SEM model based on organizational values and intellectual capital: a study conducted in entities of the Peruvian financial system

Modelo SEM basado en valores organizacionales y capital intelectual: un estudio realizado en entidades del sistema financiero peruano

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Abstract

The research analyzes the effect of organizational values on the dimensions of intellectual capital: human capital, structural capital and relational capital. The importance of the study of constructs lies in the generation of knowledge, which has become a main resource for companies, leading them to worry about the intangible nature of the organization. Organizational values, as the fundamental basis of the organization, provide support for the business union, therefore, there is a need to address these constructs. The study was carried out under the methodology of structural equation models (SEM), where an exploratory and confirmatory analysis was performed with a sample of 207 organizations from 15 financial entities, and was based on the instrument of the profile inventory in organizational values. Similarly, the intellectual capital instrument was determined to see the effect that endogenous variables have on exogenous ones. The results that show organizational values have a significant causal relationship with intellectual capital and constructs; human capital (r=0.90), relational (r=0.63) and structural (r=0.89) with a mean square error of approximation (RMSEA) of 0.08 and a minimum discrepancy by degree of freedom (CMIN/df) of 2.398 which makes relevant the confirmatory model. Finally, a significant and positive causal relationship was found among the eight organizational values, which are positively influenced in human, structural and relational capital.

Resumen

La investigación analiza el efecto de los valores organizacionales en las dimensiones de capital intelectual: capital humano, capital estructural y capital relacional. La importancia del estudio de los constructos radica en la generación de conocimiento, esto se ha convertido en un recurso fundamental para las empresas, llevándolas a preocuparse por lo intangible de la organización. Los valores organizacionales, como base fundamental de la organización, brinda soporte para el gremio empresarial, por lo tanto, existe la necesidad de abordar estos constructos. El estudio se realizó bajo la metodología de modelos de ecuaciones estructurales (SEM), donde se realizó un análisis exploratorio y confirmatorio, con una muestra de 207 funcionarios de 15 entidades financieras, y se basó en el instrumento del inventario de perfil en valores organizacionales, de igual modo, el instrumento de capital intelectual, tuvo la finalidad de determinar el efecto que tienen las variables endógenas sobre las exógenas. Los resultados muestran que los valores organizacionales tienen relación causal significativa con el capital intelectual, y los constructos; capital humano (r=0.90), relacional (r=0.63) y estructural (r=0.89) con un error cuadrático medio de aproximación (RMSEA) de 0.08 y una discrepancia mínima por grado de libertad (CMIN/df) de 2.398 que hace relevante el modelo confirmatorio. Finalmente, se encontró una relación causal significativa y positiva entre los ocho valores organizacionales, los mismos que están influenciados de manera positiva en el capital humano, estructural y relacional.

Keywords | palabras clave

Organizational values, intellectual capital, human capital, structural capital, relational capital, Structural equations, SEM Model, financial system.
Valores organizacionales, capital intelectual, capital humano, capital estructural, capital relacional, Ecuaciones estructurales, Modelo SEM, sistema financiero.

1. Introduction

Over the years, intense disruptive transformations driven by the demands of market competitiveness, information and economic globalization, have presented major challenges in the management of organizations, emerging new ways of diagnose in understanding business behavior. Because of the latter, new concepts such as intellectual capital (IC) have emerged, which provides important contributions for continuous improvement, with the aim of gaining sustainable and innovative competitive advantage, through the three dimensions of capital: human capital, structural capital and relational capital (Demuner *et al.,* 2017; Morales, 2017; Oro *et al.,* 2017).

The lack of knowledge in the different companies regarding the application of intellectual capital over the years showed marked deficiencies in South America. Developed countries in the world have given greater importance to the scientific study of knowledge management and intellectual capital, creating the need to be more competitive in the face of a market of constant change, because of competitiveness and the constant innovation through the management of intellectual capital, it has served as the basis for the development of organizations and the achievement of business success (Monagas, 2012; Osorio, 2003; Pérez & Coutín, 2005; Velásquez, 2015)

Under constant change and concern for market positioning, organizations retain in detail the intangible part of the company, which is part of their strategic plan involving intellectual capital and securities organization; the latter, is the support of the organization along with the policies, vision and mission of the company (Estivalete & Andrade, 2012; Oliveira & Tamayo, 2004). It is important to address these constructs, because financial firms do not emphasize the contribution of organizational values. In addition, Velasquez (2007) mentions that if organizations do not consider organizational values, they will have a negative effect on the achievement of objectives, such as the presence of conflicts, problems with the adaptability of employees, difficulties in implementing a strategy, difficulties in implementing an improvement program, implying low productivity and quality among other problems that will prevent the success of the company.

Camps (2015) state that companies would not complicate when values should be oriented through human behavior; however, the same happens with organizations, because the practice of values is not emphasized. In contrast to Camps, Siles (2013) found a preference of businessmen in seeking collaborators who promote and practice ethical values in the development of activities.

The preference of companies for collaborators with ethical values is increasing, because the practice of values influences the behavior of the members and orients the good performance of the company, in addition to acting as integrative elements and with knowledge of strategies for achieving objectives (Alcover, Martínez, Rodríguez & Domínguez, 2004; Oliveira & Tamayo, 2004). These profiles are considered by the authors as a bridge between the formal characteristics of the organization and individual behavior, since it is built through the perceptions and beliefs of the members of an organization.

