



INTERDEPARTMENTAL MASTER PROGRAM IN BUSINESS ADMINISTRATION (MBA)

Thesis

THE EFFECT OF ORGANIZATIONAL CULTURE AND CLIMATE ON JOB
SATISFACTION, WORK ENGAGEMENT AND AFFECTIVE
COMMITMENT:

THE CASE OF A NOT FOR PROFIT EDUCATIONAL ORGANIZATION

BY

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Dedication

*To my truly wonderful husband who has supported me throughout
this exciting journey of learning and development
showing extraordinary patience and love.*

Thank you note

*I would like to thank Professor Dimitrios Mihail
for his profound knowledge of the subject that he shares with so much enthusiasm
and for his invaluable insight and feedback
as well as all the members of faculty and staff
of the not for profit educational organization
who wholeheartedly participated in the research.*

Abstract

In this study the current prevailing organizational culture and climate was mapped in a not for profit educational institution. Job satisfaction, work engagement and affective commitment of the employees were also measured. The relation between organizational culture and climate was examined. In addition, the relation between climate and job satisfaction, affective commitment and work engagement of the employees was also studied.

A survey tool was developed which covered culture types, climate dimensions, job satisfaction, work engagement and affective commitment. The number of survey questions were 127. The survey was anonymous and from 232 questionnaires distributed, 116 were returned. There was a total response rate of 50%.

The survey showed significant associations between culture types and climate dimensions, as well as climate dimensions and job satisfaction. Job satisfaction was shown to be the antecedent of work engagement and affective commitment.

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Chapter 1: Introduction

The not for profit organization under study has a long tradition in the field of agricultural education. It was founded over 100 years ago and it continues to apply its hallmark “learn by doing” approach to educate students of all ages today. The organization’s programs have always been cutting edge and experiential, since the organization owned and run a versatile educational farm and kept relations with top institutions from abroad. Students were offered room and board and a family atmosphere. As the years passed the organization’s enrolment increased, it modernized its programs and farm operations, it developed extension programs and founded a College in order to offer higher education programs for careers in the food and agricultural industries.

Through the years a unique organizational culture has developed. This culture is reflected in the Vision statement of the Institution, its Values, its Practices, its People, its History and its Campus.

Despite its long history, devoted people and inspiring leadership, the organization was financially struggling many years before the Greek economic crisis started. And even though there were continuous efforts for diversification and expansion of the organization’s programs, sustainability of operations was not achieved.

The beginning of the Greek economic crisis coincided with the beginning of a more dynamic, ambitious, market oriented leadership, who had big plans for the organization. In less than 10 years a Preschool, an Elementary and a Middle school were founded, the College became independent, started offering Masters Degrees and sought accreditation from a US accreditation body. A post-secondary professional education two year program was also founded.

Development meant that the number of staff increased from 150-165 persons in 2009 to 355 in 2019, new departments were created and the organizational chart changed multiple times in a decade. The race for development also meant that there was no time to properly initiate new members of staff, the pace of the organization accelerated and new departments emerged with completely different composition in terms of the sex, age, level of education and type of work of their employees.

In this study the current prevailing organizational culture and climate at institutional level will be mapped and the relation between organizational culture and climate will be examined. In addition, the relation between climate and job satisfaction, affective commitment and work engagement of the employees will be studied.

Chapter 2: Bibliographical review

2.1 Job satisfaction

Job satisfaction is considered one of the most important attitudes (Robbins and Judge, 2015) studied by organizational behavior researchers since the 50's.

One of the most widely used definitions in organizational behavior research is that of Locke (1976), who defines job satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (p. 1304).

But why is job satisfaction of the employees considered important in an organization? It has been found to have a negative correlation with staff turnover (Griffeth *et al.*, 2000), a positive one with performance, directly or indirectly (Judge *et al.*, 2001; Staw *et al.*, 1994; Locke 1970) and to be significantly associated with attitudes which collectively comprise the so called Organizational Citizenship Behavior or OCB (Podsakoff *et al.*, 2000).

Apart from the expected correlation between job satisfaction and staff turnover -satisfied employees tend not to change jobs-, researchers have examined why satisfied employees perform better or behave in a more collegial way. George and Brief (1992) explained that a positive mood can give rise to organizational spontaneity activities that help others, protect the organization, can help one to develop oneself, and generate suggestions to improve functioning. Job satisfaction is therefore the basis of what is called a group affective tone.

At the level of the organization, Ostroff (1992) has shown a positive association between job satisfaction and school performance, while Koys (2001) found that employee satisfaction is significantly correlated with subsequent company profitability. Similar results are demonstrated by Harter *et al.* (2002).

Even though a number of tools have been developed through the years to measure job satisfaction (Weiss *et al.*, 1967; Smith *et al.*, 1969; Ironson *et al.*, 1989; Hackman and Oldman, 1976; Van Saane *et al.*, 2003; Koustelios and Bagiatis, 1997; Spector, 1997), in this study satisfaction is measured with five items taken from the Brayfield-Rothe (1951) measure of job satisfaction. These five items are "I feel fairly satisfied with my present job," "Most days I am enthusiastic about my work," "Each day at work seems like it will never end" (reverse scored), "I find real enjoyment in my work," and "I consider my job to be rather

unpleasant" (reverse scored). Responses to the Brayfield-Rothe items are evaluated on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale.

The tool used is the simplest found in bibliography. It attempts to establish only if the employee is in a positive emotional state as stated in the definition or not. Simplicity, in this case, was sought after.

2.2 Work engagement

The second psychological state examined in this study is that of work engagement. Rather than a momentary and specific state, engagement refers to a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behavior. Work engagement is a positively oriented human resource strength and psychological capacity that can be measured, developed, and effectively managed for performance improvement in today's workplace. It is considered to be the opposite of burnout. Contrary to those who suffer from burnout, engaged employees have a sense of energetic and effective connection with their work activities, and they see themselves as able to deal well with the demands of their jobs (Schaufeli *et al.*, 2006). Work engagement has been shown to have a direct impact on performance in a number of studies (Kim *et al.*, 2012).

Work engagement is characterized by three features: vigor, dedication, and absorption (Schaufeli *et al.*, 2002, p.74). *Vigor* is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties. *Dedication* refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge. Finally, *absorption* is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work (Maslach *et al.*, 2001).

The Utrecht Work Engagement Scale (UWES) is used, which covers the above-mentioned dimensions of work engagement: vigor, dedication, and absorption. This study uses the shortest and more practical version of the questionnaire with 9 items (Schaufeli *et al.*, 2006).

2.3 Organizational commitment

In this study, the third psychological state measured is organizational commitment. Organizational commitment is defined as “a psychological state that (a) characterizes the employee’s relationship with the organization, and (b) has implications for the decision to continue or discontinue membership in the organization” (Meyer and Allen, 1991, p. 67). In particular this study concentrates on affective organizational commitment.

According to Allen and Meyer (1990), the affective component of organizational commitment refers to employees' emotional attachment to, identification with, and involvement in, the organization. The other two components, the continuance component and the normative component, are not going to be part of this study. The continuance component refers to commitment based on the costs that employees associate with leaving the organization and the normative component refers to employees' feelings of obligation to remain with the organization.

And why did the study focus on affective organizational commitment? All components of commitment are negatively associated with turnover. But keeping employees who do not perform or are not innovative is not enough for the progress of an organization. Meyer *et al.* (1989) reported that supervisors’ performance ratings and the promotability of employees correlated positively with affective commitment and negatively with continuance commitment, while Allen & Smith (1987) reported a positive relationship between affective commitment and employee innovativeness. Again, employee innovativeness was negatively correlated with continuance commitment. In this same study, affective and normative commitment were found to be positively related to employees’ consideration for co-workers and their efficient use of time.

The six questions from the affective commitment component of the Allen and Meyer tool as used by Ang *et al.* (2013) are utilized in this study: “I would be very happy to spend the rest of my career with this organization”, “I enjoy discussing my organization with people outside it”, “I do not feel like ‘part of the family’ at my organization (R)”, “I do not feel ‘emotionally attached’ to this organization (R)”, “This organization has a great deal of personal meaning for me” and “I do not feel a strong sense of belonging to my organization (R)”. In this study the question added by Ang *et al.* (2013) to complement the Allen and Meyer tool was adapted and included. Instead of asking “I would recommend this health service to my family”, the

question was phrased as follows: “I would recommend the educational programs and the products of the Institution to my family”.

2.4 Organizational climate

The construct of organizational climate has suffered over the years from conflicting definitions and inconsistencies in operationalization (Patterson *et al.*, 2005). The dominant approach conceptualizes climate as employees’ shared perceptions of organizational events, practices, and procedures (Schneider *et al.*, 2011 b).

The study of climate started with Lewin *et al.* who in 1939 were the first ones to use the term social climate. By social climate, they meant the nature of the relationship created between leaders and followers as a function of a leader’s behavior. They studied this by manipulating the leadership style and observing the resulting behavior of the followers. Similar research was conducted by Argyris (1957), who concluded that a climate was created if an organization hired the right types of employees and by McGregor (1960) who inferred that if managers treated employees with fairness this resulted in a certain “managerial climate”. A number of theorists (Argyris, 1964; Likert, 1967; McGreor, 1960) suggested that the social context, climate or atmosphere created in the workplace has important consequences such that the conditions created in the workplace influence the extent to which an employee is satisfied, gives his or her services wholeheartedly to the organization and performs up to potential in patterns of activity that are directed toward achieving the organization’s objective.

In more recent times, there have been two ways to approach organizational climate. Some researchers study molar or global climate. Climate has been also conceptualized and studied as a domain specific construct that has a particular referent or strategic focus, indicative of the organization’s goals (Schneider, 1975). In this case we talk about climate for safety, climate for quality, climate for service etc.

But how do most empirical studies work? They tend to aggregate individual scores of the different parameters under scrutiny to the appropriate level and using the mean to represent climate at collectives. Often significant differences in climate between units and significant agreement in perceptions within units is demonstrated (James, 1982). An agreement in perception implies a shared assignment of psychological meaning allowing individual perceptions to be aggregated and treated as a higher-level construct.

The dispersion of data within a unit may be important in and of itself (Schneider *et al.*, 2002). The less agreement there is within the unit, the weaker the climate strength, the weaker association there is with results. Climate strength measures the extent of agreement between individuals about organizational climate. The measure of climate strength calculates the average deviation from the mean of all individuals in a unit (Dawson *et al.*, 2008).

