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Analysis of competitiveness through intellectual capital in companies listed on the Mexican Stock Exchange

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Abstract

The objective of this research is to analyze intellectual capital as a tool for creating value in Mexican companies that seek to be more competitive in the market, analyzing their disclosure of intangible matters, as well as the factors that motivate said disclosure. To carry out the analysis, companies from different sectors that are listed on the Mexican Stock Exchange (BMV) were selected. The selection was based on criteria of representativeness and availability of detailed financial and operational data. A quantitative methodology was used, applying multiple regression techniques and factor analysis to measure the influence of intellectual capital variables on competitiveness. The analysis revealed that intellectual capital has a significant impact on the competitiveness of companies listed on the BMV. These findings indicate that a comprehensive and balanced management of the different components of intellectual capital is crucial to improve business competitiveness. The study concludes that companies listed on the BMV should focus on strengthening their intellectual capital to improve their competitiveness to maximize their performance in the market.

Keywords: competitiveness; intellectual capital; companies; BMV.

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Análisis de la competitividad a través del capital intelectual en las empresas que cotizan en la Bolsa Mexicana de Valores

Resumen

El objetivo de esta investigación es analizar el capital intelectual como herramienta de creación de valor en las empresas mexicanas que buscan ser más competitivas en el mercado, analizando su divulgación de asuntos intangibles, así como los factores que motivan dicha divulgación. Para llevar a cabo el análisis, se seleccionaron empresas de distintos sectores que cotizan en la bolsa mexicana de valores (BMV). La selección se basó en criterios de representatividad y disponibilidad de datos financieros y operativos detallados. Se utilizó una metodología cuantitativa, aplicando técnicas de regresión múltiple y análisis factorial para medir la influencia de las variables del capital intelectual en la competitividad. El análisis reveló que el capital intelectual tiene un impacto significativo en la competitividad de las empresas listadas en la BMV. Estos hallazgos indican que una gestión integral y equilibrada de los diferentes componentes del capital intelectual es crucial para mejorar la competitividad empresarial. El estudio concluye que las empresas que cotizan en la BMV deben enfocarse en fortalecer su capital intelectual para mejorar su competitividad para maximizar su desempeño en el mercado.

Palabras clave: competitividad; capital intelectual; empresas; BMV.

1. Introduction

In the concepts of competitiveness in companies, it is necessary to consider tangible and intangible assets, or intellectual capital, as generators of value in companies. This information is of vital importance because these concepts are linked to the value and price per share, which for investors is reflected in the financial performance of companies, since they increase in value when operations grow and their reputation is good and constant.

The companies that are listed within the Mexican Stock Exchange (BMV) by type are those that we know

as those that have solid management and high-level operations and that, by listing on the BMV, have met a series of requirements to Being within it, and even being within these companies, they must continue to improve themselves, since, being public companies, they are audited and their information is available to investors at all times.

The value or price per share depends on its performance, and this is linked to its competitiveness, which for investors is reflected in the financial performance of companies, since a company increases in value when its operations grow, its presence and reputation They are constant so your

assets, tangible or intangible, increase.

Derived from this, and from the relevance that these companies have in our country, and that as they are companies that smaller companies aspire to reach at some point, the purpose of this research has been to analyze how variables such as capital, with its three parts (human capital, structural capital and relational capital) affect the competitiveness of these companies.

Therefore, this research considers some studies that analyze data on intellectual capital. That is why this research investigates and analyzes the intellectual capital data within the annual reports and the factors that influence it, such as the COVID-19 pandemic had a deep and varied impact on the stock market during 2020-2021. While sectors like technology and healthcare flourished, others like energy and travel faced major challenges. The crisis also accelerated pre-existing trends towards digitalization and investment in technology, shaping a new economic landscape for the future and supporting the theoretical model.