The difficulties of intelligent organizations are caused by a lack of basic models for the orientation in the processes and alignments of structural capital, development of human capital and relational capital, which lead to the growth and fulfillment of the organization's vision. The research was conducted with a multiple correlational

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methodology with structural equations based on theories (SEM) (Alaminos *et al.,* 2015; Brown, 2015; Byrne, 2010; Catena *et al.,* 2003; Hayes, 2013; Manzano & Zamora, 2009; Raykov & Marcoulides, 2006), with a sample of 207 officials from 15 financial institutions, with the aim of determining the effect of organizational values on intellectual capital. These constructs encompass the bonding degree of workers and the organization. Today, large institutions in the financial sector seek to be more competitive in all aspects. The interest of this investigation relies on the fact that they can determine the contribution they make to the organization, reason for which the study responds to the hypotheses that were raised based on the organizational values (Oliveira & Tamayo, 2004) and the three dimensions of intellectual capital (Martín *et al.,* 2009), human capital, structural capital and relational capital, from an intangible perspective.

1.1. Organizational values

Organizational values (OV) have always predominated in companies due to the way in which they can guide the behavior of the collaborator (Demo *et al*., 2017), as well as the convictions and attitudes of those who are part of the enterprise (Hassan, 2007). These organizational values are derived from some basic assumptions of human nature which work as the core of organizations, thus, allowing to cause a marked tendency direction, integrity and self-discipline in people (Chiavenato, 2009).

Organizational values are part of the strategic plan, where they must be clearly raised and explained to collaborators with the purpose that they are always present in the development of activities as in mechanisms, processes, behaviors and even in structure, since these allow to align strategies in the fulfillment of goals and objectives (Jaakson, 2010; Schein, 2004). In addition, organizational values play an important role in meeting the needs of individuals as well as meeting organizational objectives (Tamayo, 2007), for this purpose, it is important that companies have regulated and internalized the fundamental values for achieving the main goals (Velásquez, 2007).

Today, companies are constantly changing under a complex culture influenced by beliefs, lifestyles and the way people think and perceive when they interact (Revilla, 2013). These elements are basically agents of change that impact the organization, that is why Oliveira and Tamayo (2004) group the organizational values into four aspects.

Table 1. Aspects that group the organizational values

Types of aspects	Description
Cognitive aspects	They are the beliefs of collaborators within an organization and how they conceive the reality and response to the company's problems.
Motivational aspects	These aspects show the interests and wishes of the collaborators in a certain teamwork.
Function of values	The function of values allows to guide people's lives by delimiting the way they think and act
Hierarchy of values	As for the hierarchy, it implies the preference and distinction between what is important and what is secondary.

Source: Oliveira and Tamayo (2004)

However, Oliveira and Tamayo (2004) for better accuracy of the values proposed by Schwartz's theory (1992), conducted a study with the aim of determining an inventory of profiles on organizational values, which are described in Table 2.

Table 2. Inventory of Organizational Value Profiles (IOVP)

Organizational values	Criteria
Execution (EX)	Based on the elements on competencies of the collaborators that are decisive to achieve success.
Compliance (COM)	Based on the elements on competencies of the collaborators that are decisive to achieve success.
Domain (DOM)	Based on the power, the obtaining of status, the control over people and the market resources.
Wellness of the collaborator (WELL)	Based on fostering satisfaction for its collaborators, especially their quality of life
Tradition (TRAD)	Based on the search for the preservation of the customs and practices of the organization.
Organizational prestige (PRET)	Based on the search for prestige and influence in the society due to the quality of its products.
Autonomy (AUT)	Based on constant improvement through the valorization of creativity, experience, competencies and curiosity.
Concern by the collectivity (CBC)	Based on the relationships the company has with individuals and the community.

Source Oliveira and Tamayo (2004)

These values are very important as other elements that make up the company, because they will always be reflected when trading in the market. In addition, companies in the financial sector must implement or adjust their organizational values according to the changes that have arisen over time, allowing to align collaborators in an effective performance (Villalobos, 2014), this will make it easier for the company to have workers able to better expand their skills and increase their contributions to the entity.

Organizational values are a key piece, and according to Ramírez, Sánchez, & Quintero (2005) these should be communicated, disclosed and adopted as individual values as they will be the basis for beliefs, attitudes, opinions, "perceptions" and organization's behaviors, producing an identity and a strong corporate image in the competent market (Estivalete & Andrade, 2012). Compared to (Ramírez *et al.,* 2005; Velásquez *et al.,* 2012) the authors argue that organizational values are basic principles for the fulfillment of the objectives, since when assumed by the company, they will have an effect on the behaviors of the collaborators, generating a support for the promoting conditions and guidelines for the company's success. For Romero & Izarra (2014), they are not only the basis or principles, but they are also the platform for the identity and understanding of workers, in turn, shared values are the root of the organization and generate help for people and companies when they are put into

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practice. In addition, these must be present in each company and must be communicated during the early stages of staff incorporation, not forgetting to constantly train the old staff, starting with the leaders of the company, because they are the example for their collaborators (Hernández *et al.,* 2015; Javier & Quintana, 2017; Ramírez *et al.,* 2005; Yarce, 2000).

Finally, it is evident the great support and contribution that organizational values provide to the organization. The use is to communicate and promote them in a holistic way, resulting in a positive impact in the internal and external sphere, i.e., generating a spirit of commitment and differentiation in the collaborators with the values practiced in collaborators of other companies.

1.2. Intellectual capital and its dimensions

Intellectual Capital (IC), is a concept that has been used for several decades, allowing companies and researchers to better deepen on the subject (A. J. Sánchez *et al.,* 2007), since then, various definitions have been addressed (Villegas *et al.,* 2017), thus it is necessary to understand the concept and importance of this construct.

Some researchers tried to define the construct, as is the case of (A. J. Sánchez *et al.,* 2007) who indicate that intellectual capital is "the knowledge and it will become on benefit in the future, and it is made up of ideas, inventions, technologies, software, designs and processes" (p.3), doing all that the company counts as intangible (Rimbau-Gilabert & Myrthianos, 2014); and it is made up of skills and talents, applications, patents, suppliers, customer information and all the experience that can be built, recognized, value and defined (Sánchez, 2012; Vidal, 2017). In addition, (A. J. Sánchez et al., 2007) concludes that these elements include the ability to learn and adapt in the brands, product names and the capacity for innovation and development, i.e., intangible capital is that capital that involves internal elements such as those that allow it to link with the external of the company, for that reason it is divided into three dimensions, human capital, structural capital and relational capital.

