

# Organizational Culture Diagnostic in two Mexican Technological Universities

## Case study

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### Abstract

This study established as main research objectives: To validate the Competing Values Framework (CVF) at two universities and set the preferred dominant organizational culture in both institutions. In these universities had not implemented the CVF Cameron & Quinn model. Assuming the two organizations presented mixture of values quadrants but market culture will dominate. The CVF was useful for its extensive evidence, we applied the Organizational Culture Assessment Instrument (OCAI) remain valid and reliable.

It turned predominant current market in both institutions, as preferred in the recent clan and adhocracy in the former one. We explored the reliability of OCAI finding a moderate Cronbach's alpha and not when exploring the quadrants. By knowing the diagnosis line manager's skills providing the ability to change become effective, productive and competitive organizations.

**Keywords:** Organizational culture, characterization of culture, validation, competing values framework, OCAI.

### Introduction

The organizational culture is unique to each company according to the purpose intended. It consists of the set of knowledge, skills, attitudes and values that enable an organization to work effectively and achieve competitive results, which implies a set of attitudes: the commitment of the participants, the forms of work, respect, professionalism and ethics; authors recently [1], [2], [3] have used this construct again. The theoretical [4], [5], [6] have suggested that organizational culture is a strategic resource that has the value of ensuring the continuity and permanence of organizations.

According to Cameron & Quinn [7] culture is a crucial factor in long-term effectiveness of organizations, the authors suggest that the task of studying and managing organizational culture are able to measure the key dimensions of culture and development of skills to achieve change.

Organizational success and consequently the performance is largely implicit and empirically linked to the culture providing advance required for changes that modify the traditional forms of school management.

In the present study applies the model of Cameron & Quinn that classifies organizational culture in terms of two dimensions of values: a) Orientation (internal focus and external focus) and b) flexibility (flexible as opposed to stable and control). The intersections of the dimensions generate a structure of quadrants of values: 1) Inner Focus and flexibility (family or clan organization), 2) internal focus, stability and control (hierarchy organization), 3) external focus and flexibility, (adhocracy organization), 4) external focus, stability and control (market organization).

According to the authors usually organizations in a mixture of all values but one predominates. Each quadrant generates a different kind of leadership, guidance to human

resources and organizational change processes. The model is fully explained in the literature review found that studies conducted by other authors for similar purposes [8], [9].

The investigation was limited at two educational institutions whose characteristics are similar because they belong to a type of higher education in two years inspired by the Instituts Universitaires de Technologie (IUT) France and the ease of obtaining information as to request access to explaining that other institutions would be case study does not allow it.

The study was initiated in a plane turned out to be exploratory and explanatory since the model was not applied in UT's. Providing a sense of understanding of organizational culture. It also aims to provide the institutions a tool to diagnose and characterize their culture, to more fully understand their nature (self) and know which items and areas must meet and strengthen and on this basis rationally plan their change and development processes, and comparing what they want with what they are. For this process, broke the instrument that raises the CVF of organizational culture (OCAI, for its acronym in English). In the first section of "Literature Review" examines the state of the art culture, organizational culture and particularly the Competing Values Framework. In Method "expands the sample and nature of the research and the procedures thereof. In "Results" are presented reliability analysis and validation of the instrument, benchmarking between organizations and characterization of culture per variable per quadrant of the institutions. In "Discussion" down the findings, conclusions and contributions of research and the recommendations, scope and limitations of the study. Finally in the appendix contains the reagents of the original instrument under test.

## **Culture.**

The term "culture" refers broadly to a relatively stable set of beliefs, values and behaviors shared by a society.

According to authors [10] the term culture refers to the understanding of the arts and other intellectual achievements, applied to the organization is the belief and individual practice in the structure as a result of it. Although culture is intangible is a powerful influence over the daily actions and the functioning of the structures [11].

Although derived from social anthropology as a framework for understanding "primitive" societies [12], the concept of culture has now been used in the context of organizations through the development of motivated, committed with a common set based on values, beliefs and assumptions [13].

There are types or levels of culture that affect individual and organizational behavior. The highest level would be for example a global culture, as culture of a world religion or culture of a hemisphere. On another level are national cultures (Mexican culture) or subgroups based on gender cultures (the different ways men and women appreciate the earth), the cultures of ethnic groups (the contrasts between races) professional cultures (the culture of government), or socioeconomic group culture (rich and poor).

Studies [14] show a similar relationship between business, culture and increased productivity, while Deal & Kennedy [15] focused on the importance of a "strong" culture to promote the advantages of an organization successful.

## Organizational culture.

Organizational culture refers to how employees perceive their organization, their characteristics, not whether they like or dislike their culture. That is, culture is a descriptive term [16].

Meanwhile [17] refers to the organizational culture as the most important agent for the success of an organization. A culture can generate a positive or negative way or affect the way you work. He also notes that a strong organizational culture can generate motivation, responsibility and loyalty of employees to the organization.

The organizational culture has guided administrators find the way to increase effectiveness in their organizations. The most obvious manifestation of culture is explicit in the conduct of members in an organization is the way in which people interact [18].

On the other hand, organizational culture is a system of meanings shared by the organs of an organization that distinguish it from other, is the meeting of basic features that, taken together, capture the essence of the culture of an organization. The seven basic features that capture the essence of the culture of an organization according to Robbins [19] are: a) Innovation (taking risks) b) thoroughness c) results orientation d) guidance to persons e) signpost equipment f) aggression (competitiveness) g) stability.