2. Competitiveness, Intellectual capital and stock indices

Competitiveness has been addressed by several authors from various perspectives. Porter and Millar (1985) describe it as the ability of a company to maintain sustainable advantages over its competitors. Krugman (1994) describes that competitiveness is related to the production of attractive goods and services in the global market. Barney, (1991) highlights the influence of internal resources and capabilities on the competitiveness of a company. Dunning, (1993), Dunning & McQueen (1982) add

the dimension of foreign direct investment that measures competitiveness. Rugman (1985) suggests that the competitiveness of a company in the international market depends not only on its internal capabilities, but also on the advantages offered by its country of origin. These advantages may include natural resources, infrastructure, favorable government policies, and skilled human capital. Teece (1986) maintains that the competitiveness of a company depends on its ability to integrate, build and reconfigure internal and external competencies to adapt to changes in the environment. Teece (2007) Dynamic capabilities enable companies to innovate, respond to market changes and remain relevant. Caves (1996), Caves & Porter (1977) the competitiveness of a company depends on its ability to differentiate its products, efficiently manage costs and respond to market dynamics. Market structure and entry barriers also play a crucial role in determining competitiveness. Porter & van der Linde (1995) argue that strict environmental regulations do not necessarily impose additional costs on companies, but can incentivize efficiency and innovation.

According to them, companies that quickly adapt to these regulations can gain a competitive advantage. Moon & Montemayor (1998), Moon & Montemayor (2004) implies the ability of a company to adapt to changing market conditions and to continually innovate its products, services and processes. They emphasize the importance of strategic flexibility and the ability to respond quickly to environmental opportunities and threats. And finally, Delgado et al, (2002) define competitiveness as the ability of a region or country to create an economic environment that promotes innovation,

efficiency and growth. Economic clusters are fundamental in this process, since they facilitate collaboration, knowledge exchange and competition between companies (Delgado et al, 2014).

Competitiveness is a term that is often confused with competitive advantage. Both deserve to be distinguished and intellectual capital is based on the improvement of companies, either in their competitiveness or as competitive advantages sustained in the long term, strategically (Delgado et al, 2010).

Abdel and Romo (2004) mention that business competitiveness is derived from competitive advantage that a company has through its production and organization methods (reflected in the price and quality of the final product/service) and with rivals in a specific market (Ibarra Cisneros et others, 2017). Another conceptual approach, provided by Calvo & Ponce (2020), they mention that feasibility of a company achieving and maintaining its levels of competitiveness focuses on the distinctive competencies or competitive advantages that it develops internally and on the external conditions that provide it with both the industry or sector to which it belongs

and the region or country in which it is located.

Within the literature, most authors analyze business competitiveness as a relative term, that is, related to competitors, which is focused on obtaining an advantage that leads the company to be superior to its rivals in something, fundamentally in quality or costs (Palomo & Pedroza, 2018).

Therefore, competitiveness can be defined as follows: The ability of a company to achieve, maintain and increase an advantage over its rivals, based on superiority and behavior in the market, whether in costs, quality or differentiation.

Intellectual capital is the synergy of all the knowledge that an organization brings together, all the experience accumulated in its members, their capabilities, skills, technical knowledge, information systems, design and management of the processes and relationships of the organization entity with suppliers and customers (Table 1); In this way, human capital, relational capital and structural capital are valued through three basic dimensions, all of them established in the strategic objectives of the organization (Barrera et al, 2020).

Table 1
Basic Definitions of Intellectual Capital

Authors	Definition
Dierickx & Cool, (1989)	Intellectual capital is simply the stock of knowledge in the company.
Stewart T, (1991)	Intellectual capital is everything that is not can touch but that can make money for the company.
Edvinsson y Malone, (1997)	The possession of knowledge, applied experience, organizational technology, customer relations and professional skills that give a competitive advantage in the market.
Bontis, (1998)	Intellectual capital is the search for the effective use of knowledge.
Womack, Jones y Roos, (2021)	The intellectual capital of a company is the sum of the knowledge of its members and the practical interpretation of it.

Cont... Table 1

López & Nevado, (2021)	Book Value + Intellectual Capital + Measurement Errors + Speculative Factors = Comprehensive Market Value. And, on the other hand: Intellectual Capital = Human Capital + Structural Capital + Non-Explicit Capital.
Archibold & Escobar, (2015)	Intellectual capital manifests itself in the organizational environment as an interception of assets of an intangible nature, among which is the knowledge originated by human resources, the relationships established by the company with external agents, procedures and internal policies that in Together they generate sustainable and sustainable advantages over time, among others.