Intellectual capital has evolved since the 1990s through various proposed models, starting from the dimensions and the elements that make it up, see Table 3.

### Table 3. Type of intellectual capital

Models/Authors	Human capital	Strutural capital	Relational capital
Table of integral management (Kaplan and Norton, 1993)	Knowledge and growth perspective	Perspective of internal processes	Clients´s perspective
Skandia browser (Edvisson, 1997)	Human approach	Process approach	Client´s approach
Monitor of intangible assets (Sveiby, 1997)	Competences	Internal structure	External structure
Intelect (Euroforum, 1998)	Human capital	Structural capital	Relational capital
Intellectus (CIC, 2003)	Human capital	Technological capital o rganizational capital	Business capital Social capital

Chen, Zhu, and Yuan, 2004	Human capital	Innovation capital Structural capital	Client capital
Bueno, Salvador and Rodríguez, 2004	Human capital	Technological capital Organizational capital	Business capital Social capital
Guthrie, Petty, Yongvanich, 2004	Human capital	Internal capital	External capital
Ordóñez Pablo, 2004	Human capital	Structural capital: Technological capital and Organizational capital.	Relational capital
Joia, 2004	Human capital	Structural capital: Internal capital, External capital and Innovation capital	

Source: (Yangali & Quiróz, 2018, p. 44)

According to the models proposed, the authors group based on three dimensions: human capital, structural capital and relational capital that contribute to intellectual capital (Brooking, 1996; Chahal & Bakshi, 2016; Edvinsson & Sullivan, 1996; Euroforum, 1998), these can be seen in Figure 1.

Figure 1. Dimensions of intellectual capital
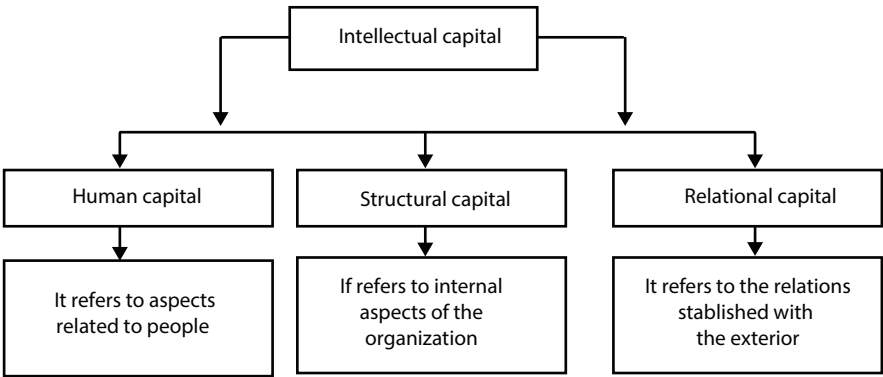
Source: Own elaboration.

These dimensions allow employees to make the most of their ability to learn and innovate in the company, standing out the human capital, the element of which is the predominant over the other two intangible capitals, which must be used in their totality through the company's workforce (Rimbau-Gilabert & Myrthianos, 2014).

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1.2.1. Human capital

Human Capital (HC), is the main dimension of the intellectual capital. Edvinsson and Malone (1998) emphasize that it consists of the skills, attitudes, and knowledge that each member of the company has, and that these cannot be owned by the company. Martin *et al.* (2009) indicate that this element is the basic knowledge of people that help improve the activity of the company, having as its own feature the impossibility of separating intangible assets from the people who develop them.

This type of capital usually focuses on the character of the employees through their knowledge, skills and efforts, increasing their productivity (Sen, 1998), this in turn, usually reaches the company individually when recruiting the new talents for the organization (Fernández, Montes, & Vázquez, 2010), some collaborators are relocated or promoted by the fact that they have invested in knowledge management through experience and training effectively and actively, allowing them to expand their capital reserves and have better opportunities, therefore, greater chance of achieving higher returns in the future for the company (Araujo, 2015; Marchante & Ortega, 2010).

However, in order for the company to increase its profitability, it must make the most of human capital, since employees concentrate a great innovative capacity (Pizarro *et al.*, 2011) not placing more emphasis on the value they have, because there is the risk that that human capital is transferable by easily taking the know-how to other companies. Thus, in order for this human capital not to be transferable, it is suggested that the company invest in its talent to increase productivity, profitability and greater employee innovation (Kido & Kido, 2015; Martín *et al.*, 2009)

In the search for recent studies that link human capital to organizational values, only small content differences that link these constructs were found. Williams (2002) states that organizational values (...) serve as a mechanism of linkage between collaborators, i.e., with human capital. Fitzgerald and Desjardins (2004) indicate that if employees have well-defined and communicated organizational values, they will be more involved and more participatory in the decision-making of the organization.

Therefore, under the problem of studying these constructs together and corroborating with the scarce theory, the theoretical model of human capital and organizational values is raised based on the hypotheses:

H0ch: There is no significant effect between organizational values and human capital
H1ch: There is a significant effect between organizational values and human capital

1.2.2. Structural capital

Structural Capital (SC) is that dimension based on systems, procedures, databases and it constitutes the most explicit form of intellectual capital (Rimbau-Gilabert & Myrthianos, 2014); i.e., that knowledge that the company acquires and is responsible for analyzing, systematizing and internalizing (Euroforum, 1998), generating for itself differentiating competitive advantage in the company, whose capital remains in the organization (Fernández-Jardón & Martos, 2016; Ibarra-Cisneros & Hernández-Perlines, 2019).