And how do we know what questions to ask? If one defines climate as the policies, practices and procedures, and the behaviors that get rewarded, supported, and expected in a setting (Ostroff *et al.*, 2003; Schneider and Reichers, 1983; Schneider *et al.*, 1998), then climate surveys must provide a response set that asks respondents not for their opinions, but for their objective reports on what happens in the setting (Schneider and White, 2004). Organizational climate surveys shouldn't depict the respondents' feelings or evaluations, as these measurements are part of research focusing on psychological climate or even job satisfaction and are about the person rather than the organization (Schneider *et al.*, 2011a).

In this study, the molar organizational climate is studied. There are two prevailing measures of organizational climate, the Organizational Climate Measure (OCM) developed by Patterson *et al.* (2005) based on the Competing Values model –more about the model and the measure can be found below, since this is the model used in this study- and that of Ostroff *et al.* (2003) using three dimensions and 12 facets as follows:

- Affective (participation, cooperation, warmth, social rewards)
- Cognitive (growth, innovation, autonomy, intrinsic rewards)
- Instrumental (achievement, hierarchy, structure, extrinsic rewards)

In recent times, a number of researchers have studied the importance of organizational climate in a number of industries: Tourism (Bellou and Adronikidis, 2009), the oil and gas industry (Hannevik *et al.*, 2014), the health sector (Floyd, 2016; Dawson *et al.*, 2008; Tsai and Huang, 2008), the service sector (Bernstrøm *et al.*, 2013; Walumbwa *et al.*, 2008), the educational sector (Lone, J. A. *et al.*, 2014; Ostroff, 1993) and manufacturing (McMurray *et al.*, 2004; Patterson *et al.*, 2004).

2.4.1 The Competing Values Model

The Competing Values Model, developed in a series of articles and studies by Quinn and colleagues (e.g., Quinn & Rohrbaugh, 1981, 1983; Quinn & McGrath, 1985), proposes that organizational effectiveness criteria in the literature can best be understood when organized along fundamental dimensions — flexibility versus control and internal versus external orientation. The framework's four quadrants describe four broad domains of valued outcomes and associated managerial ideologies about the means through which these outcomes may be achieved.

A major strength of this model is its derivation from four major schools of study of organizational effectiveness, reflecting long traditions in management and organizational psychology:

- The **human relations** approach (internal focus and flexibility in relation to the environment) reflects the tradition derived from the socio-technical and human relations schools. This approach emphasizes the well-being, growth and commitment of the community of workers within an organization.
- The **internal process approach** (internal focus and tight control within the organization) reflects a Tayloristic concern with formalization and internal control of the system in order that resources are efficiently used.
- The **open systems approach** (external focus and flexible relationships with the environment) emphasizes the interaction and adaptation of the organization in its environment, with managers seeking resources and innovating in response to environmental (or market) demands.
- The **rational goal approach** (external focus but with tight control within the organization) reflects a rational economic model of organizational functioning in which the emphasis is upon productivity and goal achievement.

By combining these orientations into one model, Quinn and colleagues aimed to provide a broad conceptual map of the domains of theory in the field over the last 60 years.

It is important, however, to recognize that the model does not propose that organizations can be located predominantly in one quadrant but, reflecting the rich mix of competing views and perspectives in organizations, proposes that organizations will be active in, and give emphasis to, each domain, but with differing strengths.

2.4.2 Climate dimensions

Dimensions in the OCM are generated within four broadly conceptualized domains that relate to the approaches mentioned above. In order to develop the dimensions, Patterson *et al.* (2005) searched the literature and selected those that were most frequently utilized in research studies from 1960 to 2000 on climate and that fitted according to the competing values model with a relatively unambiguous location in one of the four quadrants. According to Patterson *et al.* (2005) who developed the OCM, these quadrants and their dimensions are described below:

In the **Human Relations Model** (internal focus, flexible orientations) the emphasis is on a sense of belonging, trust, and cohesion, achieved through training and human resource development. Coordination and control are accomplished through empowerment and participation, and interpersonal relations are supportive, cooperative, and trusting in nature. Climate dimensions identified as representing this quadrant are:

- *employee welfare*—the extent to which the organization values and cares for employees
- *autonomy*—designing jobs in ways which give employees wide scope to enact work
- *participation*—employees have considerable influence over decision-making
- *communication*—the free sharing of information throughout the organization
- *emphasis on training*—a concern with developing employee skills
- *integration*—the extent of interdepartmental trust and cooperation
- *support*—the extent to which employees experience support and understanding from their immediate supervisor

In the **Internal Process Model** (internal focus, control orientation) the emphasis is on stability, where the effects of environmental uncertainty are ignored or minimized. Coordination and control are achieved by adherence to formal rules and procedures. The Internal Process Model represents the classic bureaucracy. Climate dimensions identified as representing this quadrant are:

formalization— a concern with formal rules and procedures

- *tradition*— the extent to which established ways of doing things are valued

In the **Open Systems Model** (external focus and flexible orientation) the emphasis is on readiness, change and innovation, where norms and values are associated with growth, resource acquisition, creativity and adaptation. Climate dimensions identified as representing this quadrant are:

- *flexibility*— an orientation toward change
- *innovation*— the extent of encouragement and support for new ideas and innovative approaches
- *outward focus*— the extent to which the organization is responsive to the needs of the customer and the marketplace in general
- *reflexivity*— a concern with reviewing and reflecting upon objectives, strategies, and work processes, in order to adapt to the wider environment

In the **Rational Goal Model** (external focus and control orientation) the emphasis is on the pursuit and attainment of well-defined objectives, where norms and values are associated with productivity, efficiency, goal fulfillment, and performance feedback. Climate dimensions identified as representing this quadrant are:

- *clarity of organizational goals*— a concern with clearly defining the goals of the organization
- *effort*— how hard people in organizations work towards achieving goals
- *efficiency*— the degree of importance placed on employee efficiency and productivity at work
- *quality*— the emphasis given to quality procedures
- *pressure to produce*— the extent of pressure for employees to meet targets
- *performance feedback*— the measurement and feedback of job performance

2.5 Organizational culture

As Schein, the most important academic theorist of organizational culture, wrote in his seminal work in 1985, management culture is the only thing of real importance leaders do (Schein 2010, p.2). As a subject, culture remains of central importance to academics and business people in understanding how organizations function. Interest in the academic world is still strong, when looking into the business world, 78% of Fortune 1000 CEO's and CFO's

view culture as one of the top three factors affecting their firm's value (Graham *et al.*, 2016). One of the reasons culture is considered important is because of its proven connection with organizational effectiveness (Johnson and McIntye, 1998; Bellou, 2010).

The first study of organizational culture back in 1979 was written by Andrew Pettigrew and published by Administrative Science Quarterly. Interest in the subject was fueled when Japan's companies' success was attributed to their unique organizational culture. A number of articles and books examined the Japanese business model and compared Japanese and American companies (Ouchi, 1981; Pascale and Athos, 1981; Lincoln and Kalleberg, 1985). The interest of the business world in culture has been consistently high. Consulting and book writing on the topic has been ludicrous. According to Chatman and O' Reilly (2016), this interest had the unintended consequence of slowing academic inquiry into the topic itself.

There are still issues of clarity between what exactly is the difference between organizational culture and climate, as there is not one universally accepted clear definition for each concept. Culture and climate are similar concepts since both describe employees' experiences of their organizations and that is not helpful. In addition there is a lot of ambiguity. In the case of climate, Verbeke *et al.* reported in 1998 32 different definitions and in the case culture, 54 different definitions. Below, some of the prevailing definitions of culture as well as its differentiation from climate are presented.

Organizational climate involves employees' perceptions of what happens the organization in terms of practices, policies, procedures, routines and rewards (Jones and James, 1979). Hence, climate's focus is on the situation and its link to perceptions, feelings and behavior of employees. It can be viewed as temporal, subjective and possibly subject to manipulation by authority figures (Denison, 1996). While climate is about experiential descriptions or perceptions of what happens, culture helps define why these things happen (Schein, 2000; Schneider, 2000). The question is answered in relation to shared values, common assumptions, and patterns of beliefs held by organizational members, and it is these which define organizational culture. Culture is more stable than climate, has strong roots in history, is collectively held, and is resistant to manipulation (Denison, 1996; Schein, 2010). Thus climate can be understood as a surface manifestation of culture (Schein, 1985; Schneider, 1990).

Svyantek and Bott (2004) propose the definitions which help distinguish between climate and culture. Organizational culture is defined as a set of shared values and norms held by employees that guide their interactions with peers, management, and clients. Organizational climate is more behaviorally oriented in that climates for creativity, innovation, safety, or service, for example, may be found in the workplace.

The more comprehensive definition of culture is offered by Schein: A pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems (Schein, 2010, p. 18).

Schein (2010) concludes that there are three fundamental layers at which culture manifests itself: observable artifacts (architecture of the physical environment, language, technology and products, artistic creations, its style, myths and stories, published lists of values, and observable rituals and ceremonies), espoused values and basic assumptions.

When we talk of values, we refer to what is the good, desirable and right way to achieve the best possible living (Zohar and Hofmann, 2012). When we talk about basic assumptions, we refer to a shared history of repeated success in implementing certain beliefs and values. Basic assumptions become so taken for granted that one can find little variation within a social unit (Schein 2010).

There are a number of organizational culture typologies proposed by different authors based on different theoretical backgrounds:

Hofstede (1980; 1998) provided his famous categorization of culture into five bipolar couples of assumptions: large versus small power distance, strong versus weak uncertainty avoidance, individualism versus collectivism, masculinity versus femininity, and long versus short-term orientation. Denison (2001) described culture in terms of adaptability, involvement, consistency and mission and proposed the Denison Organizational Culture Survey (DOCS). Cook and Szumal (1993; 2000) proposed two bipolar dimensions: people versus task and satisfaction versus security. They also developed the Organizational Culture Inventory which assess both the ideal and the currently operationalized culture.

One other instrument developed was that of the Organizational Culture Profile (OCP) survey (O'Reilly *et al.*, 1991). It has eight dimensions (innovation, attention to detail, outcome orientation, aggressiveness, supportiveness, emphasis on rewards, team orientation and decisiveness).