Source: Own elaboration adapted from Vega, (2017).

Therefore, the dimensions of intellectual capital are concentrated in three types, such as: a) human capital; b) structural capital; and c) relational capital (Saint-Onge, 2009; Roos, 1998; Bueno et al, 2011; Camisón et al, 2000; Bontis, 1998; Cañibano et al, 2002; Euroforum, 1998).

• Mexican stock exchange

In the November 2018 report of the World Federation of Stock Exchanges, these companies belonging to the Mexican Stock Exchange (BMV), also known as public companies, represent 30% of the Gross Domestic Product (GDP) of the country. These companies are classified in different indices that show the behavior of the price of the shares included in them.

The BMV Group is made up of companies that, together, offer comprehensive services for the operation and negotiation of the securities and derivatives market in Mexico, supported by a modern and Latest generation technological infrastructure in all its companies. The Mexican Stock Exchange, SAT. From C.V., is a financial entity that operates under a concession from the Ministry of Finance and Public Credit, as established by the Securities Market Law (Santiago, 2022).

In this market the purchase and sale of instruments representing the share capital of a company is carried out. The BMV is the forum where operations of the organized securities market are carried out in Mexico, the objective is to carry out transactions that seek to increase competitiveness in the market (Valores, 2021).

Likewise, the fundamental aspects to take into account in the study of listed companies are both the real and financial assets for valuation, with some assets being easy to value, but the main notions remain the same (Peña, 2020).

That is why the financial reports of companies that disclose within the BMV leave intangible assets as a voluntary decision. However, Valenzuela-Durán, (2009) mentions that it is necessary to have accounting information and analyze whether they comply with the standards (IAS 38) that affect decision making.

Authors such as García & Hidalgo (2009) Note that in IAS 38, intangible assets are defined as an identifiable asset, of a non-monetary nature and without physical appearance, used in the production or supply of goods and services, rented to third parties, related to the entity.

Therefore, international regulatory bodies, such as the Financial Accounting Standard Board (FASB) or

the International Accounting Standards Board (IASB), recommends including information on intangible assets outside the financial statements, avoiding the incorporation of accounting criteria that could put them at risk. The quality and reliability of financial information. Once the theoretical basis that gives meaning to this research has been analyzed, the results of the analysis are presented in the following two sections.

3. Methodological aspects

The methodological design of this research is exploratory-descriptive, transactional and longitudinal with a mixed approach since it has a theoretical section that supports the base constructs of this research.

A literature review was carried out on reliable sites, scientific articles and verified sites: this research is made up of companies listed (Table 2) on the Mexican Stock Exchange to guarantee that the sample is representative of the main industries and economic sectors of the country, providing a comprehensive vision of the performance and trends of the stock market by sector during 2020-2021, which together belong to various sectors such as energy, industrial, materials, frequently consumed products, health, telecommunications services, financial services, public services, goods services non-basic consumption and information technologies (Mexican Stock Exchange, 2021).

Table 2
Companies Listed on the BMV Divided by Sector

Sector	Number of Companies
Energy	2
Industrial	38
Materials	21
Frequently consumed products	22
Health	5
Telecommunications services	9
Financial services	25
Non-basic consumer goods and services	20
Information technology	1
Total	143

Source: Prepared with information extracted from the Bolsa Mexicana de Valores (2021).

Likewise, annual reports were obtained, which show general information, the history of the company, financial information, administration and the state of competitiveness of the companies listed on the Stock Exchange,

it is determined; It is by this means that each of the corresponding indices is determined. To structural capital, human capital and relational capital, for a total of 58 items. To analyze intellectual capital, variables were considered: human

capital, structural capital, relational capital, knowledge management and competitiveness. Below are the

dimensions and indicators of each of the aforementioned variables (Table 3).