Then, as this capital remained within the organization, it will influence other intangible assets, allowing a flow of knowledge and perfecting efficiency by properly building the various work of the organization, therefore it will depend on the size and seniority to make this capital more profitable for the company (Edvinsson & Malone, 2004; Herrera & Macagnan, 2015), it will also be an essential resource to face the competition (Fernández-Jardón & Martos, 2016).

Various models of intellectual capital have been postulated, allowing some of the researchers in this line to divide structural capital into two types of capital.

Table 4. Types of structural capital

Types	It refers to
Organizational capital	The structural design, the coordinated process, the organizational routines, the culture and behavior of the teamwork, the planning and control of activities.
Technological capital	The patents, the know-how, the industrial property it owns, as well as the industrial secrecy and technical experience that the company has acquired.

Source: Navas and Ortiz (2002)

Structural capital is focused under these two capitals, and this capital is reflected in companies even though many of these are only operating on the internet (Eyzaguirre, 2017; Mercado-Salgado, 2016; Vidal, 2017). This allows the creation of new strategies of organizational and technological capital, motivating a continuous improvement by the business sector.

However, like human capital, there are few studies linking structural capital with organizational values. Human capital is an intermediary that allows to link structural capital with organizational values, the employees being the ones who intervene in the processes and tasks that demand social interaction (Arciniega, Woehr & Poling, 2008); in this sense, organizational values are reflected in the processes, mechanisms, behaviors and structures of the organization, with the purpose of achieving the planned objectives and goals (Jaakson, 2010; Navas & Ortiz, 2002; Rimbau-Gilabert & Myrthianos, 2014; A. J. Sánchez *et al.,* 2007; Schein, 2004). Then, OV with the SCwill also be linked to systems, procedures and databases (Rimbau-Gilabert & Myrthianos, 2014). Based on this, there is a link with the organizational capital and the technological capital (Navas & Ortiz, 2002), in order to be able to complement each other when carrying out any activity during the financial year of the organization.

Therefore, the theoretical model of structural capital and organizational values is established based on the following hypotheses:

H0ce: There is no significant effect between organizational values and structural capital
H1ce: There is a significant effect between organizational values and structural capital

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1.2.3. Relational capital

One of the three capitals is relational capital (RC), which consists of the company's relationship with suppliers, customers and external agents who have been able to contact the company over time. Since it is transcendental in the decision-making through technological tools and since it is supported by human capital and structural capital, it directly influences relational capital supported by brand, loyalty and the same relationships with suppliers (Kogut & Zander, 1996; Martín *et al.,* 2009; Martínez & Cegarra, 2003; Navas & Ortiz, 2002; Rimbau-Gilabert & Myrthianos, 2014).

In the same way, it influences those intangible assets that the company obtains when it maintains relationships with agents from its environment such as customers, suppliers and allies (Alzate Ortiz, & Jaramillo Arenas, 2015), producing a superior knowledge that arises in coordination and combination of some of the knowledge of each of the actors involved in the relationship. In addition, it provides information about the interests shown by the actors in the environment, which are decisive in detecting technological or market opportunities that guide the process of developing new knowledge (Martín *et al.,* 2009).

Based on the interests of the agents, Navas and Ortiz (2002) classified agents into two types, external agents and internal agents, not leaving aside the so-called market capital, which collects the external relations of the company, considered from a wide point of view. It should be emphasized that companies will always seek to establish links with companies in other sectors, including those of the competition. The human capital plays an important role, which will expand the network of contacts with these companies and that will allow it to fulfill its established strategic purposes.

In the search to link relational capital with organizational values, Revilla (2013) indicates that organizational values have a link to the moment when relating to people, and this is reflected when coming into contact with internal and external customers (Navas & Ortiz, 2002; Revilla, 2013; Santos *et al.,* 2011), i.e., in the relationship with customers, suppliers and allies (Kogut & Zander, 1996; Martín et al., 2009; Martínez & Cegarra, 2003; Navas & Ortiz, 2002; Ortiz & Arenas, 2015; Rimbau-Gilabert & Myrthianos, 2014).

To corroborate these theoretical postulates, this research focuses on the problem of establishing the theoretical model of relational capital and organizational values based on the following hypotheses:

H0cr: There is no significant effect between organizational values and relational capital
H1cr: There is a significant effect between organizational values and relational capital

2. Materials and methods

In this study, the effect of organizational values on the dimensions of intellectual capital is analyzed. To determine the effect of organizational values on human capital, structural capital and relational capital, a multivariate analysis with Structural Equation Models (SEM) was used according to (Alaminos *et al.,* 2015; Brown, 2015; Byrne, 2010; Catena *et al.,* 2003; Hayes, 2013; Manzano & Zamora, 2009; Raykov &

Marcoulides, 2006; Saboya *et al.,* 2019). This type of analysis examines simultaneously a series of dependency relationships with the aim of developing more systematic and holistic perspectives of the problems addressed, as well as leading to deeper reflection (Alaminos *et al.,* 2015; Hair *et al.,* 2007; Manzano & Zamora, 2009). The theoretical model depicted in Figure 2 was raised.

Figure 2. Graphical sequence of relationships of the constructs
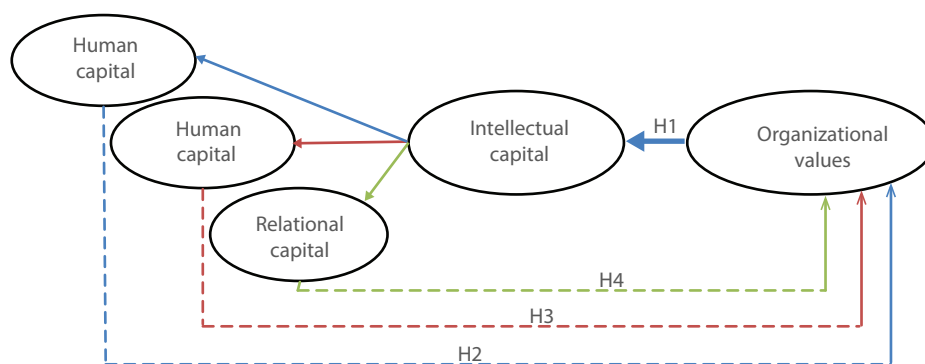
Source: Own elaboration

The Structural Regression Model was raised for Model Analysis (SEM), which allows the association between latent variables (Manzano & Zamora, 2009).