These characteristics are presented continuously from low to high ranks in the organization. In evaluating this result gives us a picture of the feelings of shared understanding with the members, how they do things and how it is supposed that the members should behave.

Organizational or corporate culture includes characters allowed behavior in organizations by individuals learned through socialization processes. Thus, by the similarity of these codes are macro cultures between organizations with beliefs about its nature and that are shared by members of various structures. They impact and influence all aspects affecting competition and cooperation among organizations. Value systems and beliefs shared by members of different organizations within a macro culture facilitate relations of cooperation and coordination between those favoring the reduction of contradictions, conflicts and rivalries.

## Models of organizational culture.

The model supports a manager in an organization is usually formed by the assumptions that this has for people and making interpretations of situations. Since managers tend to act as they think, the underlying model that prevails in the administration of a company determines the environment. The models vary from one company to another and within their departments [20].

To establish the most important dimensions of organizational culture is essential to use a theoretical model that focuses on the search for key cultural dimensions. No model is fully inclusive and correct. But the model that we base we must accurately describe reality, be valid and can integrate and organize most of the dimensions proposed [21]. For this reason we chose the model of competing values described below:

**The CVF Cameron & Quinn model.**

There are several approaches to the concept of change in organizational culture, one of the most approved models is the design of the survey: the CVF Cameron & Quinn model [22].

This model is intended to diagnose valuable organizational culture and prepare for change [23], allowing establishing the manner in how they think act and process information people within the organization in terms of values and fundamental premises. The model is set to two dimensions by way of cartesian axes intersect forming four quadrants with their cultural ideals which are explained below:

The first dimension on the horizontal axis, opposes the inward-looking strategy that has the organization (internal, short term and simple activities) to the external-oriented strategy (external, long-term activities aimed at achieving objectives). Refers to the type of organization that tends to look inward in its daily management and therefore their culture is not affected immediately by changes in the environment or if you happen would be temporary.

The second dimension, the vertical axis, in contrast with the characteristics exerted by the organization on its members, flexibility, individuality and spontaneity versus stability, control and predictability. The stability and control characteristics mean that members of the organization are engaged in a controlled work environment and / or rigid, that does not always lead to diversion compared to the established or commonly accepted it as the members of the organization prefer this form of work and need it. For Quinn & Rohrbaugh [24] these two dimensions forged the four quadrants, each representing a different set of indicators of organizational effectiveness. Relations between the two dimensions are presented in figure one.

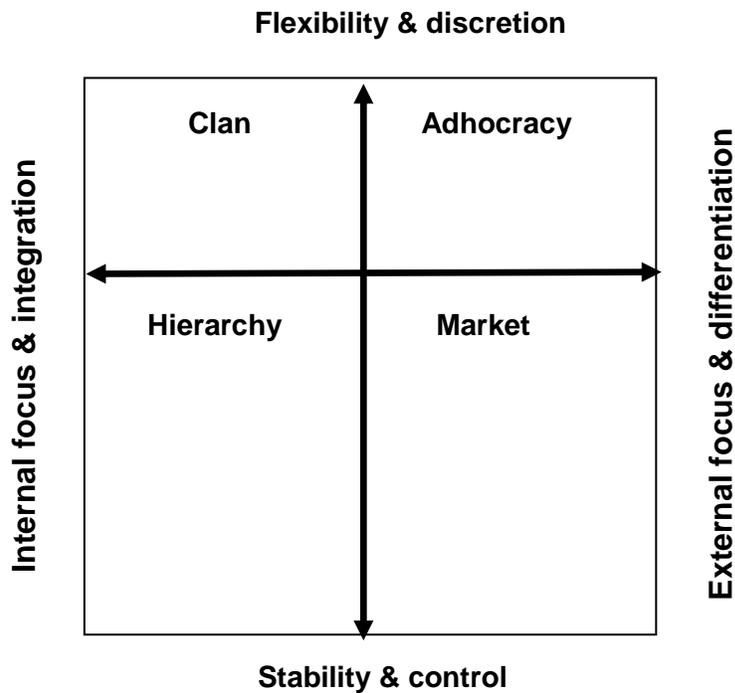


Figure 1. The Competing Values Framework (CVF)<sup>1</sup>

<sup>1</sup> Extracted from Cameron & Quinn (2006 p.46).

The explanation is as follows: The clan culture is internally oriented and flexible control. It is characterized by shared values and goals, cohesion, participation, development of individuals, the sense of group performance by teamwork, loyalty and consensus standards. Its name comes from its similarity to a family organization. The hierarchy culture is presented with stable internal guidance and control. It is based on rules, specialization, impersonality, responsibility and hierarchy. The goals of the organization's long-term stability, predictability and efficiency. The culture of market shows stable control and external orientation. It works as a market in itself. The core values are competitiveness and productivity. A market culture is a workspace led to results. The adhocracy culture is manifested by external focus and flexible control. A culture of pioneering and innovative as keys to success.

**Characteristics of each quadrant of cultures.**

Here are some characteristics of cultures by quadrant as the type of leadership, culture, values and orientation among others.