Table 3
Dimensions and indicators of the human capital variable

Variable: Human capital							
Dimension							
Personal typology		Knowledge		Job Skills		Shared values	
Indicator	Label	Indicator	Label	Indicator	Label	Indicator	Label
Age	CICHTPED	Education level	CICHCONE	Definition of competence	CICHCLDC	Identification degree	CICHVCGI
		Training	CICHCOFR	Competition elements	CICHCLEC	Degree of consistency with decisions	CICHVCGC
		Work experience	CICHCOEXPR			Degree of coherence with actions	CICHVCGA
		Seniority in the company and position	CICHCOANT				
		Languages	CICHCOID				

Source: Own elaboration based on the research objectives.

Table 3 shows the human capital variable with the indicators that measure this variable and the labels that identify each indicator. The total number of items to measure this variable was 11.

Similarly, Table 4 shows the dimensions and indicators of the structural capital variable with the labels that identify each of these; the total number of items for this variable is 23.

Table 4
Dimensions and indicators of the structural capital variable

Variable: Structural Capital							
Dimension							
Culture		Processes		Systems		Organization	
Indicator	Label	Indicator	Label	Indicator	Label	Indicator	Label
Quality of your products	CICEUCUCAL	Productive efficiency	CICEPREP	Information about business vision	CICESISIN	Social services	CICEORSS
Installed capacity/ state-of-the-art technology	CICEUCUCAP	Intangible asset recognition	CICEPRRI	Comprehensive information systems	CICESISSI	Policies, objectives, R&D&I strategies	CICEORIDI
Diversity new products/ technology	CICECUDIV			Internal control structure	CICESISCI	Shareholder structure	CICEOREA

Cont... Table 4

Use of energy and other inputs	CICECUEN	IT systems and investments	CICESISIT	Organizational structure	CICEOREO
Certificates / quality recognitions	CICECUCER			corporate governance	CICEORGP
Business model management	CICECUGE			Company risks	CICEORRE
Environmental policies/ regulations	CICECUPOL			Competitive advantage	CICEORVC
Corporate social responsibility	CICECURES				
Market share	CICECUCME				
Information about image, leader and brands	CICECUINM				

Source: Own elaboration based on the research objectives.

Regarding the relational capital variable, Table 5 shows the dimensions and indicators used to measure this

variable, '20 items were used to measure this variable.

Table 5
Dimensions and indicators of the Relation capital variable

Variable: Relational Capital									
Dimension									
Suppliers		Clientes		Image		Cooperation		Zone	
Indicator	Label	Indicator	Label	Indicator	Label	Indicator	Label	Indicator	Label
Investments in new markets	CICRPRINV	Key customer dependency	CICRCLDC	Information and communication strategy	CICRIMEC	Relative efforts relative to work environment	CICRCOET	Marketing activities	CICRZOAM
Network of suppliers and distributors	CICRPRRED	Customer education/ training	CICRCLCD	International leadership position	CICRIMPL	Strategic alliances, strategic partner agreements	CICRCOAE	Product export	CICRZOEP
Market studies	CICRCOEM	Relationship with clients	CICRCLRC					Market diversification	CICRZODM
		Distr. of customers by segment or business	CICRCLDS					Production / client	CICRZOPC
		Web clients	CICRCLCW					Acquisitions/ stakes	CICRZOAP
		Training new clients	CICRCLC						
		Clients/employee	CICRCLCM						
		Commitment to clients	CICRCLCC						

Source: Own elaboration based on the research objectives.

For the strategic human resources management variable, the dimensions and indicators for this variable are shown

in table 6, for the measurement of this variable, 4 items were applied.

Table 6
Dimensions and indicators of the Human resources management variable

Variable: Strategic Human Resources Management			
Dimension			
Compensation plans		Career plans	
Indicator	Label	Indicator	Label
Type of remuneration	GERHTRE	Gender	GERHGE
Job competence	GERHCLA	Civil status	GERHPEC

Source: Own elaboration based on the research objectives.

For the knowledge management variable, the dimensions and indicators for this variable are shown in Table 7.

To measure this variable, 8 items were applied.

Table 7
Dimensions and indicators of the knowledge variable

Variable: knowledge management					
Dimension					
Learning in the organization		Knowledge in the organization		Structuring of knowledge	
Indicator	Label	Indicator	Label	Indicator	Label
Learning ability	GCAPHAP	Knowledge protection	GCCOPC	Application of knowledge	GCECAPC
Learning disposition	GCAPHDA	Policies and regulations	GCCOPN	Spread of knowledge	GCECEC
		Organizational skills	GCCOHO	Knowledge development	GCECDC

Source: Own elaboration based on the research objectives.