Structural model:

$$\eta = B\eta + \Gamma X + \zeta \ (1)$$

Measurement model:

$$Y = \Lambda_X \eta + \varepsilon \ (2)$$

$$X = \Lambda_Y \xi + \delta \ (3)$$

The study population consists of objects or individuals that have a quantity or characteristics (Ghozali, 2006). In the research the study population were 15 organizational entities, as shown in Table 5, which are part of the Peruvian financial system between Banks, Cooperatives, Financials, Rural and Municipal Funds, which applied the instrument of organizational values (Oliveira & Tamayo, 2004) and intellectual capital (Martín *et al.,* 2009) to 207 senior, middle-command and operational officials with a link of no less than 6 months. The instruments were applied by the researchers, with 15 requests submitted to the organizations under study and upon authorization, with a duration of 05 months, starting from January 12 to May 04, 2019.

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Table 5. Sampling of financial institutions

N°	Financial institution	Surveyed
1	Banco de Crédito del Perú	16
2	Scotiabank	13
3	Financiera Crediscotia	20
4	Caja Maynas	18
5	Mibanco	20
6	Caja Trujillo	16
7	Cooperativa San Martin de Porres	18
8	Financiera Confianza	13
9	Banco de la Nación	1
10	Interbank	15
11	BBVA Banco Continental	10
12	Caja Metropolitana	3
13	Caja Paita	16
14	Caja Piura	15
15	Cooperativa de Ahorro y Crédito la Progresiva	13
Total		207

Source: own elaboration

As suggested by Westland (2019) before the descriptive and positive tests, it is important to analyze the data, because of the nature of the variables in this study that are ordinal with Likert scale responses. Westland points out that the selection will help isolating the characteristics of the data and will allow the data to be adjusted before an additional multivariate analysis. In addition, it is considered what was suggested by Tabachnick, Fidell, and Ullman (2007) to pre-review the data, i.e. assumptions for prior analysis.

The data analysis used the Statistical Product and Service Solutions (SPSS) companion tool called AMOS version 25 to compile the theoretical model proposed by the researchers (see Figure 3), seeking the validation to theoretical hypothesis raised.

Figure 3. General model of theoretical hypotheses
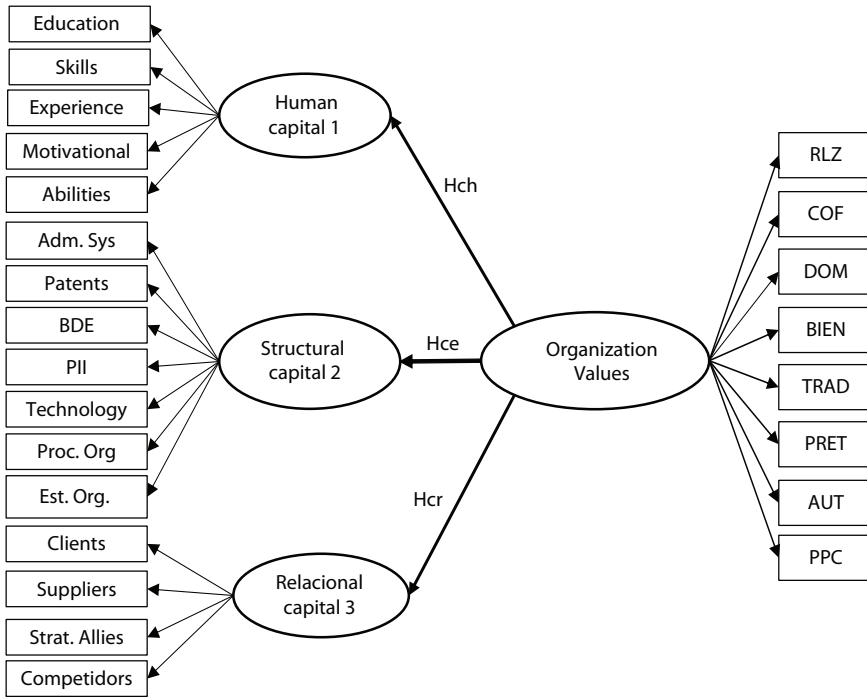
Source: own elaboration

3. Results

3.1. Characterization and evaluation of the SEM model

The SEM model in Figure 4 identifies the standardized estimated values of the complex general model, giving sufficient conditions for its estimation. According to (Alaminos *et al.,* 2015; Bollen, 1989; Browne & Cudeck, 1992; Byrne, 2010; Catena *et al.,* 2003; Manzano & Zamora, 2009; Raykov & Marcoulides, 2006; Schumacker & Lomax, 2010) the SEM model used global adjustment measures to validate the theoretical model shown in Figure 8.

According to Figure 4 a standardized factorial load of 0.88, 0.84 and 0.64, respectively was obtained where surface variables provide a causal relationship to exogenous variables influenced by endogenous variables, equivalent to the results of Table 6. It was determined that the SEM model of Organizational Values and the three types of intellectual capital without modification as shown in Table 6, showed a Chi-square value at 710.970 and a probability level $\rho = 0.000$ with 249 degrees of freedom.

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Table 6. Global adjustment measures without modification

Adjustment measure	X²	df	NP	CMIN/df	CFI	RMSEA
	710.970	249	0.000	2.855	0.815	0.103

X^2 = Chi-square; df = freedom value; NP = Probability value; CMIN/df = Chi-square/freedom degree; GFI = Goodness of fit index; RMSEA = Quadratic mean approximation error.

