

8. How long have you been working in the private security sector (in years)?

_____

Your answer has been registered.

Thank you for your participation in this survey.

8.2. Annex II - Questionnaire in Portuguese language

Muito obrigado por aceitar fazer parte deste estudo.

O objetivo deste questionário é recolher informação sobre a perceção do pessoal de segurança privada (Vigilantes, Coordenadores de Segurança e Diretores de Segurança) relativamente à cultura organizacional das suas empresas e qual o efeito que esta tem na forma como percebem a sua performance, bem como qual o efeito mediador do engagement no trabalho nesta relação.

Este estudo tem um propósito meramente académico. Os dados coletados serão tratados com absoluta confidencialidade e todas as respostas são total e obrigatoriamente anónimas.

A resposta completa a este questionário não demora mais que 5 minutos.

1. Tendo em consideração a organização em que trabalha, indique a frequência com que cada uma das situações apresentadas é valorizada:

   (A resposta, para cada alínea apresentada, deve ser uma das listadas na figura infra)

De modo nenhum	Raramente	Um pouco	Bastante	Muito	Muitíssimo
O	O	O	O	O	O

   a) Assumir Riscos (tomar decisões que impliquem incerteza quanto aos resultados)

   b) Compreensão mútua (entendimento entre as pessoas)

   c) Objetivos Claros (conhecer concretamente as metas a atingir)

   d) Enfase na realização da tarefa (preocupação com o atingir resultados)

   e) Abertura à critica (aceitação de outras opiniões, ainda que diferentes)

   f) Padrões elevados de desempenho (fazer muito e bem)

   g) Cumprimento das regras (as pessoas são estimuladas a cumprir regras)

   h) Procedimentos estabelecidos (regras e instruções formais e escritas)

   i) Flexibilidade (adaptação às circunstâncias)

j) Formalização (tudo passado a escrito)

k) Apoio aos colegas (preocupação com os colegas de trabalho)

l) Confiança mútua (as pessoas confiam umas nas outras)

m) Eficiência (fazer o mais possível com os menores recursos)

n) Apoio na resolução dos problemas de trabalho (entre – ajuda)

o) Pioneirismo (procurar ser o primeiro e o melhor)

p) Respeito pela autoridade (respeitar e valorizar as chefias)

2. Tendo em consideração as suas tarefas profissionais, avalie com que frequência tem cada um dos seguintes sentimentos, crenças ou comportamentos:

(A resposta, para cada alínea apresentada, deve ser uma das listadas na figura infra)

Nunca	Algumas vezes por ano	Uma vez ou menos por mês	Algumas vezes por mês	Uma vez por semana	Algumas vezes por semana	Sim, todos os dias
O	O	O	O	O	O	O

a) No meu trabalho sinto-me cheio(a) de energia

b) No meu trabalho sinto-me com força e energia

c) Estou entusiasmado(a) com o meu trabalho

d) O meu trabalho inspira-me

e) Quando me levanto de manha apetece-me ir trabalhar

f) Sinto-me feliz quando estou a trabalhar intensamente

g) Estou orgulhoso(a) do que faço neste trabalho

h) Estou imerso(a) no meu trabalho

i) "Deixo-me ir" quando estou a trabalhar

3. Em que medida compara a performance da sua organização, nos ultimos 3 anos, à de outras organizações semelhantes à sua, relativamente a:

   (A resposta, para cada alínea apresentada, deve ser uma das listadas na figura infra)

Muito Pior	Pior	Equivalente	Melhor	Muito Melhor
O	O	O	O	O

a) Qualidade do serviço

b) Desenvolvimento de novos serviços

c) Capacidade para atrair funcionários

d) Capacidade para reter funcionários

e) Satisfação dos clientes

f) Relação entre a gestão e restantes colaboradores

g) Relação entre colaboradores em geral

4. Indique por favor o seu género

   a. Masculino

   b. Feminino

5. Indique por favor a sua idade (em anos)

   _____

6. Indique por favor a sua função na sua organização

f) Vigilante

g) Coordenador de Segurança

h) Diretor de Segurança

7. Indique por favor as suas habilitações literárias (ultimo ciclo de estudos completo)

i) Ensino Básico

j) Ensino Secundário

k) Licenciatura

l) Mestrado

m) Doutoramento

8. Quanto tempo tem de experiência profissional na área da segurança privada (em anos)?

_____

A sua resposta foi registada.

Agradecemos a sua participação neste inquérito.

8.3. Annex III – Pre-test questionnaire sample characterization

Gender	Age	Function	Education	Professional Experience
Male	32	Security Guard	Secondary Education	7
Female	23	Security Guard	Secondary Education	4
Male	37	Security Guard	Secondary Education	10
Male	53	Security Coordinator	Secondary Education	23
Male	48	Security Guard	Basic Education	8
Female	27	Security Guard	Bachelor's degree	3
Male	31	Security Director	Master's degree	11
Male	37	Security Guard	Secondary Education	4
Male	44	Security Guard	Basic Education	17
Male	31	Security Guard	Secondary Education	9
Male	56	Security Director	Secondary Education	31

Table 23 – Pre-test questionnaire sample characterization

(Source: The author, 2019)