In this study, the Organizational Culture Assessment Instrument (OCAI) by Cameron and Quinn (2006) is used, which is based on the Competing Values model (Quinn and Rohrbaugh, 1981; 1983; Quinn and McGrath, 1985). There are two major dimensions:

1. Flexibility, discretion and dynamism (changing, adaptable and organic) vs stability, order and control (stable, predictable and mechanistic).
2. Internal orientation, integration and unity vs external orientation, differentiation and rivalry.

The two dimensions form four quadrants, four cultural types:

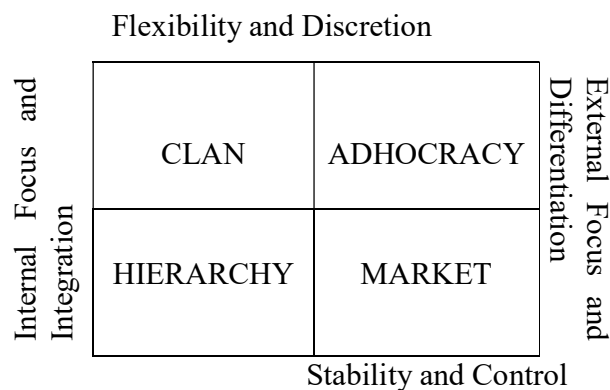


Figure 1: The Cameron and Quinn model for Organizational culture

The choice of the names of each quadrant is not random. It is based on management as well as child development theory. The OCAI allows you to diagnose the dominant orientation of the organization.

- An organization in which the cultural type Hierarchy prevails is meant to be internally focused and have a stable organization.
- An organization in which the cultural type Market prevails is meant to have an external focus and stability.
- An organization in which the cultural type Clan is meant to be internally focused and have a flexible organization

- An organization in which the cultural type Adhocracy is meant to have an external focus and flexibility

In an organization, all these culture types are present to some extent and organizational effectiveness results when the organization's pattern of culture is congruent with environmental demands.

And how does the instrument work? Participants are asked to rate how relevant to their organization are assumptions linked to particular culture types. For example, clan culture is postulated to signify a series of basic assumptions, such as: the organization is like an extended family, leaders are mentors or parent figures, the organization is held together by loyalty and tradition, and employees perform best through participation and teamwork.

Choosing the right methodology

There is also a lot of debate in literature about the methodology that should be used to study culture. A number of researchers have argued that culture cannot be measured by a survey and it is best approached by ethnographic methodology, whereby the researcher tries to discover the implicit beliefs and the underlying assumptions that underpin an organization by spending time to immerse himself/herself in it. The resulting depiction emphasizes the uniqueness of the organization under study (Chatman and O'Reilly, 2016). On the other hand, standardized surveys permit comparisons and allow for drawing statistically significant results. One of the shortcomings of surveys is that they lose a lot of information about the organization under study, because the informants' answers are not open and they result in pre-described profiles. There is also the issue of the knowledgeability of the informant as well as the sound design of each survey and its construct validity. Chatman and O'Reilly (2016) argue that except for the OCP, all other culture measures suffer from poor design and connection with the construct of culture.

The OCAI is chosen in this study, as it is widely used, easy to administer, has a very logical structure and connection with the theory of organizational culture. Another reason for choosing the OCAI is that it has the same theoretical background that of the Competing Values Model, as Patterson *et al.*'s Organizational Climate Measure (2005). It was thought

that two measures of similar language and logical framework would work in terms of their results and conclusions in a more parsimonious way.

2.6 An integrated model of organizational culture and organizational climate / climates

So how does all fit together? Culture and climate can be viewed as two complementary constructs that reveal overlapping yet distinguishable nuances in the psychological life of organizations (Schneider, 2000). Both culture and climate deserve attention as separate constructs as well as interrelated ones. The social and symbolic processes associated with organizational culture and climate influence a number of individual and group behaviors including turnover, job satisfaction, job performance, citizenship, safety, customer satisfaction, service quality, and organizational indicators of effectiveness (Schneider *et al.*, 2011a).

And how do culture and climate intertwine? Culture is learned over time. It is a product of vicarious and experiential learning (Bandura, 1977; Schein, 2010) that results from interactions between leaders and unit members and produces sense making (Hartnell and Walumbwa, 2011).

The deepest layers of organizational culture take on an unconscious or take-for-granted / unquestioned nature, then it seems that employees may only be aware of the more surface-layer elements (e.g. culture artifacts, espoused values, organizational structures, behavioral routines), and it is these elements that influence their behavior. From this vantage point, organizational culture is assumed to shape the way of doing things in the organization primarily through its surface-layer attributes. This further implies an integrative mechanism for the interpretation of culture by organizational employees (Ostroff *et al.*, 2003).

At the same time individuals' background characteristics and the process of the individual joining the organization, his or her values and social cognitive processes influence the psychological climate (James and James, 1989). When these climate perceptions are shared across an organization's employees, unit or organizational climate is said to emerge (James and Jones, 1974). These shared perceptions develop only when strong emergent processes are enacted in the organization (practices delivered in such a way as to create a strong situation, homogeneity of attributes among employees, interactions with other processes,

social tuning to adjust perceptions to others, group processes, and leaderships). When the emergent process is weak, idiosyncratic perceptions within an organization develop, producing wide variability in perceptions of climate, which can result in wide variability in individual attitudes and behaviors, diminishing the relationship to organization performance (Ostroff and Bowen, 2000).

Antecedents of culture

Industry and business environments (Dickson *et al.*, 2004), national culture (Hofstede *et al.* 1990), external stakeholders (Hatch, 2011) and external cultures anchored outside the organization such as competitors, strategic alliances, political parties, and professional associations (Harrison and Corley, 2011) are considered antecedents of culture. The direct effect of leadership on culture has been demonstrated (Berson *et al.*, 2008; Giberson *et al.*, 2009; Hartnell and Walumbwa, 2011).

Outcomes of culture

Culture has been viewed as a key driver of organizational effectiveness (e.g. Deal and Kennedy, 1982; Peters and Waterman, 1982). Organizational culture can be a valuable, rare, inimitable, and non-substitutable resource that can help organizations create competitive advantage.

Hartnell *et al.* (2011) conducted a meta-analysis of studies published between 1980 and 2008 and found that in 23 out of 25 cases studies there were significant positive correlations between culture types and the measures of organizational effectiveness.

Mediators and moderators

Organizational culture is a key social contextual variable that moderates the relationship between leadership and criteria such as organizational commitment (Chen, 2004), innovation (Jung *et al.*, 2008) and employee attitudes and financial effectiveness (Kinicki *et al.*, 2011). Organizational culture also was found to be moderator of the linkage between human resources practices and policies and various criteria (Carroll *et al.*, 2011).

And what how does climate fit into all this?

James and Jones (1974, 1976) developed one of the first and most comprehensive models of climate. Subsequently, Kopelman *et al.* (1990) presented a more complete model: They showed that climate influenced organizational productivity through cognitive and affective states (such as work motivation and job satisfaction) and salient organizational behaviors (attachment behaviors, role-prescribed behaviors and citizenship behaviors).

Antecedents of climate

Organizational context variables have shown promise for understanding climate (Ostroff *et al.*, 2013).

Human resource management practices have been particularly emphasized as a factor that drives climate (Kopelman *et al.*, 1990; Klein and Sorra, 1996; Schneider, 1990; Collins and Smith, 2006; Ngo *et al.*, 2009).

Top management and leaders have been proposed as important direct or indirect factors believed to influence organizational climate (e.g. Kozlowski and Doherty, 1989; Zohar and Hofmann, 2012) due to the fact that managers and leaders are largely responsible for communicating meaning (Schein, 2010).

Outcomes of climate

Using Ostroff's (1993) typology, Carr *et al.* (2003) demonstrated that three higher order facets of climate (affective, cognitive, and instrumental) were related to job performance, stress, well-being, and withdrawal through their relationship on commitment and satisfaction. Similarly, psychological climate showed significant relationships to motivation and performance, which were fully mediated by attitudes (Parker *et al.*, 2003).

A lot of the studies look into the correlation between strategic climates and desirable outcomes (service, quality, safety *etc.*). Generic climate dimensions have also been related to organizational effectiveness (Lindell and Brandt, 2000; Ostroff, 1993). Dawson *et al.* (2008) showed that particular climate variables such as well-being and quality have a positive correlation with performance. Imran *et al.* (2010) proved that the open systems approach and the rational approach climate using Patterson *et al.* (2005) measure are predictors of innovative work behavior. McMurray *et al.* (2004) showed a significant correlation between

organizational commitment and organizational climate. Patterson *et al.* (2004) studied company climate and productivity mediated by average level of job satisfaction and found significant correlations. Tsai and Huang (2008) studied the relationship among ethical climate types and job satisfaction and organizational commitment among nurses in Taiwan. Finally, climate has been linked to customer satisfaction and financial performance and employee attitudes (Schulte *et al.*, 2009).

Mediators and moderators

Climate mediates between practices and employee responses and performance outcomes. In addition, climate has also been shown to mediate the relationship between leadership style and citizenship behaviors at the group level (Ehrhart, 2004) and individual's commitment (Walumbwa *et al.*, 2010). Collective attitudes, motivation and behaviors have been shown to be a mediator between climate and performance outcomes at the organizational level (Patterson *et al.*, 2004), group level (Schneider *et al.*, 2005) and individuals level (Carr *et al.*, 2003; Parker *et al.*, 2003).

Culture and climate

Both Zohar and Hofmann (2012) and Ostroff *et al.* (2013) propose similar integrated culture / climate models.