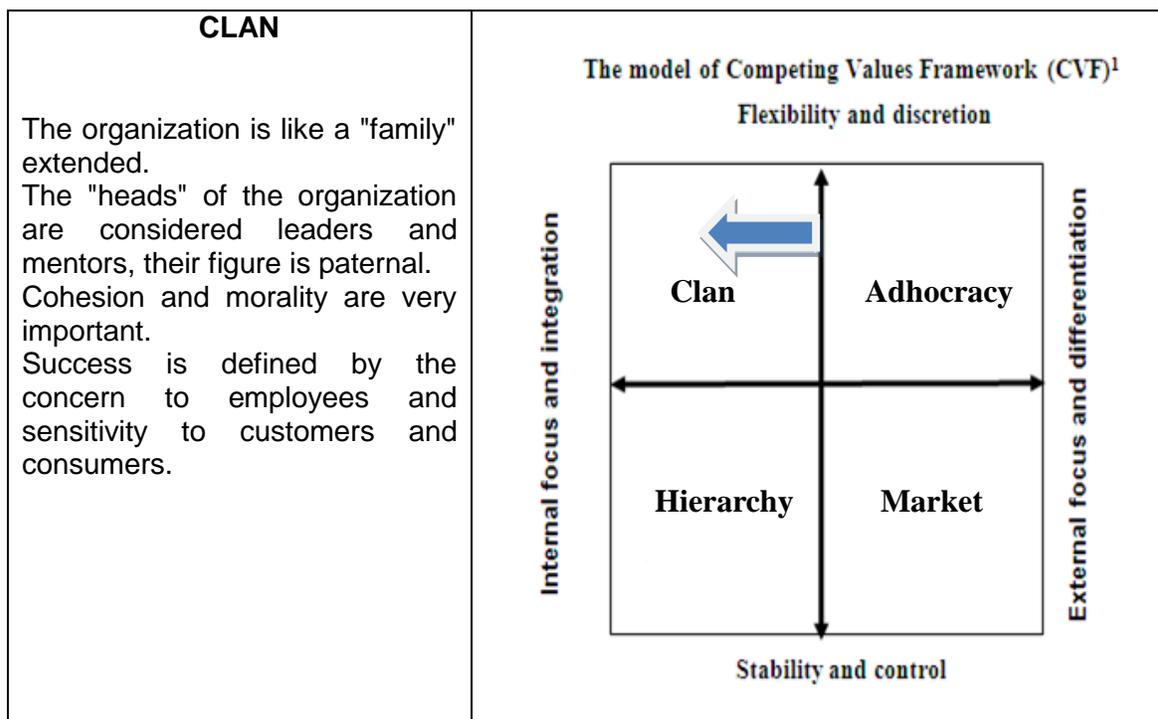


Figure 2. Clan culture

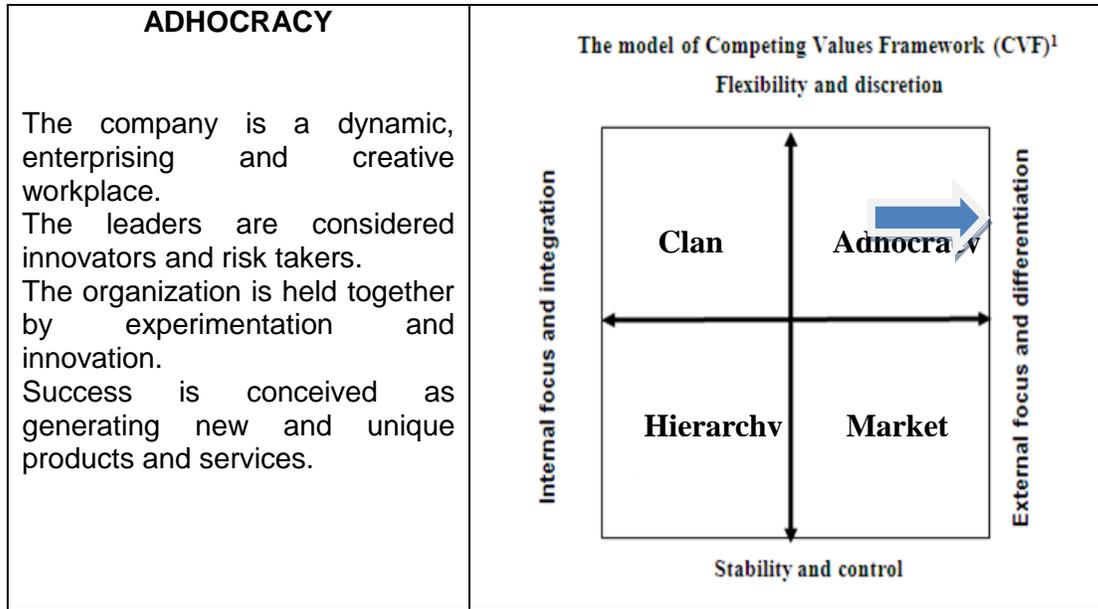


Figure 3. Adhocracy culture

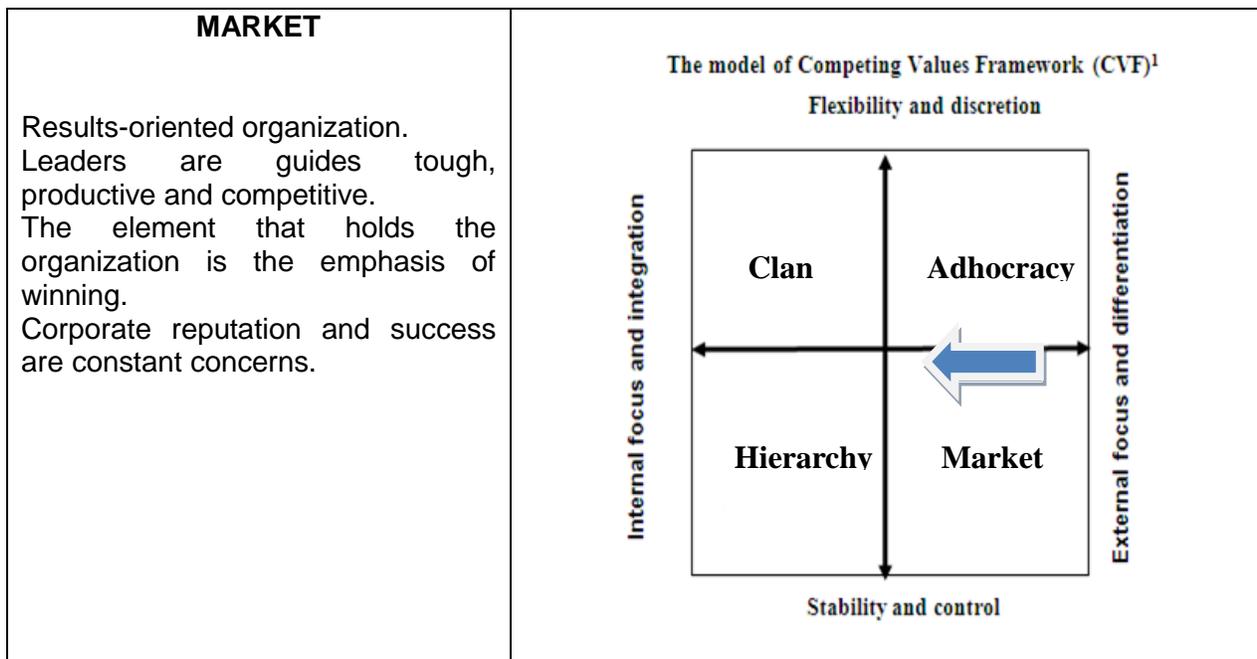


Figure 4. Market culture

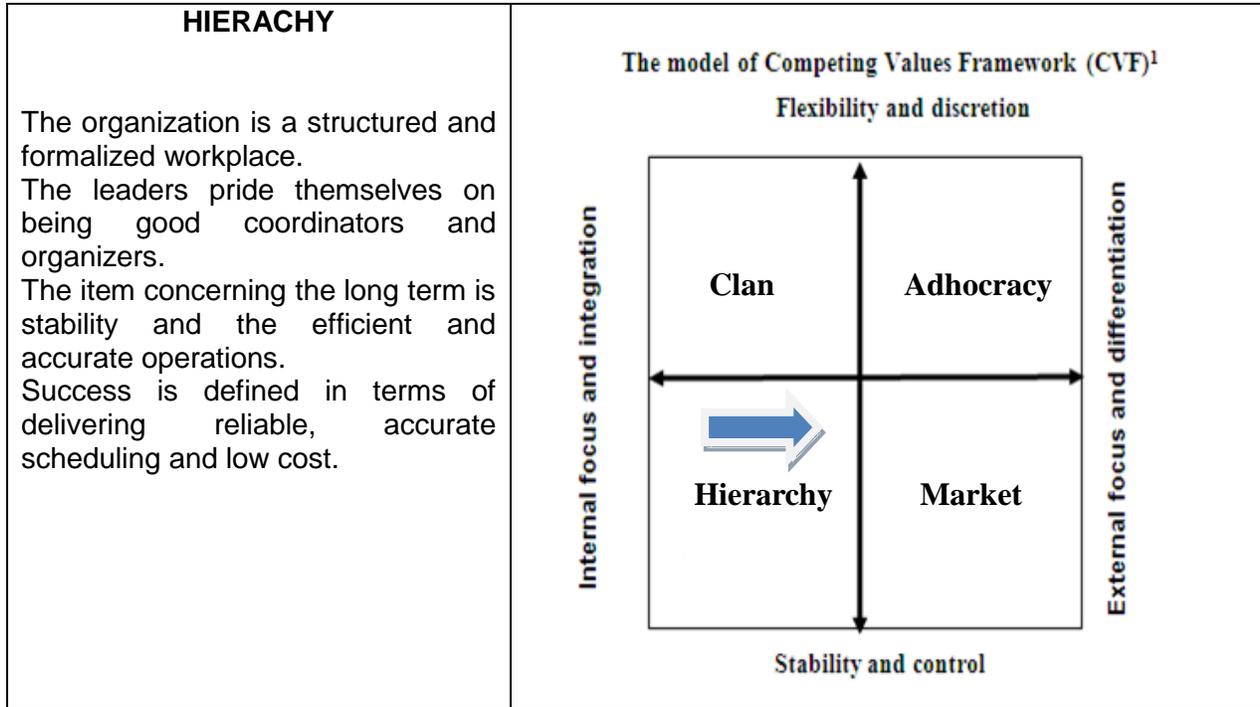


Figure 5. Hierarchy Culture

It has been found that most organizations have a mixture of all cultures but one predominates. Over 80% of some thousands of organizations that have been studied have been characterized by one or more of these types of culture identified by this model [25].

**Diagnosis of organizational culture for change.**

The diagnosis is the assessment of organizational culture and its impact existing structures and current strategies to identify imbalances, faults and errors corrected. This diagnosis requires analysis of the assumptions, premises, values, norms, beliefs, artifacts, etc.

The CVF provides a snapshot of the assumptions with which the organization operates and the values are characterized. No types of cultures right or wrong. Each organization may be described by a number of different answers. However, it is as correct as faithfully respond to the items so that the results of diagnostic culture is possible and necessary [26].