Also, the overall adjustment measures have a CMIN/df equal to 2,855 which is relevant and a CFI equal to 0.815 which is also significant as opposed to RMSEA equal to 0.103, which is significant but not within the allowed parameters according to (Browne & Cudeck, 1992; Schumacker & Lomax, 2010).

Figure 4. SEM organizational model values and intellectual capital types without modification
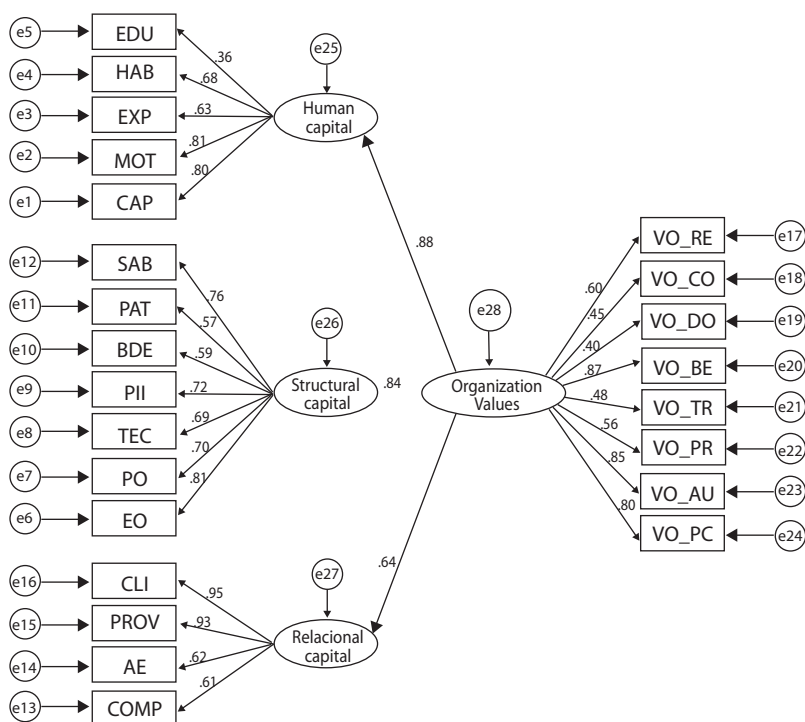
Source: own elaboration

In Table 6 where RMSEA that is not within the allowed parameters is shown, a reset of the SEM model errors was made, obtaining the model in Figure 5. A SEM model of organizational values and the three types of intellectual capital (Human Capital, Structural Capital and Relational Capital) was confirmed as shown in the
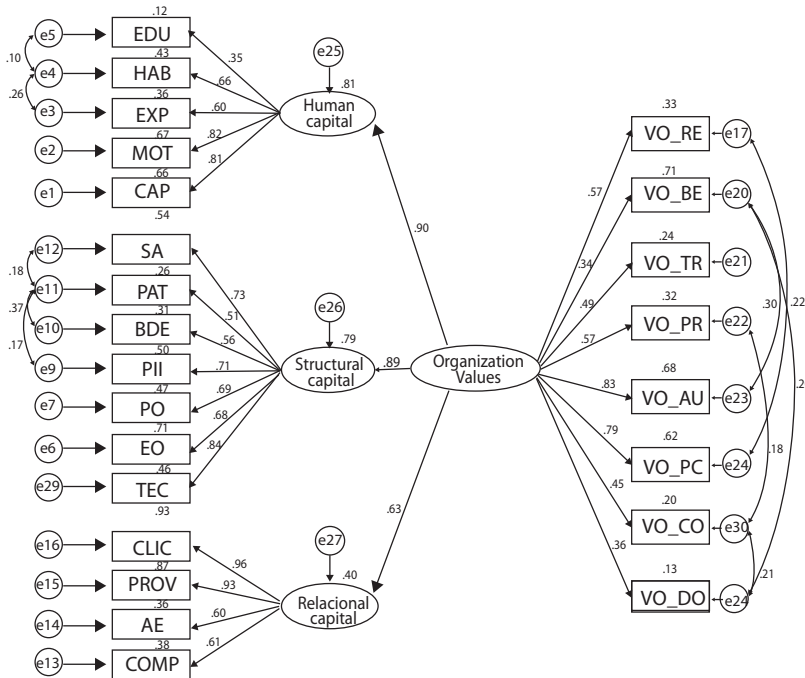
figure above. In addition, a Chi-square was obtained at 516.186 and a probability level $\rho = 0.000$ that even though is lower than the significance level of α = 0.05 allowed to validate the SEM model with $df = 199$. In addition, the modified global fit model (Table 7) yielded a CMIN/df equal to 2,594 that is relevant, a GFI equal to 0.805, a CFI equal to 0.868, a PCFI of 0.748, which are all significant. It should be emphasized that the result of the modified global adjustment model obtained a RMSEA equal to 0.079, being within the established parameters (the value from .05 to .08 indicates a perfect fit) according to (Browne & Cudeck, 1992; Schumacker & Lomax, 2010), the new SEM model in Figure 5 is accepted.

Table 7. Modified Global Adjustment Model

X²	df	NP	CMIN/df	GFI	CFI	PCFI	RMSEA
570.688	238	0.000	2.398	0.798	0.867	0.748	0.08

X^2 = Chi-square; df = Degrees of freedom; NP = Probability Level; CMIN/df = Chi-square/ degrees of freedom; GFI = goodness-of-fit index; CFI = comparative adjustment index; PCFI = Adjusted Parsimony Measures; RMSEA = Quadratic mean approximation error.

Figure 5. SEM model of organizational values and the three types of intellectual capital with modifications

Source: Own elaboration.