The last variable of this study is the competitiveness variable. Table 8 shows the dimensions and indicators used for

its measurement and applying 9 items for its analysis.

Table 8
Dimensions and indicators of the Competitiveness variable

Variable: Competitiveness					
Dimension					
Financial performance		Operational performance		Customer Performance	
Indicator	Label	Indicator	Label	Indicator	Label
Profit margin and profitability	CODFMU	Labor productivity	CODOPPL	Customer satisfaction	CODCLSC

Cont... Table 8

Sales	CODFVT	Costs reduction	CODOPRC	Customer loyalty	CODCLLC
Liquidity	CODFLIQ	Market share	CODOPPM	Client retention	CODCLRC

Source: Own elaboration based on the research objectives.

4. Intellectual capital as a tool for value creation in Mexican companies: Research results and analysis statistical

After having chosen the companies and the variables through which the phenomena whose inference will be developed. If the desire to contrast is determined, the analysis techniques are detailed using SPSS program, where the statistical information corresponding to each item proposed in the research is shown.

Firstly, and to contrast the information obtained previously, the statistical analysis of the independent variables was carried out, which allowed us to identify which the variables are sufficiently significant in the disclosure of intellectual capital.

For this reason, to determine which factors influence Mexican companies to disseminate competitiveness through intellectual capital, the independent variables were compared: Human Capital, Structural Capital, and relational capital. For this analysis, a visual inspection of the correlation matrix and the existing correlation structure between the study variables was carried out. However, since it is a large matrix, it was decided to review only the determinant of the matrix.

The determinant within the matrix is characterized by being a global measure of the correlation between the study variables.

In the dataset analyzed, the determinant shown is a figure very close

but different from zero; which we can say that the correlation structure in the set of variables under analysis is adequate. Having as a result matrix is 7.414E-75.

For its interpretation, the following criterion is used: If this determinant of the matrix is close to zero, so there is a correlation structure considered important between the variables, being indicative, appropriate and relevant in the factor analysis of the study variables.

Next, the sampling adequacy test (MSA) was carried out, which considers that if the result shows that the KMO of the set of variables analyzed is > 0.6 , this will indicate that no It is appropriate to perform a factor analysis of the data. In our case, the test result showed a KMO of 0.808, that is, > 0.6 , which makes it advisable to perform the factor analysis on the set of study variables.

Subsequently, Bartlett's test of sphericity was carried out, which considers that if there was no correlation structure between the study variables, then the correlation matrix would be the identity matrix; Therefore, we would have zeros (0) off the diagonal, which would imply that there would be no correlation between two variables (no matter what they were) and ones (1) on the diagonal. Therefore, if the critical value (Sig.) obtained in the test is > 0.05 , the null hypothesis of sphericity could not be rejected and, therefore, the relevance of the factor model to explain the data could not be assured. In Table 9, the data resulting from the application of this test show a significance of 0.000, that is, < 0.05 .

Table 9
KMO Test Results - Bartlett Sphericity

KMO and Bartlett test		
Kaiser-Meyer-Olkin measure of sampling adequacy		0.808
	Approx. Chi squared	20340.618
Bartlett's test of sphericity	gl	2145
	Sig.	0.000

Source: own elaboration according to the results obtained and analyzed with the software SPSS ver. 25.

The results obtained in both tests (KMO sampling adequacy and Bartlett's sphericity) combined with the result obtained with the determinant of the matrix show the existence of a significant correlation between the study variables, so it is considered appropriate to carry out the exploratory factor analysis. From the above, the recommendation of Petter, De Lone and McLean, (2013) is met, who consider that there must be at

least two of the tools that must evaluate the correlation between the variables to justify carrying out the exploratory factor analysis.