Graphic description of the theoretical model

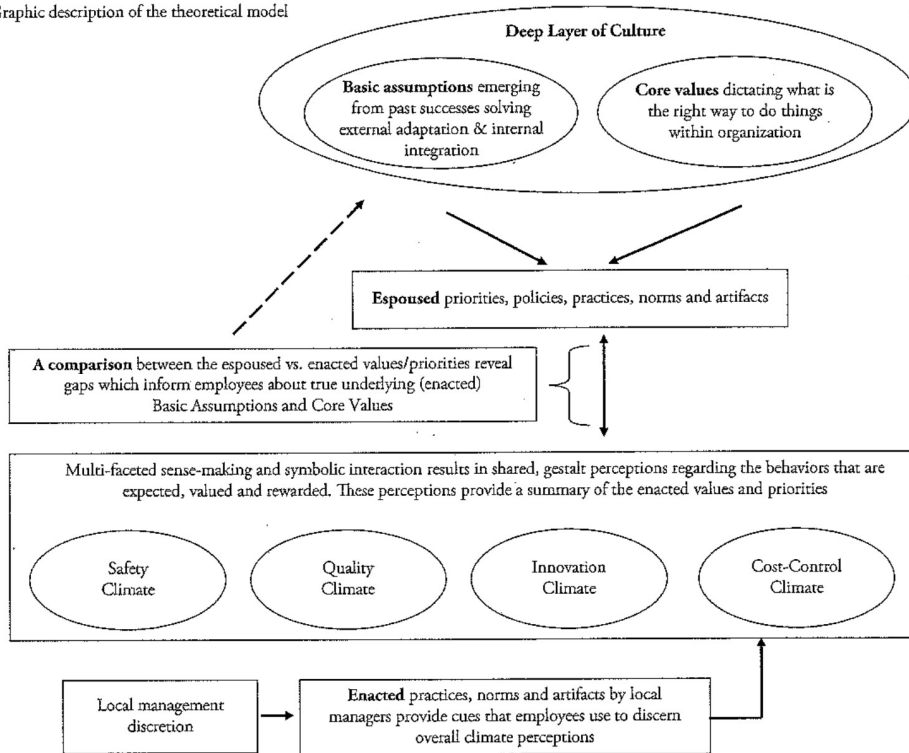


Figure 2a: Integrated model proposed by Zohar and Hofmann (2012)

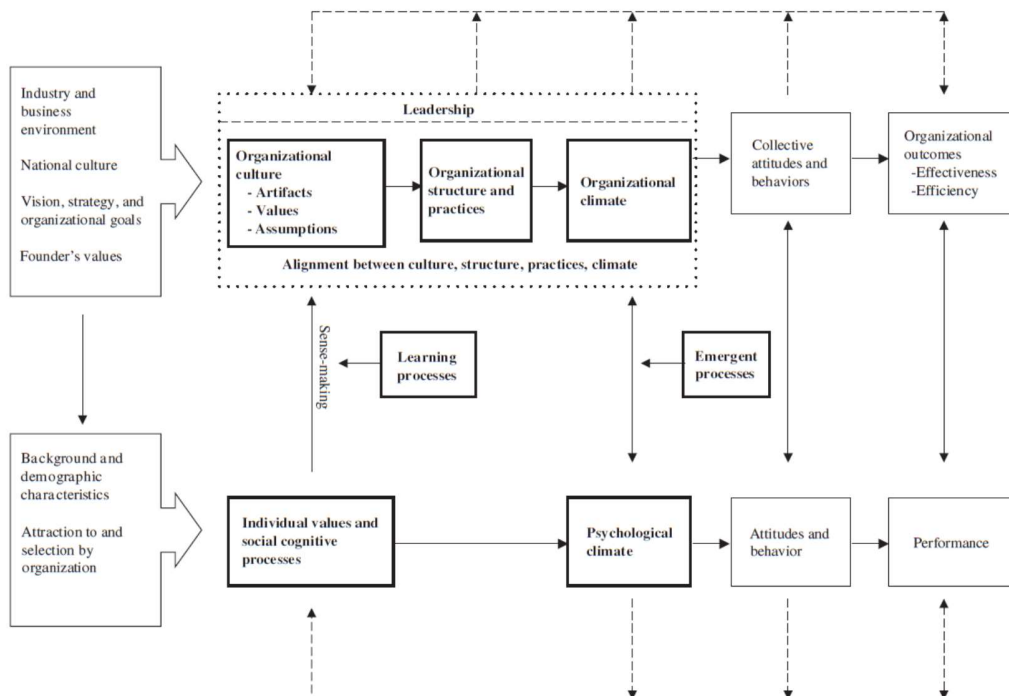


Figure 2b: Integrated model proposed by Ostroff et al. (2013)

In Figure 2a, the framework developed by Zohar and Hofmann (2012) is presented where organizational climate is an integral element, incorporating top-down and bottom-up process in culture conceptualization and measurement.

In Figure 2b, the framework developed by Ostroff *et al.* (2013) shows that organizational culture is a function of industry and environmental characteristics, national culture, founder's values, and an organization's vision, goals, and strategy. The organizational culture is therefore expected to align with and relate to structure, practices, policies, and routines in the organization that in turn provide the context for climate perceptions.

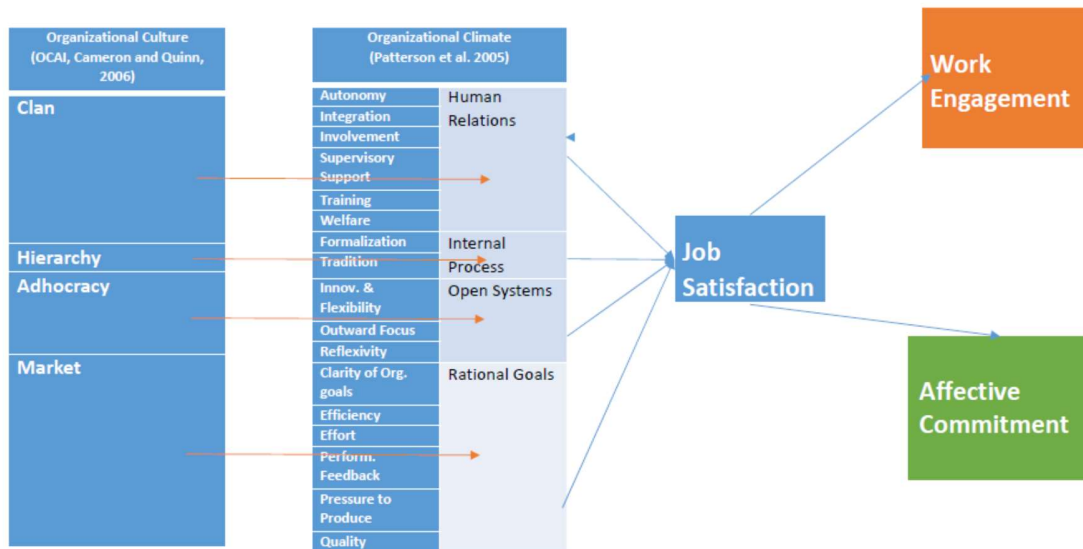
At the same time, Schneider *et al.* (2011a) proposes an integrated climate / culture or climcult framework for thinking. They propose that joint climate / culture research would not only provide a rich tapestry of the ways people observe and experience their work place in the aggregate, but also identify some keys to the triggers or drivers of what people observe and experience, especially via the focus on socialization practices and the easily transmitted myths and stories that exist in organizations.

According to Schneider, organizational climate and culture researchers are partially responsible for failure to integrate the study of climate and culture in their work. Differences in the definitions, the conceptualization and in the methods used have set obstacles for a more complete understanding of the framework.

In fact, only one study was found where the relationship between climate and culture was investigated by McMurray (2003). The study took place in a newly emerging university and showed that those faculties whose subcultures were congruent with the leadership culture had more positive subclimates.

In this study the following model will be studied:

Figure 3: The conceptual model proposed



The study will explore if Organizational culture can be considered an antecedent of Organizational climate. Subsequently, the relationship between Climate dimensions and Job satisfaction will be investigated. Finally, the mediating role of Job Satisfaction between Climate dimensions and Work Engagement and Affective Commitment will be explored.

The following hypotheses are tested:

H1: Organizational culture types are positively associated with climate dimensions of the equivalent Organization climate model. The Organizational culture type of Clan is positively associated with the Organizational climate dimensions of Autonomy, Integration, Involvement, Supervisory Support, Training and Welfare; the Organizational culture type of Hierarchy is positively associated with the Organizational climate dimensions of Formalization and Tradition; the Organizational culture type Adhocracy is positively associated with the Organizational climate dimensions of Innovation and Flexibility, Outward focus and Reflexivity; the Organizational culture type of Market is positively associated with the Organizational climate dimensions of Clarity of Organizational goals, Efficiency, Effort, Performance feedback, Pressure to produce and Quality.

H2: Organizational climate dimensions are positively associated with Job Satisfaction.

H3: Job Satisfaction is positively associated with Work engagement.

H4: Job Satisfaction is positively associated with Affective commitment.

Chapter 3: Methodology

A survey tool was developed by combining the five questions taken from the Brayfield-Rothe (1951) measure of job satisfaction, the nine questions of the compact version of the Utrecht Work Engagement Scale (Schaufeli *et al.*, 2006), the six questions from the affective commitment component of the Allen and Meyer tool as used by Ang *et al.* (2013) with the additional question “I would recommend the educational programs and the products of the Institution to my family”, the Organizational Climate Measure (OCM) and the Organizational Culture Assessment Instrument (OCAI). All questions were translated in Greek.

The number of survey questions were 127. The survey was anonymous and the researcher could not trace answers back to individual e-mails. At the end of the survey respondents were also asked to answer questions about their demographical characteristics (educational level, type of employee, sex, age and department).

The tool was distributed via google forms to all long-term employees of the organization through the internal organizational e-mail account from July to November 2021. No one could answer the questionnaire twice, but all participants were allowed to correct their answers. From 232 questionnaires distributed, 114 were returned via google forms. For the technical staff a printed version was made available. Only two printed questionnaires were returned. There was a total response rate of 50%.

As the individual components of the survey were taken from different measures they were used with the original Likert scale as proposed by the writers that developed them except for the OCAI.

For the climate measure the scale was: 1 (definitely false), 2 (mostly false), 3 (mostly true), 4 (definitely true). The same scale was used for the OCAI.

Even though the Organizational Culture Assessment Instrument (OCAI) has its own logic, for reasons of uniformity and simplicity, the original instructions were not used. According to the authors that developed the OCAI each participant should divide 100 points among four alternatives that define each of the six culture aspects. The OCAI is used to map the current and the preferred culture. In this survey all four alternatives of each of the six aspects were

presented as questions measuring the current culture, so that this version of the culture measure had 24 questions altogether.