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In Figure 5 it can be observed that the endogenous variable and the human capital have a causal relationship to superficial variables, abilities (CAP) with a standardized estimator (causal relationship) of 0.812, motivations (MOT) with a standardized estimator of 0.816, skills (HAB) with a standardized estimator of 0.659, and experiences (EXP) with a standardized value of 0.600 of the study partners. In addition, the Education Indicator (EDU) has a standardized value of 0.346, and by looking at the p-value it can be observed that this value provides a causal relationship to human capital, which must be reinforced with training and other indicators related to education.

The second endogenous variable, structural capital, has a causal relationship with its most significant indicators such as the organizational structure (EO) with a causal relationship of 0.843, the administrative system (SA) with a causal relationship of 0.733, the intellectual property (PII) with a causal relationship of 0.708, the organizational process (PO) with a correlation of 0.688, technology (TEC) with a causal relationship of 0.676, the strategic database (BDE) with a correlation of 0.557, and finally patents (PAT) with a causal correlation of 0.507.

In the third endogenous variable, relational capital, has a causal relationship with its most significant indicators such as customers (CLI) with a causal correlation of 0.963, suppliers (PROV) with a causal relationship of 0.933, competitors (COMP) with a causal relationship of 0.613 and finally the allies (AE) with a causal correlation of 0.598.

On the other hand, the exogenous variable of organizational values shows the most relevant loads of exogenous surface variables, where the categorization concentration is well-being (VO_BE) with a causal correlation of 0.840, autonomy (VO_AU) with a causal correlation of 0.825, concern for collectivity (VO_PC) with a causal correlation of 0.787, compliance (VO_RE) with a causal relationship of 0.575, the prestige of the company (VO_PR) with a causal relationship of 0.567 and the least significant tradition (VO_TR) causal relationship of 0.491, conformity (VO_CO) with a causal relationship of 0.446 and the domain (VO_DO) with a causal relationship of 0.491 causal relationship of 0.358, which has not placed much emphasis on these values, respectively.

3.2. Testing and validation of the hypotheses raised

Figure 3 is made of assumptions (Hch, Hce and Hcr) with the theoretical structural model of SEM structural equations, Figure 4 confirms that there are causal correlations of influence and prediction between exogenous and endogenous variables under study, but modifications were made because goodness-of-fit indices were not within the parameters established according to the theory (Browne & Cudeck, 1992; Catena *et al.*, 2003; Schumacker & Lomax, 2010), a modified adjusted SEM model was obtained and was presented in Figure 5.

It is seen under the modified confirmatory SEM structural model in Figure 5 and the results of standardized estimates as shown in Table 8, that the estimators are higher than 0.5 with the exception of education (EDU) with 0.346 with a significant p value. In this sense, the first theoretical hypothesis raised by rejecting the null hypothesis H0ch and accepting the alternating H1ch is corroborated, confirming that there is a significant effect between the organization values and the human capi-

tal with an effectiveness index of 0.902. The second hypothesis, H1ce, raised in the theoretical model confirms that there is a significant effect between the exogenous variables, organizational values and the endogenous structural capital variable with an effectiveness index of 0.887. In addition, the third hypothesis in the structural equations model confirms that there is a significant effect between organizational values and relational capital variable with an effectiveness index of 0.633.

Table 8. Regression and Standardized Weights of the Default Model

Causative relation			Estimate	S.R.W.	S.E.	C.R.	P
Human Capital_	<---	Organizational Values	.743	.902	.100	7.429	***
Structural Capital_	<---	Organizational Values	4.645	.887	.615	7.553	***
Relational Capital_	<---	Organizational Values	.601	.633	.109	5.534	***
CAP	<---	Human Capital	1.000	.812			
MOT	<---	Human Capital	1.753	.816	.149	11.728	***
HAB	<---	Human Capital	1.823	.659	.202	9.006	***
EDU	<---	Human Capital	.718	.346	.163	4.416	***
EXP	<---	Human Capital	1.828	.600	.227	8.064	***
EO	<---	Structural Capital	1.000	.843			
PO	<---	Structural Capital	.174	.688	.017	10.002	***
PII	<---	Structural Capital	.515	.708	.050	10.399	***
BDE	<---	Structural Capital	.087	.557	.011	7.680	***
PAT	<---	Structural Capital	.097	.507	.014	6.799	***
SA	<---	Structural Capital	.219	.733	.020	10.902	***
TEC	<---	Structural Capital	.110	.676	.011	9.785	***
COMP	<---	Structural Capital	1.000	.613			
AE	<---	Structural Capital	1.004	.598	.099	10.144	***
PROV	<---	Structural Capital	1.357	.933	.142	9.555	***
CLI	<---	Structural Capital	2.514	.963	.262	9.609	***
VO_TR	<---	Organizational Values	1.598	.491	.287	5.563	***
VO_PR	<---	Organizational Values	1.237	.567	.199	6.206	***
VO_PC	<---	Organizational Values	4.482	.787	.520	8.614	***
VO_AU	<---	Organizational Values	4.255	.825	.537	7.922	***
VO_RE	<---	Organizational Values	1.000	.575			
VO_BE	<---	Organizational Values	3.298	.840	.412	8.003	***
VO_CO	<---	Organizational Values	.855	.446	.166	5.137	***
VO_DO	<---	Organizational Values	.546	.358	.129	4.249	***

S.R.W. - Standardized Regression Weights; S.E.-Estimate Standardized

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4. Conclusions and discussion

The results of the study reveal a significant and positive causal relationship between the eight organizational values (RLZ, COF, DOM, BIEN, TRAD, PRET, AUT and PPC), which are positively influencing the human capital, structural capital and relational capital, respectively.