**Importance of culture in an educational institution.**

The importance of culture in an educational institution lies in understanding the complex social reality of the institution to reach a reflection. In this regard, [27] noted that this view represents the culture of an organization in a holistic and considers intangible and difficult to change. Representative of this approach is the study of Clark [28], the existence of organizational studies at institutions of higher education itself that found in the analysis of several U.S. universities and noted that the traditions are strongly embodied in the components of the organization and affect development. Concluded that the study of narratives and ties in formal systems of universities lead to a better understanding of the fundamental capabilities of institutions to improve the lives of its participants.

Others mark the importance of coming to understand what happens in educational institutions being subject to the perspective of culture as a central metaphor. Among them are studying Davila [29] and Neumann [30]. The research objective of the first was to identify the culture of an institution of secondary education. Finding the presence of two distinct subcultures:

- a) The young students.
- b) The adults, i.e. teachers and administrators.

Each subculture retained their beliefs and standards yet shared certain elements that unified institutional culture through structural reconciliations. As a result of understanding these elements the authors proposed utility designed to display institutional reforms.

There is the example of an empirical study on the effectiveness of school [31] involving 2000 students in 50 schools and included organizational culture as a factor in school effectiveness. Another example [32] was published on school effectiveness and school improvement, it also considers the organizational culture as a determinant of school effectiveness.

A synthesis of previous literature reveals the organizational culture is a determinant of the effectiveness of educational institutions. The discipline of students is an essential aspect of organizational culture in educational institutions. Student discipline is a function of the organizational culture of the school.

### **Brief introduction of technological universities.**

The model was created technological universities in Mexico in 1991 with the aim of decentralizing higher educational services to underserved communities encourage expansion and diversification of educational opportunities by providing training commensurate with the economic reality with the dynamics of various markets local labor to promote the link between academics and the productive sector in response to the demands of an emerging human resource applicant solidly prepared to carry out the innovation needed across the country.

This began to offer educational subsystem level 5B and from September 2009, the subsystem has expanded the coverage of educational level 5A studies, this classification is based according to the International Standard Classification of Education (ISCED).

This new option provides students with economic need for improvement in professional terms if certain conditions are met [33] among which is important to note:

- a) Diversify the educational structure to enable various school tours, with similar goals and values giving students opportunities to enter professional life and pursue higher studies.
- b) Create top-level academic options whose main features are the close ties with the productive areas and focus their vocational and professional curricula.
- c) Decentralize educational services at more than cities with relative socioeconomic disadvantage, therefore, away from the urban centers.
- d) Include in education policy strategies to address school problems both financial and academic.

The development of this research is presented in two technical universities located in the central region of Mexico proposing a study of organizational culture and the subsequent will be named as ancient UT and recent UT.

### **Méthod.**

Included in the study a quantitative approach in the use of measurement techniques (OCAI) and the qualitative approach in its history and interpretations seeking openness to change and preparing for the event with interviews and application outlining the following questions: Is our organizational culture an appropriate structure to meet the demands that demands our environment? What changes are needed to align our culture with our demands? Have we put emphasis on what our customers expect? What areas have not developed? In what areas we have developed or have competed more strongly? What areas have had a competitive advantage? The results led us to define meanings and motives which the university community expressed their ideas and views to find more similarities than differences according to the Organizational Culture Assessment Instrument (OCAI) achieving consistency of the study.

The research design is transactional because the data were collected at a time and given time, in this case to establish the degree of validity of the instrument and diagnose the organizational culture of each of the institutions referred to in the case study. The scope of the exploratory study is characterized by little studied to examine issues which have questions or unaddressed. The most significant criteria are located graphically on a two-dimensional model, integrating the basis for the four types of organizational culture. The first dimension brand effectiveness criteria that emphasize flexibility, discretion and dynamism of other criteria that give preference to the stability, order and control. The second dimension separates effectiveness criteria that indicate an internal orientation, integration and unity of criteria that emphasize an external orientation, differentiation and rivalry [34] refers to the type of organization that tends to look inward, culture is not affected immediately by changes in the environment or if happen would be temporary. For Quinn & Rohrbaugh [35] these two dimensions forged the four quadrants, each representing a different set of indicators of organizational effectiveness. Considering culture in its current state and preferred.

We review the main concepts involved in this study: Current culture: Mixture of assumptions, behaviors, stories, myths, metaphors and others who meet to define what it means to be a member of society in the present [36].

Preferred culture: Mixture of assumptions, behaviors, stories, myths, metaphors and others who meet to define what it means to be a member of a society that likes most, required [37].

The dimensions measured in the Competing values Framework according to Cameron & Quinn [38] are:

1. Key features of the organization. Qualities that prevail in an organization. As features can be a personal, entrepreneurial space, habitat competitive, controlled environment.
2. The leadership of the institution. Process of influencing people willing to participate and enthusiastically toward achieving the goals of the organization. Leadership can be a facilitator, mentor, entrepreneur, innovative, aggressive, and results-oriented.
3. Address employees. Directing, influencing people to contribute to organizational goals and group. Oriented management to teamwork, consensus, risk taking, innovative, competitive, efficiency-oriented.

4. Union of the organization. Group of people working together to make a profit or satisfy needs. For joining the organization considered loyalty, mutual trust, commitment, formal rules.
5. Strategic emphasis. Highlight the core long-term objectives of a company and implementing courses of action and allocation of resources to achieve those goals. The emphasis is on human development, trust, openness, resource acquisition, competitiveness.
6. Success criteria. Standards to judge, estimate or know the successful development of human resources, teamwork, to have the newest products and services

Each of these variables will have four options. The questionnaire divided 100 points among these four alternatives. Depending on the importance and similarity of each of the alternatives to the organization gives the highest score to the alternative that most closely matches the institution and the lowest score at which considers less like this one. It is important to ensure that the total sums to 100 in each alternative.