For the job satisfaction measure the scale was: 1 (strongly disagree), 2 (disagree), 3 (slightly disagree), 4 (neither disagree nor agree), 5 (slightly agree), 6 (agree), 7 (strongly agree)

For the affective commitment measure the scale was: 1 (strongly disagree), 2 (disagree), 3 (neither disagree nor agree), 4 (agree), 5 (strongly agree)

For the UWES the scale was: 0 (never), 1 (almost never), 2 (rarely), 3 (sometimes), 4 (often), 5 (very often), 6 (always); where 0 Never 1 Almost Never (A few times a year or less) 2 Rarely (Once a month or less) 3 Sometimes (A few times a month) 4 Often (Once a week) 5 Very Often (A few times a week) 6 Always (Every day).

For each component of the survey an Exploratory Factor Analysis (EFA) took place using the IBM SPSS Statistics Data Editor (IBM Corp., 2013). The KMO and Bartlett's test of sphericity was carried out using the maximum likelihood extraction method and the Promax rotation method to extract eigenvalues of factors equaling or exceeding 0.7 and factor loadings equaling or exceeding 0.3.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic that indicates the proportion of variance in the variables that might be caused by underlying factors (Kaiser and Cerny, 1979) and Bartlett's test of sphericity tests the hypothesis that the correlation matrix is an identity matrix, which would indicate that the variables are unrelated and therefore unsuitable for structure detection.

According to Cudeck and O'Dell (1994) the maximum likelihood method has many advantages in that it allows researchers to test the statistical significance of factor loadings, calculate correlations among factors and compute confidence intervals for these parameters.

Once the EFA was complete the Cronbach's alpha was used to measure the internal consistency of the resulting factors. According to Cronbach (1951), values of the co-efficient higher than 0.7 are satisfactory.

The factors that were discerned were isolated and fed into the model. The PLS-SEM, a non-parametric method bootstrap procedure was used (Efron and Tibshirani, 1986; Davison and Hinkley, 1997) to test the significance of path coefficients. In bootstrapping, subsamples are

randomly drawn observations from the original set of data (with replacement). The subsample is then used to estimate the PLS path model. This process is repeated until a large number of random subsamples has been created (in this case 1,000.). The estimations from the bootstrap subsamples are used to derive standard errors for the PLS-SEM results. With this information, t-values, p-values, and confidence intervals are calculated to assess the significance of PLS-SEM results Hair *et al.* (2017). The software used for this procedure was SmartPLS (Ringle *et al.*, 2015).

Chapter 4: Results and discussion

First the demographic profile of the respondents is presented. They are highly educated. 85.34% of them have a tertiary education first or postgraduate degree/diploma (Figure 4). 47.41% of the respondents are administrators and 40.52% teaching staff or faculty (Figure 5). The technical staff is underrepresented, which would explain the high percentage of women among the respondents (59.48%), as seen in Figure 6. Most respondents belonged to the age group 40-49 with the age groups of 30-39 and 50+ coming second in the distribution (Figure 7).