In the first instance, the causal relationship of organizational values over the human capital makes it possible to emphasize that there is good practice of organizational values on the part of officials, this is because the values have been shared (Alcover, C., Martínez, D., Rodríguez, F. and Domínguez, 2004; Oliveira & Tamayo, 2004), disclosed (Ramírez *et al.,* 2005) and internalized (Velasquez, 2007). In this sense, human capital has great respect for preserving the brand and practicing good customs (Oliveira & Tamayo, 2004), this will be mentioned when it is linked to the very structure of the entity (CE2) (Jaakson, 2010; Schein, 2004), i.e., the company's administrative systems, patents, database and intellectual property (Navas & Ortiz, 2002; Rimbau-Gilabert & Myrthianos, 2014), influencing in the relation of their members with the external agents (CR3) (Kogut & Zander, 1996; Martín et al., 2009; Martínez & Cegarra, 2003; Navas & Ortiz, 2002; Rimbau-Gilabert & Myrthianos, 2014), and respecting the practice of values (Hassan, 2007) as the traditional culture policies of the company.

The effect of the organizational values exposed in the modified SEM model against the human capital in the causal relationship is higher than in the structural and relational capital, because this human capital predominates over other capitals (Rimbau-Gilabert & Myrthianos, 2014) and it cares about paying attention and interacting with individuals in meeting organizational goals (Tamayo, 2007). These statements confirm that the human capital is influenced by the values of the organization, as long as they are disseminated (Velásquez, 2007), shared and practiced by all members of the entity (Alcover, C., Martínez, D., Rodríguez, F. and Domínguez, 2004; Oliveira & Tamayo, 2004).

The effect of the constructs shown in Table 7 and the SEM model in Figure 10, allows to emphasize that organizational values are oriented towards a better life and behavior of officials (Camps, 2015; Demo *et al.,* 2017), delimiting the way of thinking and acting (Oliveira & Tamayo, 2004), reflecting in them the capacities (A. J. Sánchez *et al.,* 2007), attitudes, skills and knowledge (Edvinsson & Malone, 2004; Hassan, 2007) that each official of the financial institution owns and contributes to it. In this sense, because there is a link between organizational values and human capital, it is observed that officials are valued, and they develop professionally within the financial institution, contributing with their skills and abilities (Edvinsson & Malone, 2004; León & Mancheno, 2017; Sarur, 2013; Valencia, 2005), to achieve the goals of the financial institution where they have been working.

Additionally, organizational values influence the structural capital, being the human capital a link of these constructs, i.e., collaborators influenced by organizational values intervene on processes and tasks that demand social interaction (Arciniega *et al.,* 2008). In addition, the organizational values driven by human capital are reflected in the processes, mechanisms, behaviors and structures of the organization,

in order to achieve the planned objectives and goals (Jaakson, 2010; Navas & Ortiz, 2002; Rimbau-Gilabert & Myrthianos, 2014; A. J. Sánchez *et al.,* 2007; Schein, 2004). The results of the SEM model make it possible to confirm that organizational values will be linked to systems, procedures and databases (Rimbau-Gilabert & Myrthianos, 2014), i.e., there is a link with capital organizational and technological capital (Navas & Ortiz, 2002), in order to be able to complement each other when carrying out any activity during the financial year of the organization.

As it was verified that organizational values have a causal relationship in rela-tional capital and this in turn present high values in surface variables, customers, suppliers, strategic allies and competitors, these are similarly driven by the relational capital, relying on the structural capital. It is corroborated with the authors (Kogut & Zander, 1996; Martín *et al.,* 2009; Martínez & Cegarra, 2003; Navas & Ortiz, 2002; Rimbau-Gilabert & Myrthianos, 2014) that the above-mentioned organizational values directly influence the brand, loyalty, and the relationships with the suppliers, and according to (Ortiz & Arenas, 2015) these directly influence customers, suppliers and allies at the time agents relate to the organizational environment.

The results indicate that the relational capital, moved by the human capital and the values it carries, plays an important role in relating to external and internal agents; i.e., with customers, suppliers, strategic partners and even with competitors, since it allowed to expand the network of contacts of the company, therefore, to ful-fill its established strategic purposes. According to the results presented in the SEM model, it is corroborated with (Navas & Ortiz, 2002; Revilla, 2013; Santos et al., 2011) that organizational values will have a significant effect on relational capital when they are related to external and internal agents of the organization.

This study makes it possible to determine that organizational values are prac-ticed, disseminated and internalized by employees. These values are the support for the management that promote conditions and guidelines to achieve financial success. In addition, they make it possible to affirm that organizational values are the funda-mental basis of the organization. Values make sense in the organization when they are communicated, disseminated and promoted sufficiently (Ramírez *et al.,* 2005). A positive causal relationship between the two constructs occurs by maintaining organizational values, and it is stated that financials make the most of human capi-tal through the creation of knowledge and innovation, embodied in new processes, patents, models branding, technologies and leveraging databases that improve rela-tionship mechanisms with suppliers, customers, state entities, and even competition.

Organizational values such as intellectual capital become similar, both in cau-sal correlation and in the collection of information, indicating that organizational values are the support for the organization (Ramírez *et al.,* 2005; Romero & Izarra, 2014; Velásquez *et al.,* 2012), and they are created as part of their structure and pro-cesses (structural capital), practiced by human capital and disclosed by the relational capital of the financial entity (Ramírez *et al.,* 2005). Greater investment in intellectual capital improves efficiency, value creation and influences the performance of banks (Vidyarthi, 2019; Wang *et al.,* 2018).

From a broader perspective, organizational values are in all the processes per-formed inside and outside the organization, whether at the moment of monitoring a

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system, planning a project, working as a team, engaging with people inside and outside the organization entity, when establishing a contact with an organization or supplier, it will always be necessary to keep the values of the organization in mind. In short, organizational values need human capital to be shared, disseminated, internalized in all processes involving structural capital and relational capital that allow to achieve the objectives and goals posed, determining the entity to achieve the business success.

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