To work on the data extracted in the exploratory factor analysis, the values obtained were coded into numerical values in ordinal order, with values from 1 to 5. In Table 10, the rule for said coding is as follows:

Table 10
Data Coding for AFE

Data encryption	
0 – 1000	1
1001- 10,000	2
10,001- 100,000	3
100,001-1,000,000	4
> 1x10 ⁶	5

Source: Own elaboration based on the results obtained and analyzed with the software SPSS ver. 25.

For this reason, the exploratory factor analysis was carried out by applying the principal components analysis method with Varimax type

rotation, obtaining a cumulative explained variance of the 3 extracted dimensions of 75.665% (Table 11).

Table 11
Total Explained Variance

Comp.	Total variance explained								
	Initial eigenvalues			Sums of charges squared of the extraction			Sums of charges squared of rotation		
	Total	% de variace	% acumulated	Total	% de variance	% acumulated	Total	% de variance	% acumulated
1	20.901	31.668	31.668	20.901	31.668	31.668	16.096	24.388	24.388
2	12.196	18.479	50.147	12.196	18.479	50.147	15.861	24.033	48.420
3	8.648	13.103	63.250	8.648	13.103	63.250	8.502	12.881	61.301

Extraction method: principal component analysis.

Source: Own elaboration based on the results obtained and analyzed with the software SPSS ver. 25.

Likewise, the loadings of the 3 dimensions were obtained to measure intellectual capital, which are: a) Human Capital, b) Structural Capital and c) Relational Capital, excluding those items with a factor loading <0.40. The results of the dimensions are presented below.

11 elements (CICHVCGA, CICHCOFR, CICHCONE, CICHCLEC, CICHCOID, CICHVCGI, CIGHTPED, CICHVCGC, CICHCOEXPR, CICHCOANT and CICHCLDC), with a loading greater than 0.40 and which contributes 12,881% of total variance.

5. Results by dimension of exploratory factor analysis

Table 12 presents the Human Capital dimension, which is made up of

Table 12
Factor Loadings and Component Details of the Human capital

LABEL	ÍTEM	FACTOR LOAD	COMMUNITY
CICHVCGA	Degree of coherence with actions	0.930	0.910
CICHCOFR	Formación	0.926	0.888
CICHCONE	Education level	0.923	0.904
CICHCLEC	Competition elements	0.922	0.875
CICHCOID	Languages	0.921	0.876
CICHVCGI	Identification degree	0.901	0.839
CIGHTPED	Age	0.899	0.858
CICHVCGC	Degree of consistency with decisions	0.703	0.636
CICHCOEXPR	Work experience	0.693	0.602
CICHCOANT	Seniority in the company and position	0.642	0.591
CICHCLDC	Definition of competence	0.611	0.613

Source: Own elaboration based on the results obtained and analyzed with the software SPSS ver. 25.

Likewise, Human Capital, and has a percentage of 12.881% of the explanatory power of the model. This indicates that Human Capital contributes 12.881% of the total variability explained by that component or factor.

Table 13 shows the second dimension, Structural Capital, which is made up of 23 elements (CICECUPOL, CICORVC, CICESISIT, CICEOREA, CICECURES, CICEISSI, CICEORSS,

CICEPREP, CICESISCI, CICEREO, CICEORRE, CICECUDIV, CICESISIN, CICEORIDI, CICECUINM, CICECUCAL, CICECUCAP, CICECUEN, CICECUCME, CICECUCER, CICEPRRI, CICECUGE and CICEORGP) obtaining a greater proportion of the total variance, its contribution is 24.388%, in its entirety to the dimension, all the elements have a factor loading greater than 0.04.

Table 13
Factor Loadings and Component Details of the Elements of the Structural Capital