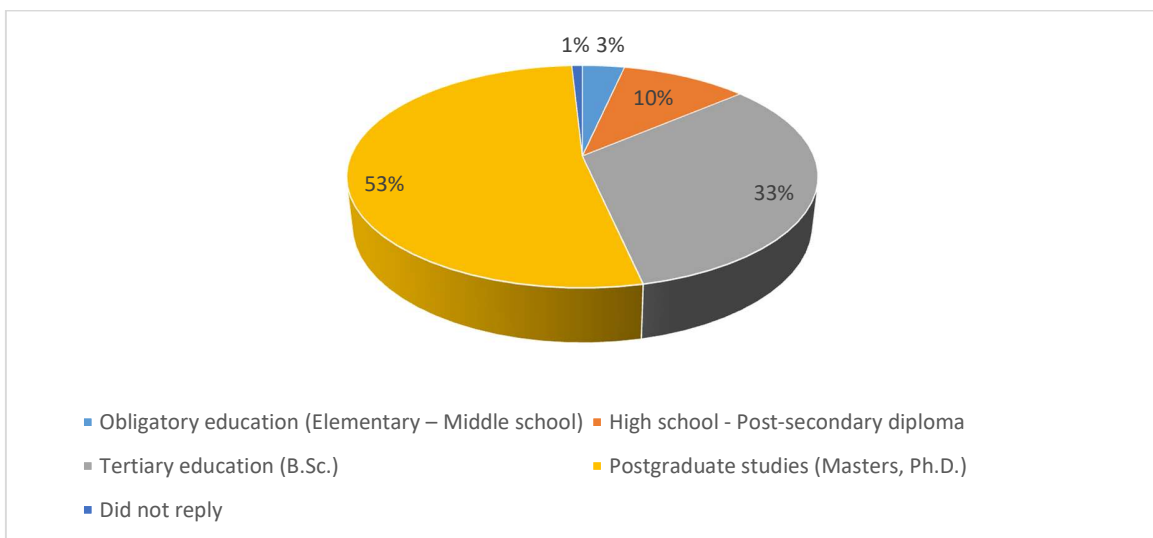


Figure 4: Participants' educational level

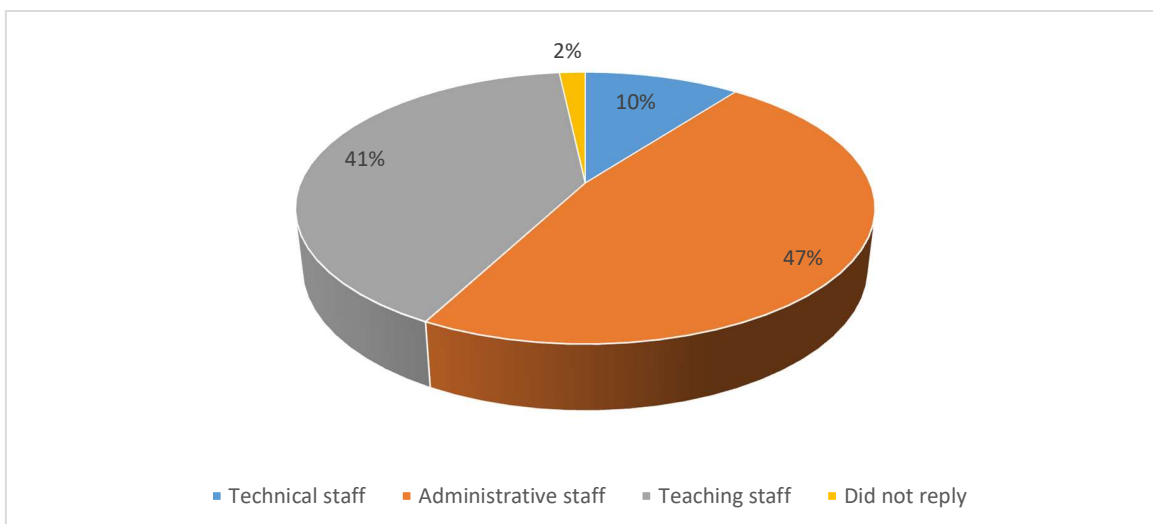


Figure 5: Participants' professional category

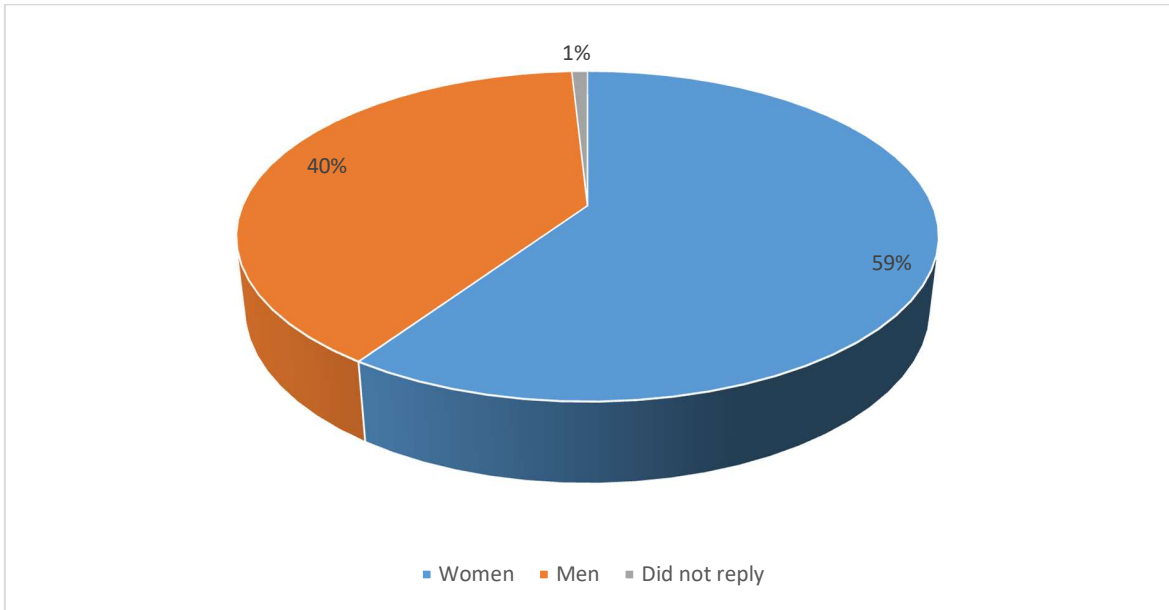


Figure 6: Participants' sex

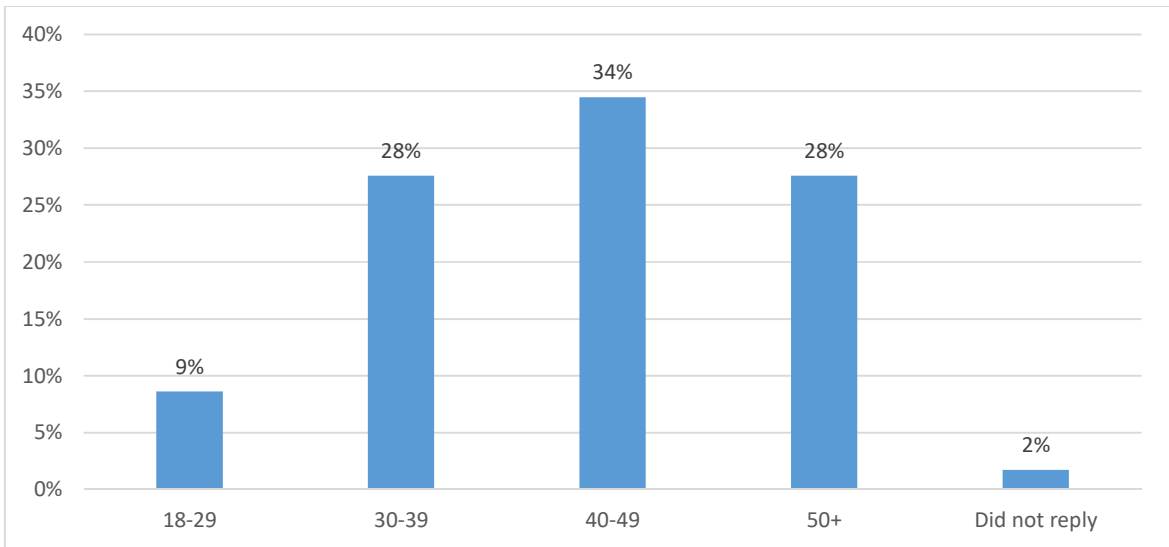


Figure 7: Participants' age

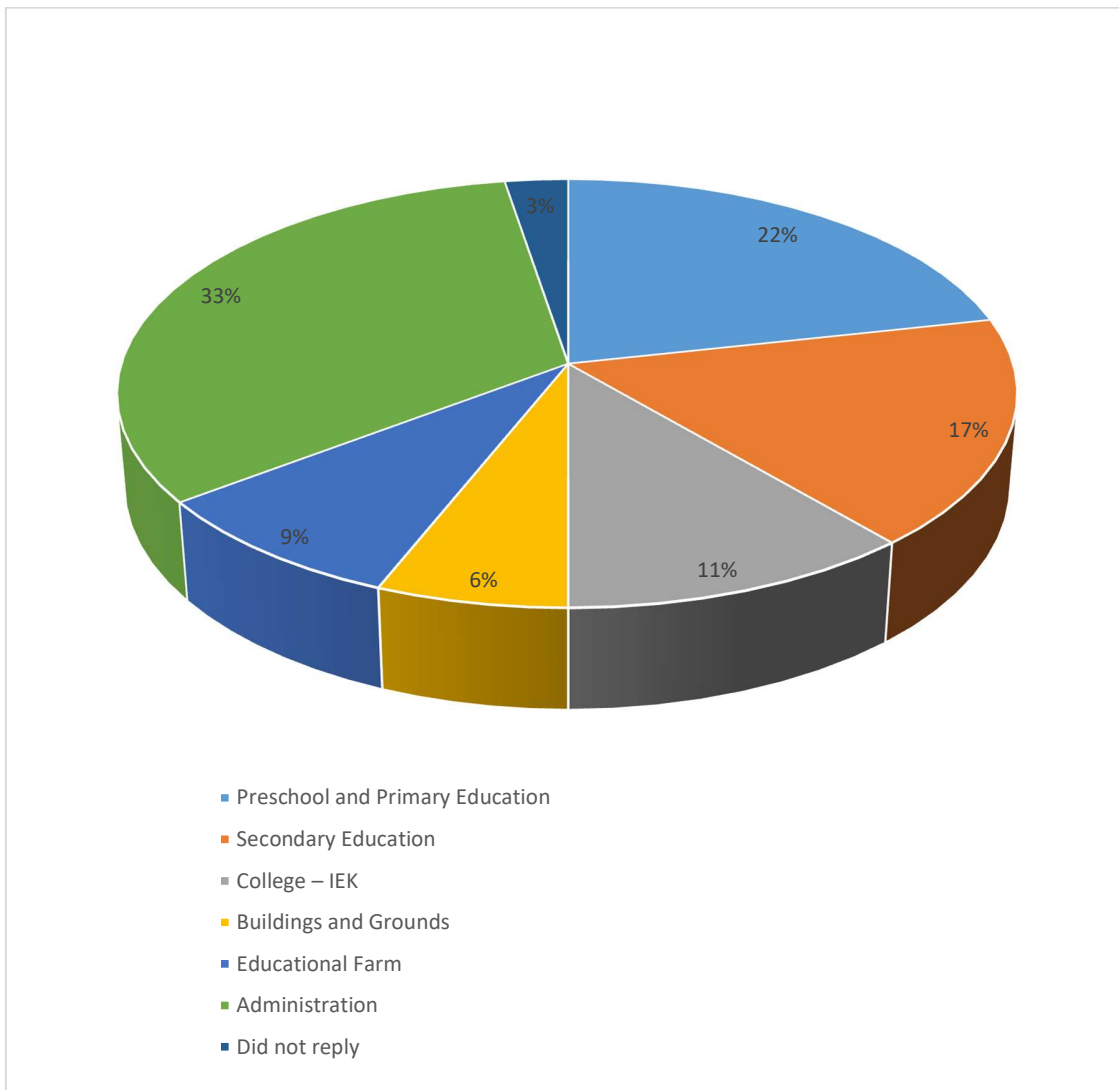


Figure 8: Participants' department

As shown in Figure 8, 21.55% of the respondents work in the preschool and primary education departments which were founded after 2011. 17.24% of the respondents work in the secondary education departments, the Middle School and the High School. The High School is the traditional educational program of the Institution. The Middle School was founded in 2019. 11.21% of the respondents work in the post-secondary departments of the institution which was founded in 1996. 32.78% of the respondents are administrators. The participation of the employees in technical departments (Buildings and Grounds and the Farm) is low, 6.03% and 8.62% respectively. The survey misses to represent the voices of the employees with a technical background.

Focusing on organizational culture, the predominant culture is that of Hierarchy (Table 1 and Figure 9). This is followed closely by the Clan culture and that of Adhocracy. Market culture is the one that received the lower scores. The questions comprising the Market culture component of the OCAI are more relevant to a for profit aggressive and antagonistic organization, which does not fit the profile of this organization. Having an outer focus and following one's goals does not necessarily mean that an organization has to have this antagonistic orientation.

After carrying out the Exploratory Factor Analysis (EFA), three factors are discerned, that of Clan, Market and Hierarchy. The Pattern matrix table of the EFA is shown in Table 2. Trying to find the reason why the Adhocracy culture could not be discerned as a separate factor, the following possible conclusion is drawn. It might be because of all the changes in the organization, different departments understand and experience Adhocracy in a different way. New departments, departments that enjoy a creative freedom, departments that innovate understand this culture type and the value of Adhocracy, while more traditional departments possibly confuse it with the Clan culture.

Table 1: Organizational culture summary results

Organizational Culture Summary	Mean (max 4)	Standard Deviation
Clan	2.92	0.88
Adhocracy	2.92	0.77
Market	2.79	0.73
Hierarchy	2.95	0.77

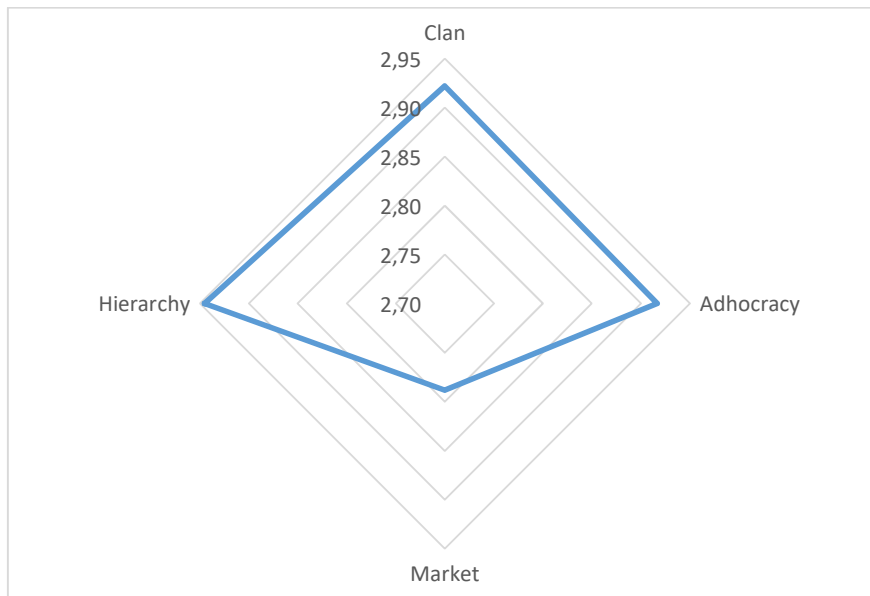


Figure 9: Organizational culture

Table 2: Pattern Matrix of the EFA for Culture

	Factor		
	1	2	3
CULTURE_CLAN3	,714		
CULTURE_CLAN5	,911		
CULTURE_CLAN6	,919		
CULTURE_MARKET1			,717
CULTURE_MARKET3			,800
CULTURE_MARKET4			,669
CULTURE_HIERARCHY1		,394	
CULTURE_HIERARCHY3		,760	
CULTURE_HIERARCHY4		,631	
CULTURE_HIERARCHY5		,855	

Extraction Method: Maximum Likelihood.
 Rotation Method: Promax with Kaiser Normalization.
 a. Rotation converged in 5 iterations.

Focusing on organizational climate, differences appear to be small among climate models (see Table 3). When looking into the dimensions (Table 4), the highest rate is given to quality, followed by formalization, outward focus, welfare and effort. In the top five dimensions, representatives of all climate models can be found.

Table 3: Organizational climate summary results

Organizational Climate Summary	Mean (max 4)	Climate Dimensions
Human Relations	2.69	Autonomy, Integration, Involvement, Supervisory support, Training, Welfare
Internal Process	2.72	Formalization, Tradition
Open Systems	2.80	Innovation and Flexibility, Outward focus, Reflexivity
Rational Goal	2.77	Clarity of goals, Efficiency, Effort, Performance feedback, Pressure to produce, Quality

Table 4: Organizational climate dimensions results

Organizational Climate Dimensions	Mean (max 4)	Standard deviation	Belongs to the Model
Quality	3.28	0.79	Rational Goals
Formalization	3.21	0.72	Internal Process
Outward focus	3.11	0.79	Open Systems
Welfare	3.05	0.78	Human Relations
Effort	3.02	0.81	Rational Goals
Supervisory support	3.00	0.78	Human Relations
Pressure to produce	2.96	0.82	Rational Goals
Training	2.89	0.79	Human Relations
Performance feedback	2.72	0.88	Rational Goals

Reflexivity	2.67	0.80	Open Systems
Innovation and flexibility	2.62	0.81	Open Systems
Integration	2.57	0.92	Human Relations
Clarity of organizational goals	2.56	0.81	Rational Goals
Involvement	2.49	0.88	Human Relations
Tradition	2.23	0.89	Internal Process
Autonomy	2.13	0.81	Human Relations
Efficiency	2.06	0.88	Rational Goals

After carrying out the Exploratory Factor Analysis (Table 5), 8 factors are discerned: Supervisory Support, Welfare, Formalization, Clarity of Organizational goals, Efficiency, Effort, Pressure to Produce and Quality. Four out of the top five factors are among those confirmed by the EFA and so are some of the dimensions that scored low such as clarity of organizational and efficiency. That can mean that the dimensions that are clearest to the respondents are the ones that they feel more passionate about.