### **Instrument.**

For the study of organizational culture instrument is applied in two dimensions based OCAI bipolar way of cartesian axes, producing four quadrants are crossed with their respective types of culture.

The instrument is in the form of a questionnaire that requires response of six domains and 24 items. The columns in charge of responding to the questionnaire assigned a score of these four alternatives according to how similar is each with its own organization and in all total 100. From the CURRENT column corresponding to the current situation of culture. In the second call PREFERRED values are recorded according to the interviewee should be either adopt the organizational culture. The highest score (40) means a higher affinity and the lowest score (10) a lower affinity. In the second column preferred values were recorded by the respondent should be either adopt the organizational culture within 5 years in universities. The dimensions measured are key features, the leadership of the institution, address of employees, union organizing, strategic focus, success criteria.

To identify the type of culture within an organization, in a reliable manner is necessary to apply an instrument to measure and diagnose the organizational culture. A measurement of culture should be: Practical, timely, inclusive, mixed, manageable and meaningful [39]. See Appendix 1.

### **Sample.**

We considered the entire population (census) of the career of Business Development at the Technological Universities. We worked with a population of 239 recent college and 254 in the ancient University including academic staff and students.

### **Results.**

The first objective was fulfilled with the analysis of the reliability and validity of the instrument OCAI. The Cronbach's alpha coefficient applied to the instrument in each of the institutions produced the following results: For the most recent institution the Cronbach's alpha in today's culture is 0.667 (n = 239, 24 items), culture is preferred of 0.618 (n = 239, 24 items). For

the ancient institution the Cronbach's alpha in today's culture is of 0.660 (n = 254, 24 items), in the preferred culture is of 0.750 (n = 254, 24 items). Finding the total of the items of this study reliability or moderate according to the term used by Cameron & Quinn [40]. Not so the results obtained by each of the domains, they have a low reliability due to be considered competing cultures and checked the Pearson correlation applied.

Through the implementation of the Organizational Culture Assessment Instrument (OCAI) the second goal was fulfilled in diagnosing organizational culture in each of the institutions resulting dominant market for both institutions, as preferred for the institution of ancient clan and adhocracy for the new institution. Below are the results of current and preferred culture of the ancient institution continuous line indicating the current culture and preferred culture dashed line.

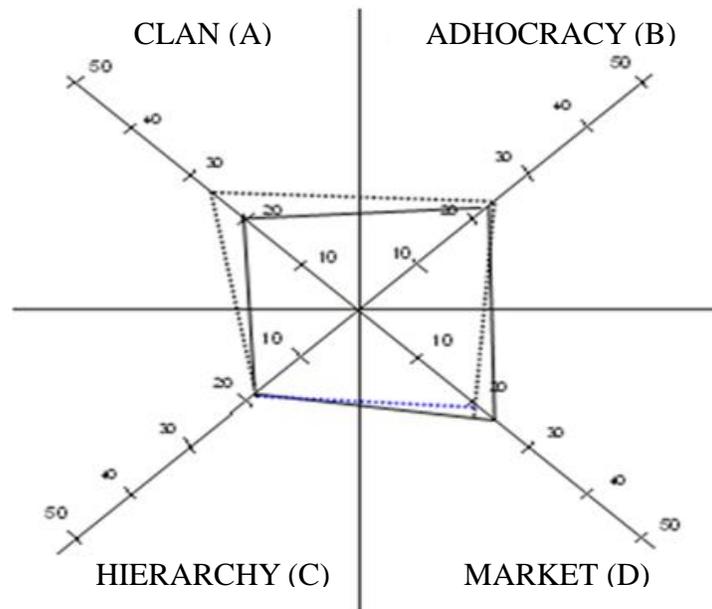


Figure 6. Diagnostic yield of culture, ancient institution

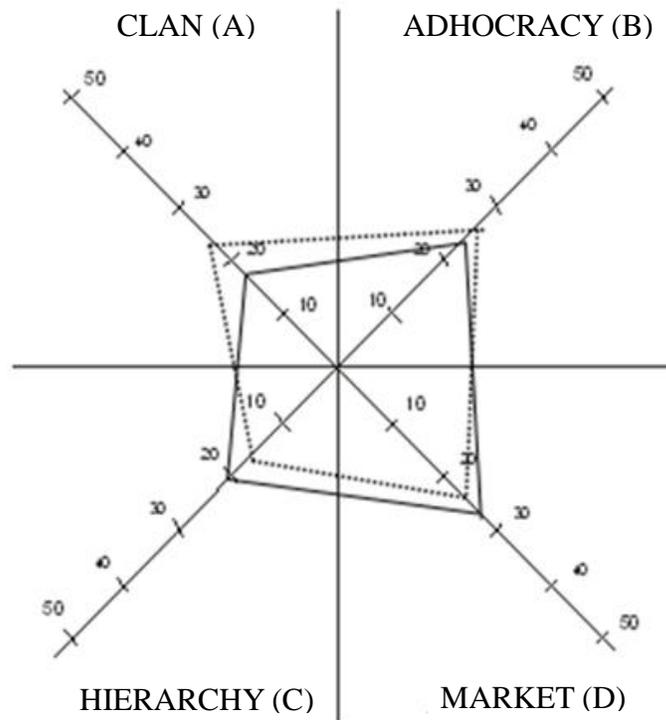


Figure 7. Diagnostic yield of culture, recent institution

In the figure above is showed that in recent college market dominated culture characterized by being an organization focused on results and an emphasis on meeting the goals. The preferred culture proved to be the adhocracy, characterized by being entrepreneurial and creative, with emphasis on risk taking, which means that the "glue" that holds the organization, is innovation. In today's culture ancient institution is the market and preferred the clan.