LABEL	ÍTEM	FACTOR LOAD	COMMUNITY
CICECUPOL	Policies/regulations environmental	0.967	0.965
CICORVC	Competitive advantage	0.963	0.957
CICESISIT	IT systems and investments	0.959	0.948
CICEOREA	Shareholder structure	0.949	0.926
CICECURES	Social responsibility corporate	0.945	0.922
CICEISSI	Comprehensive information systems	0.940	0.917
CICEORSS	Social services	0.939	0.909
CICEPREP	Productive efficiency	0.938	0.912
CICESISCI	Internal control structure	0.932	0.890
CICEREO	Organizational structure	0.909	0.856
CICEORRE	Company risks	0.870	0.803
CICECUDIV	Diversity new products/technology	0.869	0.797
CICESISIN	Information about business vision	0.849	0.773
CICEORIDI	Policies, objectives, R&D&I strategies	0.833	0.754
CICECUINM	Information. about image, leader and brands	0.759	0.651
CICECUCAL	Quality of your products	0.685	0.629
CICECUCAP	Installed capacity/state-of-the-art technology	0.676	0.625
CICECUEN	Use of energy and other inputs	-0.659	0.550
CICECUCME	Market share	0.643	0.471
CICECUCER	Certificates / quality recognitions	0.632	0.522
CICEPRRI	Intangible asset recognition	0.590	0.422
CICECUGE	Business model management	0.549	0.378
CICEORGP	corporate governance	0.498	0.340

Source: Own elaboration based on the results obtained and analyzed with the software SPSS ver. 25.

Structural Capital has explanatory power of 24.388%, highlighting its relevance in organizational performance and the importance of systems, processes and organizational culture in business success. Organizations should focus on strengthening this capital to realize its potential benefits. From this we see that Relational Capital within companies listed on the Mexican Stock Exchange (BMV) plays an important role.

The components are shown in detail with the components of the

Structural Capital variable.

Next, Table 14 presents the Relational Capital dimension, made up of 20 elements (CICRCOAE, CICRCLDS, CICRZOEP, CICRCLEM, CICRPRRED, CICRZOAP, CICRZOAM, CICRZOPC, CICRZODM, CICRCLDC, CICRZOET, CICRIMPL, CICRCLCW, CICRPRINV, CICRCLRC, CICRCLCC, CICRMEC, CICRCLCD, CICRZOEM and CICRCLCC) with an explanation percentage of 24.033% and a factor loading >0.04 .

Table 14
Factor Loadings and Component Details of the Elements of Relational Capital

LABEL	ÍTEM	FACTOR LOAD	COMMUNITY
CICRCOAE	Strategic alliances, strategic partner agreements	0.971	0.960
CICRCLDS	Distribution of clients by segment or business	0.967	0.961
CICRZOEP	Product export	0.964	0.953
CICRCLEM	Market studies	0.962	0.948
CICRPRRED	Network of suppliers and distributors	0.949	0.926
CICRZOAP	Acquisitions/stakes	0.944	0.921
CICRZOAM	Marketing activities	0.944	0.904
CICRZOPC	Production / client	0.935	0.887
CICRZODM	Market diversification	0.911	0.847
CICRCLDC	Key customer dependency	0.905	0.849
CICRZOET	Relative efforts relative to work environment	0.901	0.827
CICRIMPL	International leadership position	0.895	0.845
CICRCLCW	Web clients	0.868	0.785
CICRPRINV	Investments in new markets	0.856	0.764
CICRCLRC	Relationship with clients	0.842	0.728
CICRCLCC	Commitment to clients	0.780	0.659
CICRMEC	Information and communication strategy	-0.773	0.634
CICRCLCD	Customer education/training	0.750	0.636
CICRZOEM	Clients/employee	0.723	0.568
CICRCLCC	Training new clients	0.520	0.294

Source: Own elaboration based on the results obtained and analyzed with the software SPSS ver. 25.

The Relational Capital variable. The result of 24.033% as explanatory power of Relational Capital in the model suggests a significant influence of this variable

on the dependent variable of the study. This can be interpreted as a contribution of 24.033% indicates that Relational Capital is a key factor to understand

the variability in the performance of the dependent variable, whether in terms of financial performance, innovation, competitiveness, etc.

Additionally, to the above and in accordance with the methodology, it is equally relevant to analyze the matrix of reproduced correlations, which are the residuals that are calculated between the observed and reproduced correlations. These results show that there are 479 (21.0%) non-redundant residuals. With absolute values greater than 0.05, which establishes a good fit on the correlations between the observed variables.

6. Results by dimension of exploratory factor analysis

According to the results presented,

it is clear that, of the three dimensions grouped homogeneously according to the study variable, a brief explanation is offered below in reference to each of them. The components are shown in detail below, along with the components of the Structural Capital variable.