Table 5: Pattern Matrix of the EFA for Climate

Pattern Matrix ^a							Pattern Matrix ^a		
	Factor						Factor		
	1	2	3	4	5	6	7	8	
CLIMATE_SUPERVISORY_SUPPORT1	.902								
CLIMATE_SUPERVISORY_SUPPORT2	.920								
CLIMATE_SUPERVISORY_SUPPORT4	.871								
CLIMATE_SUPERVISORY_SUPPORT5	.913								
CLIMATE_WELFARE2				.967					
CLIMATE_WELFARE3				.943					
CLIMATE_WELFARE4				.587					
CLIMATE_FORMALIZATION1							.694		
CLIMATE_FORMALIZATION3							.856		
CLIMATE_CLARITY_ORG_GOALS2		.669							
CLIMATE_CLARITY_ORG_GOALS3		.376							
CLIMATE_CLARITY_ORG_GOALS4		.905							
CLIMATE_CLARITY_ORG_GOALS5		.959							
CLIMATE_EFFICIENCY3							.641		
CLIMATE_EFFICIENCY4							1,015		
CLIMATE_EFFORT1			.966						
CLIMATE_EFFORT2			.667						
CLIMATE_EFFORT4			.855						
CLIMATE_PRESSURE_TO_PRODUCE3								.847	
CLIMATE_PRESSURE_TO_PRODUCE4								.870	
CLIMATE_QUALITY1					.716				
CLIMATE_QUALITY2					.914				
CLIMATE_QUALITY3					.823				

Extraction Method: Maximum Likelihood.
 Rotation Method: Promax with Kaiser Normalization.
 a. Rotation converged in 7 iterations.

The questions that measured affect seem to work very well, especially the job satisfaction ones by Brayfield and Rothe (1951) and the affective commitment ones by Allen and Meyer (1990). The question that was adapted from a suggestion by the researchers Ang *et al.* (2013) “I would recommend the educational programs and the products of the Institution to my family” does not fit into the Affective commitment measure. In the case of Employee engagement, all items form one factor. The three subcategories: Vigor, Dedication and Absorption, presented by Schaufeli *et al.* (2006) in the UWES measure are not confirmed and the one factor solution is used. As shown in Table 6, the results are more than satisfying in all three affects as compared with those in the bibliography. All measure results are presented also in percentages so that they can be compared. The three affects receive percentages of about 80%. In order to be able to understand the meaning of these results, analogous research results are consulted. In the case of job satisfaction, the research of Judge *et al.* (1998) is studied. Judge *et al.* (1998), who also used the same questions by Brayfield and Rothe (1951) during a survey among 1,300 physicians of the American Medical

Association, a survey among 1,086 business school graduates of the University of Maryland and a survey among 200 Israeli students at the Hebrew University, received means of Job Satisfaction from each of the different samples of 74.4%, 67.1% and 69.2% respectively. In the case of affective commitment, the study of Ang *et al.* (2013) is looked into. The authors studied among other things Affective commitment of 466 employees and managers in an Australian hospital. They characterize medical practitioners as being heavily committed with their Affective commitment measured with the same questions as in this study having a mean value at 3.24. In this study the mean value of Affective commitment is 3.27 or 81.79% (Table 6). In the case of the resulting mean of 4.78 from the use of the short version of the UWES, according to its manual, this is regarded as high in the proposed item scale 1-6 (Schaufeli and Bakker, 2003).

It Tables 7-9, the resulting Communalities and Total Variance that are calculated during the EFA of the Job Satisfaction measure, the Affective commitment questions and the UWES are shown.

Table 6: Results from measures three affects

JOB SATISFACTION	Mean (max 7)	Standard deviation	%
	5.66	1.48	80.88
AFFECTIVE COMMITMENT	Mean (max4)		%
	3.27	0.96	81.79
EMPLOYEE ENGAGEMENT	Mean (max 6)		%
	4.78	1.29	79.61

Table 7: Communalities and Total Variance Explained from the EFA in the Job Satisfaction measure

	Initial	Extraction
JOB_SATISFACTION1	,782	,851
JOB_SATISFACTION2	,772	,836
JOB_SATISFACTION4	,756	,816
JOB_SATISFACTION5	,605	,644

Extraction Method: Maximum Likelihood.

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,354	83,850	83,850	3,147	78,686	78,686
2	,314	7,862	91,712			
3	,178	4,441	96,153			
4	,154	3,847	100,000			

Extraction Method: Maximum Likelihood.

Table 8: Communalities and Total Variance Explained from the EFA in the Employee Engagement measure

	Initial	Extraction
ENGAGEMENT_VIGOR1	,764	,704
ENGAGEMENT_VIGOR2	,797	,761
ENGAGEMENT_VIGOR3	,785	,788
ENGAGEMENT_DEDICATI ON1	,858	,860
ENGAGEMENT_DEDICATI ON2	,800	,780
ENGAGEMENT_DEDICATI ON3	,742	,690
ENGAGEMENT_ABSORPT ION2	,720	,546
ENGAGEMENT_ABSORPT ION3	,678	,559

Extraction Method: Maximum Likelihood.

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,993	74,909	74,909	5,688	71,100	71,100
2	,663	8,285	83,194			
3	,454	5,672	88,866			
4	,297	3,717	92,583			
5	,197	2,459	95,042			
6	,158	1,975	97,017			
7	,148	1,846	98,863			
8	,091	1,137	100,000			

Extraction Method: Maximum Likelihood.

Table 9: Communalities and Total Variance Explained from the EFA in the Affective Commitment measure

	Initial	Extraction
AFFECTIVE_COMMITMEN T3	1,000	,798
AFFECTIVE_COMMITMEN T4	1,000	,737
AFFECTIVE_COMMITMEN T5	1,000	,841

Extraction Method: Principal Component Analysis.

After the completion of the EFA, the remaining confirmed factors are analyzed for their consistency using the Cronbach's α co-efficient. In Table 10, one can see the Cronbach's α values for all factors. The resulting consistency is satisfactory. All factors have a Cronbach's α coefficient of over 0.7.

Table 10: Reliability analysis for all factors

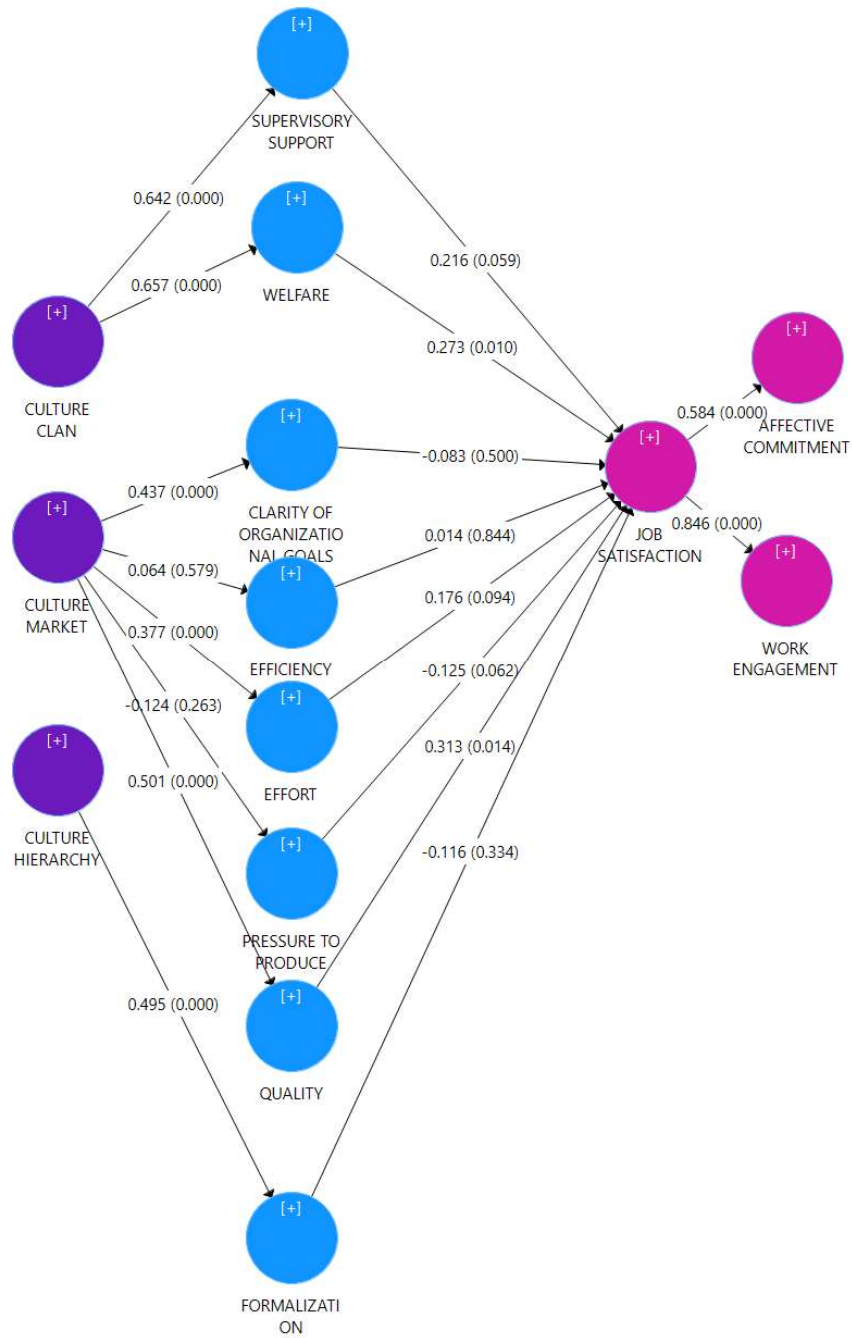
Organizational Culture	Cronbach's α
Clan	0.897
Market	0.754
Hierarchy	0.833
Organizational Climate	Cronbach's α
Supervisory support	0.936
Welfare	0.911
Quality	0.907
Effort	0.878
Clarity of Goals	0.864
Pressure to produce	0.844
Efficiency	0.732
Formalization	0.723
Affects	Cronbach's α
Job Satisfaction	0.935
Work Engagement	0.950
Affective Commitment	0.861

The values of the resulting factors were fed into SmartPLS software. The proposed model was visually presented and the bootstrapping algorithm was run. The calculation gave the following results.