The above figures show the results of this process, the team will determine which aspects of organizational culture are emphasized and which are the same. It is suggested that the dominant cultures Market are abandoned, but the results which are the activities scheduled to be taken to implement culture change with minimal resistance.

### Discussion.

The findings in survey research have some limitations as it tries to measure an abstract concept like culture of an organization with the understanding some knowledge of the most important aspects of that culture. Some of the proponents of this research approach [41], [42], [43] given this criterion were interviewed members of the organization, were matched features that dominate the market culture and concluded that indeed the institutions are governed by this culture in addition to observing the key features was found that the institutional control coordinates and organizes the processes in search of a more efficient In the interview the majority of workers in the old UT actually stated that they would be more comfortable working in a stable, friendly, no pressure, no conflict with a paternalistic figure located in the context of flexibility and discretion in an internal focus and integration where they long to work "just like old times" in which the previous Rector was recognized as a mentor.

Externalize have worked with warmth and commitment to their former leader, who considered his peers as a family where cohesion and morale are very important, success is defined by the concern to employees and sensitivity to customers and consumers. Now times have changed and how work has become impersonal as their main concern is directed to achieving objectives and meeting targets for the evaluation of faculty and administrative staff is based on compliance with those provisions and is triggered in the permanence of the institution.

In recent institution prefers an innovative leader, a visionary who is set to an adhocracy culture located in the framework of flexibility and discretion as the ancient institution but in an external orientation. The organization is held together by experimentation and innovation.

Through the implementation of the Organizational Culture Assessment Instrument (OCAI) was diagnosed dominant organizational culture being the market for both institutions and clan preferred to the old institution and the adhocracy for the recent institution, also clearly describe the behavior of today's culture has been demonstrating the ability to identify the institutional profile. The rationale of this research is valid as to characterize the dominant and preferred organizational culture in each of the educational institutions knew how they work and are run educational institutions and so managers can perform several functions and organizational processes, change their culture or direct efforts to impact the effectiveness and success of the organization.

In exploring the alpha reliability was found Cronbach with moderate rates in the analysis of current and preferred cultures, but not when analyzed by domains which is attributed to the domains are in competition, will be important to review the instrument item by item. Consider whether items should increase or incorporate other institutions to increase the number of participants to increase their reliability since the model is seen to apply for advisory groups and limited to meet current and preferred cultures and make a proposal for change. We propose an expert advice in areas such as organizational development, human capital management who are familiar with the CVF to carefully prepare the participants to change.

The involvement of the university community in the study of culture was a necessary factor, since it is directed specifically to understanding the complex processes that occur in organizations to drive towards improving the results of the same or prepare for change.

Managers at these universities agreed to forward the results to have technical elements allow scientists to understand and modify if that is the organizational culture of your school as a key element that supports improving organizational competitiveness and productivity. The two Presidents completed their period but not before recommending the new Rector of the University today to hire an outside consultant that assessed the diagnosis and proposed strategies for change. He presented the research at the visit of the director of education of the IUT in France in the region of Pays-Basque Bayonne du Département Techniques de Commercialisation where some students do stay in our country by enlisting the support to begin implementation of the model the IUT in France and thus know if the dominant culture and preferred are the same in the two countries.

The former rector of the University decided that the quality department to follow up the project at the stage of change.

Through this study recommendations were made according to the six standards outlined in the Model of Competing Values:

1. Kind of culture that dominates the organization.
2. Differences between current and preferred culture.
3. The force of the kind of culture that dominates the organization.
4. The congruence of the dominant culture generated by different causes and different individuals within the organization.
5. Comparison of the organizational culture.
6. Trend for each of the educational institutions.

These recommendations are: You must work hard to achieve the preferred culture (clan and adhocracy) in two institutions because according to studies is not the culture obtained immediately follow and is demonstrated through descriptive statistics.

In the ancient university is recommended to consider the importance of seeking and finding the necessary faculty and staff. Promote teamwork and participatory high performance, build morale through the "empowerment" and create high levels of trust, express more care for people, promoting proposals of his own department. It means to become undisciplined, permissive or a great "dreamer", take a look inside, to stop working hard and have high expectations, much less lack of responsibility.

For recent college is recommended to place dynamic business, accept and celebrate the risks encouraging the freedom to develop creativity and innovation, make changes to the rules, creating programs that focus on innovation, clarify the vision of the future. That does not mean forgetting the goals; take unnecessary risks, leaving analysis and projects, delaying everything.

The tendency of applied studies in other organizations [44] help to provide a further understanding of the profile of culture. Below are some:

1. The most senior managers tend to have high results of the clan culture.
2. The results where hierarchy dominant culture are generally lower.
3. The clan culture and adhocracy are preferred by the leaders as they lead to teamwork, innovation and change.
4. The hierarchy culture is preferred by leading educational institutions.

Applying a process of change in a planned working methods are also modified, allowing it to respond to current and future needs considering as a constraint to apply the change the structure in which the subsystem is working according to a model inspired in "The Instituts Universitaires de Technologie" (IUT) in France.