The variable Knowledge Management with an explanatory power of 7.815% highlights its moderate relevance in organizational performance and the importance of knowledge management practices in business success. Organizations should focus on strengthening these practices to leverage their potential benefits in combination with other strategic factors. Its components are presented in detail in the following table 15.

Table 15
Knowledge Management: Component Details

LABEL	ÍTEM	FACTOR LOAD	COMMUNITY
GCECDC	Knowledge development	0.938	0.883
GCECAPC	Application of knowledge	0.932	0.871
GCCOHO	Organizational skills	0.921	0.854
GCAPHDA	Learning disposition	0.806	0.661
GCCOPC	Knowledge protection	0.770	0.628
GCCOPN	Policies and regulations	0.517	0.402
GCAPHAP	Learning ability	0.494	0.377
GCECEC	Spread of knowledge	0.463	0.358

Source: Own elaboration based on the results obtained and analyzed with the software SPSS ver. 25.

Finally, the Strategic Human Resources Management variable is presented with an explanatory power of 6.548%, highlighting its moderate relevance in organizational performance and the importance of human resources management practices. in business

success. Organizations should focus on strengthening these practices to leverage their potential benefits in combination with other strategic factors. Its components are presented in detail in the following table 16.

Table 16
Strategic Human Resources Management: Component Details

LABEL	ÍTEM	FACTOR LOAD	COMMUNITY
GERHGE	Gender	0.854	0.888
GERHCLA	Job competence	0.853	0.910
GERHPEC	Civil status	0.845	0.890
GERHTRE	Type of remuneration	0.826	0.810

Source: Own elaboration based on the results obtained and analyzed with the software SPSS ver. 25.

For all of the above, the results of the analysis show that intellectual capital plays a crucial role in the competitiveness of companies listed on the Mexican Stock Exchange. Companies that invest in the development of their human, structural and relational capital show superior performance and a greater ability to adapt to market changes. The discussion highlights the importance of strategically managing these intangible assets to maintain a sustainable competitive advantage.

7. Conclusions

The analysis of the competitiveness of companies listed on the Mexican Stock Exchange (BMV) through intellectual capital can guide business managers and strategists. Below are the main conclusions derived from this analysis:

First, intellectual capital has been confirmed as a critical component for business competitiveness. Companies that invest in the development of their human, structural and relational capital tend to perform better in the market. This approach not only contributes to greater innovation and productivity, but also improves operational efficiency and the ability to adapt to changes in the business environment.

Second, human capital, including employees' skills, knowledge and

experiences, represents an essential basis for value creation. 12.881% of the explanatory power of the model demonstrates that continuous training and professional development of employees are essential to maintain a competitive advantage. Companies that promote an environment of learning and professional development can better adapt to technological and market changes.

Third, relational capital, with 24.033% of the model's explanatory power, is vital for business success. This component covers relationships with customers, suppliers and other stakeholders, as well as the company's reputation in the market. Companies that effectively manage their external relationships tend to have greater business opportunities, access to resources and a better competitive position. Maintaining and strengthening these relationships is crucial for long-term sustainability.

Fourth, Structural capital, which represents 24.388% of the explanatory power of the model, includes organizational infrastructure, processes, systems and databases. This capital provides the necessary framework for human and relational capital to be effective. Companies with efficient management systems, well-

defined processes and an advanced technological infrastructure can quickly respond to market demands and take advantage of emerging opportunities.

Fifth, with 7.815% explanatory power, knowledge management is a significant but not dominant variable in the model. The ability to capture, store and use organizational knowledge can improve decision making and innovation. However, its impact must be complemented with other strategic practices to maximize value.

Sixth, strategic human resources management, with 6.548% explanatory power, highlights the importance of aligning human resources policies and practices with the company's strategic objectives. Effective selection, hiring, training and retention strategies are essential to developing a workforce capable of meeting market challenges and contributing to organizational success.

Finally, to improve their competitiveness, companies must invest in the training and development of their human capital, strengthen their external relationships and actively manage their relational capital, optimize their internal processes and systems to improve structural capital, implement effective management systems of knowledge and align their human resources practices with strategic business objectives.

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