All indicators of the culture and climate are reflective and highly associated with their factors with P values at 0.000.

In Figure 10 the results of the bootstrapping calculation can be seen and the confirmed associations in the proposed model studied.

Figure 10: The Culture – Climate – Affects model proposed



Hypothesis H1 is partly supported: The Organizational culture type of Clan is positively associated with the Organizational climate dimensions of Supervisory Support and Welfare ($p < 0.001$); the Organizational culture type of Hierarchy is positively associated with the Organizational climate dimension of Formalization ($p < 0.001$); the Organizational culture type of Market is positively associated with the Organizational climate dimensions of Clarity of Organizational goals, Effort and Quality ($p < 0.001$). The Organizational culture type of Adhocracy and the Organizational climate dimensions of Open Systems were not discerned as separate factors and therefore their associations not studied. The association between the Organizational culture type of Market was not found to be associated with Efficiency and Pressure to produce.

Hypothesis H2 is partly supported: Certain organizational climate dimensions are positively associated with Job Satisfaction, such as Welfare and Quality ($p < 0.05$).

Hypothesis H3 is supported: Job Satisfaction is positively associated with Work engagement ($p < 0.001$).

Hypothesis H4 is supported: Job Satisfaction is positively associated with Affective commitment ($p < 0.001$).

There is a significant positive association between the two Human Relations climate model dimensions, that of Supervisory Support and of Welfare with the Clan culture. The cultural type Clan defines an organization that is internally focused and has a flexible organization. It refers to an organization that provides a sense of an extended family environment, where people share a lot of themselves and leadership exemplifies mentoring, facilitating, or nurturing. The glue that holds such an organization together is loyalty and mutual trust. Commitment, trust, openness, and participation persist. This type of organization is expected have structures and processes that focus on the support of employees by their supervisors and on the welfare of employees.

There is also a significant positive association between the Rational Goals climate model dimensions of Clarity of Organizational Goals, Effort and Quality with the Market culture. The cultural type Market defines an organization, where an external focus and stability are important. In this case, the market of an educational institution requires quality and that explains why the climate dimension that prevails and has a significant relationship with the

market culture element of the institution. There is no significant relationship between the Market culture and the Rational Goals climate dimensions of Efficiency and Pressure to produce.

There is a significant positive association between the Internal Process climate model dimension of Formalization with the Hierarchy culture. The cultural type Hierarchy defines an organization where an internal focus and stability are important. An organization, where Hierarchy prevails is an organization that is a very controlled and structured place. It makes sense that in such an environment Formalization, which is a concern with formal rules and procedures, is prevalent and associated with the Hierarchy culture.

None of the Open Systems climate dimensions were confirmed during the EFA. On the side of the culture, Adhocracy culture was not confirmed as a separate type. In this respect, responses on culture and climate were consistent in their inconsistency.

The climate dimensions that have a significantly positive association with Job Satisfaction are Welfare, Quality and Supervisory Support. This is a logical association since on the one hand employees feel that they are being taken care and they are supported by their supervisors and on the other hand they get satisfaction from being proud of doing quality work. Finally, Job Satisfaction shows a very significant relationship to Work engagement and Affective commitment. The study shows that Culture can be considered an antecedent to climate and Job Satisfaction has a mediating role between climate dimensions and work engagement and affective commitment. The study confirms what seems to be common sense: A satisfied employee works with vigor, dedication and gets absorbed in what one does and chooses to stay in the organization, not because one feels obliged or because the cost of change is high, but because one wants to stay.

Similar results are shown by numerous researchers. Ang *et al.* (2013) in their study, showed that job satisfaction positively mediated the relationship between employee High Performance Work Systems and affective commitment. Pološki Vokić and Hernaus (2015) through single and multiple regressions showed that job satisfaction is a significant predictor of work engagement, while work engagement strongly predicts employee loyalty.

Limitations of the research

Some of the weaknesses of this study were:

- The underrepresentation of the technical staff of the institution in the pool of the respondents of the survey. This was a large loss of valuable information. It also affected the response ratio.
- The ambiguity in the survey tool in regard to the reference of the questions: Do they refer to the institutional culture and climate or to the culture or climate as respondents experienced it in their own department. A number of respondents asked this question while trying to complete the survey. This ambiguity caused some confusion and it could have affected the results.
- The use of the OCAI with a different scale than that the authors designed. The original scale of the OCAI asks of the respondent to divide 100 points between the four different statements representing the four culture types. This way it is very clear to the respondent that the statements are different expressions for the same aspect and they have to think what best fits their organization (Cameron and Quinn, 2006).
- The complexity of the OCM with its 17 dimensions. As Schneider *et al.* (2011b) noted that Michael Patterson *et al.* (2005) reduced their climate dimensions from 19 in the original tool to “only” 17 dimensions as the research unfolded.

Chapter 5: Conclusions

As it was mentioned in the introduction, the organization under study has gone through 10 years of continuous development amidst an economic crisis and more recently the effects of the pandemic. Even though there are no data in the survey from its culture at the beginning of the decade, it is well known that this was an organization that relied on tradition, family relations between employees, friends of the institution, trustees and donors. The institution has never been stagnant. Despite the efforts for change, these were not enough to provide a positive lasting economic perspective and with the Greek economic crisis starting in 2009, the outlook was even bleaker. In less than 10 years the institution became more extrovert, developed a number of new educational programs. All this came with a cost. There was a lot of effort and hard work, an increasing number of new employees, new departments and a frequently changing organizational chart. There was not enough time for people to properly introduce themselves to each other, for new efficient policies and procedures to develop, for the institution to cement the changes into its new reality, for the old to combine with the new.

The results of the survey show that despite the fact the employees seem to be satisfied, engaged with their work and committed emotionally to the institution, the culture and climate results are not as clear.

There are two prevailing cultures, Hierarchy and Clan in the organization. The results of Adhocracy could not be used because the type was not confirmed as a separate factor in the EFA. The current culture seems to have been formed from the institution's long history, its values, its stories, its campus, all artefacts as well as the current changes, the new leadership, new coming staff and its background, the socioeconomic changes that have affected the institution and its employees, the pandemic and the working and learning from home arrangements it introduced and changes in the use of technology. The Market type questions of the OCAI tend to try to profile a for profit very aggressive organization that does not reflect the organization under study. It might be that it is the type of survey tool that was used that could not map the new more extrovert inclination of the organization.

Even though there seems that there was an intentional effort to move the culture from the original introvert Hierarchy and Clan traditions to more extrovert culture types. This effort might not have been entirely successful as the deepest layers of organizational culture are

difficult to change. Management and Human Resources will have to work arduously to anchor the changes in corporate culture (Kotter, 1996).

Combining old traditions and values with the new trends, developing a new composite and diverse culture, introducing new policies and procedures that are easy to use and promote efficiency through the endorsement of new technologies, enabling communication and the empowerment of employees are some of the challenges. As seen in the Ostroff model (Ostroff *et al.*, 2013), leadership and alignment of culture, structure, practices and climate provide the framework for culture and climate.

In the climate front, high values are given to Quality, Formalization, Outward focus, Welfare, Effort and Supervisory support. From these, all but outward focus were confirmed as separate factors by the EFA. In the case of quality, it seems that employees perceive the focus of the organization on quality procedures as high and that contributes to their job satisfaction. This can be explained as employees understand that students, parents and the community expects from an educational institute excellent quality and the focus of the organization in quality procedures makes sense to them and can also be a source of pride and satisfaction. In the case of formalization, this factor also received a high rate, but its association with job satisfaction is low. The climate dimension with the lowest rate was that of efficiency. Combining these two results, one can conclude that there is unnecessary bureaucracy that results in low efficiency. The focus of the organization on the employee's welfare is rated highly and is a source of job satisfaction. Since the survey took place in the second semester of 2020, during the pandemic, this was a very important factor for organizations and employees. Finally, employees consider that they perform to the best of their ability and that they receive sufficient support from their immediate supervisors. This type of effort is often a source of job satisfaction that subsequently results in further performance (Judge *et al.*, 2001).

A number of climate dimensions were not confirmed. These were Autonomy, Integration, Involvement, Training, Tradition, Innovation & Flexibility, Outward Focus, Reflexivity, Performance Feedback. It is possible that the survey questions were not well understood, had a different meaning for employees from different departments, or the employees were in a dilemma if they should base their answers on their own experience in their department or from what they see and hear happening in the organization in general.

Management and Human Resources will have to work on developing systems and policies that address in a strategic way all dimensions presented in the Organization Climate Measure ensuring alignment with the preferred culture type. By strategic is meant, that the decision if an employer allows employees more autonomy or uses more hierarchical models to govern an institution would then define the approach to Autonomy and Formalization.

Even though there could be extensive of discussion about the relationship between organizational culture and climate and how the one influences the other, as well as which is the appropriate methodology to use in order to map them and a lot more research will take place in the future about these topics, there is one very clear conclusion that can be drawn from this study: Job satisfaction was proven to be the antecedent of work engagement and affective commitment. This conclusion is a very interesting and useful for designing appropriate organizational structures and policies for the prosperity of employees and organizations.

Proposals for future research

In terms of proposals for future research, the study of the different sub-cultures and different sub-climates in the organization would be of great research interest. There is also research interest in the development of the parameters studied in this project through time and how leadership styles and human resource management practices would affect them in the future.

Studying organizational culture and climate in the same study was very interesting and something that hasn't been studied thoroughly. The intersection of the culture and climate is a unique new research field and researchers should take Schneider *et al.*'s (2011a) recommendation and carry out composite climcult studies.

In this study the OCAI and the OCM were used. A different interesting combination would be the use of ethnographic methodology for the mapping of organizational culture and the use of the Organizational Culture Profile (OCP) survey (O'Reilly, Chatman and Caldwell, 1991).

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