The results of the sample had a mixture of values from all quadrants predominant one, this is corroborated by the fact that significant correlations were quadrants each other, the model approach rejects a "typology" or classification, arguing that understanding companies and institutions should be based on the relative emphasis accorded to each of the competing values which is multidimensional and nonlinear. The instrument was validated by evidence of three types: content, criterion and construct, constituting the necessary information. Content validity was achieved through literature review and the inclusion of experts examined the questionnaire reinforced the validity. The criterion validity and construct was assessed by factor analysis.

As input the results to assess the effects of significant decisions affecting the organization (a restructuring, a change program, etc.) to diagnose the organizational culture before and after the addition determine which values (squares and dimensions or variables) had significant consequences. In this sense may have predictive value.

The validation criteria can be optimized by qualitative interviews on topics reflecting his guide dimensions for all quadrants. The way points us forward to further explore and confirm the complex nature of organizational culture helping to define the direction for other scholars confirm the model in different samples of Mexican and foreign organizations.

The added value provided by this research is to point the direction in which to achieve change in a more conscious, evaluating the risks for cultural change possible to determine significant changes in developing strategies and implementation action plan to optimize resources to respond challenges such as increasing knowledge-based skills, innovation, technology with a suitable organizational culture to lead the organization toward meeting goals.

Among the benefits provided by this study to institutions such as universities is to enable them to become oriented organizations present events in education, flexible administrative processes that are dynamic institutions that create products and services that society demands without neglecting the importance organizational culture as a tool that well managed by senior management makes the changes necessary to become competitive assessing the extent of worker organizing and facilitating these are directed towards the development of career. The study showed how the institutions reflecting the dominant ideology that people carry in conveying a sense of identity of employees.

This research opens up a range of possibilities to the following individuals:

1. Knowing the organizational culture of UT's belonging to other educational subsystem. It would be interesting to know if all the subsystems permeate the culture. It is proposed to strengthen relations between UT's consider the benefits of the implementation of CVF, creating a study and submitting recommendations to the directors of education subsystem.
2. Apply the change in UT's preferred belonging to the educational subsystem. When results from the application of CVF in institutions planning is proposed that the same model suggests implementing the desired change.
3. Make comparisons with other Mexican and European technological universities, mainly from France where he initiated the model of the IUT's looking to apply the model in Mexico and France. Closer ties between the institutions of finding subsystem findings on the similarity of cultures and the improvement of institutions.
4. Make further recommendations to the subsystem since according to recent literature review conducted in 1999 by international experts [45].

Upon completion of this research is provided to researchers and scholars of the organizations first study to generate interest in diagnosing the culture of technological universities and present a diagnostic approach to effect a change of organizational culture effectively and efficiently without forgetting the fundamental principles between man and his work in addition to seeking to develop their potential in a stimulating environment as required by our times.

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**Appendix 1. The Organizational Culture Assessment Instrument**

<b>1. Dominant Characteristics</b>		<b>Now</b>	
A	The organization is a very personal place. It is like an extended family. People seem to share a lot of themselves.		
B	The organization is a very dynamic entrepreneurial place. People are willing to stick their necks out and take risks.		
C	The organization is very results oriented. A major concern is with getting the job done. People are very competitive and achievement oriented.		
D	The organization is a very controlled and structured place. Formal procedures generally govern what people do.		
Total			
<b>2. Organizational Leadership</b>		<b>Now</b>	
A	The leadership in the organization is generally considered to exemplify mentoring, facilitating, or nurturing.		
B	The leadership in the organization is generally considered to exemplify entrepreneurship, innovating, or risk taking.		
C	The leadership in the organization is generally considered to exemplify a no-nonsense, aggressive, results-oriented focus.		
D	The leadership in the organization is generally considered to exemplify coordinating, organizing, or smooth-running efficiency.		
Total			
<b>3. Management of Employees</b>		<b>Now</b>	
A	The management style in the organization is characterized by teamwork, consensus, and participation.		
B	The management style in the organization is characterized by individual risk-taking, innovation, freedom, and uniqueness.		
C	The management style in the organization is characterized by hard-driving competitiveness, high demands, and achievement.		
D	The management style in the organization is characterized by security of employment, conformity, predictability, and stability in relationships.		
Total			

<b>4. Organization Glue</b>		<b>Now</b>	
A	The glue that holds the organization together is loyalty and mutual trust. Commitment to this organization runs high.		
B	The glue that holds the organization together is commitment to innovation and development. There is an emphasis on being on the cutting edge.		
C	The glue that holds the organization together is the emphasis on achievement and goal accomplishment. Aggressiveness and winning are common themes.		
D	The glue that holds the organization together is formal rules and policies. Maintaining a smooth-running organization is important.		
		Total	
<b>5. Strategic Emphases</b>		<b>Now</b>	
A	The organization emphasizes human development. High trust, openness, and participation persist.		
B	The organization emphasizes acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued.		
C	The organization emphasizes competitive actions and achievement. Hitting stretch targets and winning in the marketplace are dominant.		
D	The organization emphasizes permanence and stability. Efficiency, control and smooth operations are important.		
		Total	
<b>6. Criteria of Success</b>		<b>Now</b>	
A	The organization defines success on the basis of the development of human resources, teamwork, employee commitment, and concern for people.		
B	The organization defines success on the basis of having the most unique or newest products. It is a product leader and innovator.		
C	The organization defines success on the basis of winning in the marketplace and outpacing the competition. Competitive market leadership is key.		
D	The organization defines success on the basis of efficiency. Dependable delivery, smooth scheduling and low-cost production are critical.		
		Total	



