Mediating Factorial Model of Corporate Image in the Face of COVID-19

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Abstract

Corporate governance is considered a system of management, production and transfer of knowledge in the face of predictable risk events. In the case of the pandemic, public policies were exposed in the media and socio-digital networks as incompetent, ineffective and incapable of containing or mitigating COVID-19. Consequently, the corporate image was distorted according to the demands of public opinion. The objective of this work was to reveal the expectation of a Higher Education Institution in the face of the health crisis. An exploratory, cross-sectional and psychometric study was carried out with a selection of 100 students from a public university in central Mexico. The results show that the coupling between administrators, teachers and students determined the corporate image of the university. In relation to the literature reviewed, lines of study concerning the mediating factors of coupling are discussed.

Keywords: coupling, collaboration, COVID-19, image, reputation

1. Introduction

In this section, the most significant contributions on corporate governance are discussed, emphasizing the structure that inhibits or allows the development of intellectual capital. In the first place, the central elements of corporate governance are exposed, even though the literature identifies and associates corporate governance with this concept (García, Bermúdez & Juárez, 2022). Next, we proceed to establish the central elements of intellectual capital in order to be able to link governance and capital in academic, professional and labor training. This exercise is worth discussing two elements that seem concomitant at first glance, but that

have not been associated as variables that determine school or work performance or performance (Sandoval et al., 2022). This is so because the structure of corporate governance assumes a supportive and cooperative process since they share common resources.

In contrast, intellectual capital suggests the academic, professional and work training of a select group that competes to establish the best option in terms of global solutions, or in terms of intangible asset functions.

Understood as a management, production and knowledge transfer system, corporate governance centralizes decision-making and therefore its structure lies in the circumduction

of factors such as policies, procedures, transparency, committees, hierarchies, control and legality (Larker & Tayan, 2015). In this scheme where the mission and vision of the corporation define the goals and strategies, the governance structure assumes a management hierarchy, a linear serial production and an asynchronous translation of the quality of processes and products. At least five instances and ten actors make up a minimum structure of corporate governance: efficiency of capital markets, legal regulations, socio-cultural values, accounting standards and regulatory mechanisms determine the action of actors such as auditors, clients, partners, competitors, regulators, analysts, creditors, investors, all of them around administrators or managers (Larcker & Tayan, 2015).

In this way, there are five functions of corporate governance, considering a structure where decisions are made based on the formation of intellectual capital in knowledge-creating organizations such as Higher Education Institutions (IES): 1) Accounting audit, preferably external to those who make decisions, but dependent on the consultative, advisory or government council; 2) Transparency and inherent to those who design the objectives, strategies and goals; 3) Bioethics or normative and regulatory principles of the consequences and effects of corporate decisions on those who make up the company and other parties involved; 4) Practices and fair competition inherent in the production of knowledge and innovation to increase the quality of processes and products; 5) Short, medium and long term vision (Larker & Tayan, 2015).

Being a knowledge management, production and transfer system, the corporate governance structure is designed for high competition, even though its mission and vision is to spread the benefits among the parties involved and interested, corporate governance prevents risks and for this reason, it establishes mechanisms for the interaction of its structural functions with a specific area of risk management and communication (Bustos, Juárez & García, 2022). That is to say, decisions will be made as long as this area has previously established a program and a strategy for minimizing costs and maximizing profits, but when this is not possible, then collateral, direct and indirect effects of corporate decisions are anticipated (Larker & Tanyan, 2015).

Knowledge management aimed at risk prevention involves a dual process: context management and focused management. The first involves monitoring and anticipating conflicts of interest, followed by dialogue with legal or regulatory parties (García et al., 2022). The second includes the actors; managers, auditors and directors involved in organizational performance. It is a system of corporate self-regulation with scope to other organizations due to the list of audits for the clarification of conflicts of interest, as well as the satisfaction of the parties involved.

There are knowledge management models differentiated by the cultures, norms and values from which they were proposed, developed and consolidated (García, 2022). In this section, the most significant ones are reviewed with the purpose of discussing their relevance and effectiveness in the management, production and transfer of knowledge in HEIs.

In this model, the structure of relationships prevails over the structure of tasks, innovations or processes. It is a decision scheme based on agreements and consensus not only for the benefit of the organization but also of the organizations involved (Sánchez et al., 2022). This means that the conflict of interest is generated by the absence of a negotiation structure, agreements and co-responsibilities. It is a system of double entry of information and internal and external regulation. Its virtue lies in the balance of the demands of the environment and those generated in the structure itself (Raju, 1997).

In relation to the structure, functions and risk management, the Anglo-American model involves the parties interested in the development of the sector and not only of the organization, but not based on trust but from the legal frameworks that allow the regulation of the conflicts.

If the Anglo-American model supposes a regulation between the organizations and based on the structure of conflict, negotiation, agreements and co-responsibility, the German model rather suggests an internal dynamic between those who make the decisions and those who execute the tasks without considering the importance of the external parties involved such as auditors, suppliers or creditors (Raju, 1997). Even in the German model, corporate governance is distinguished by excluding

employees and other interested parties in the dynamics of knowledge management, which supposes a permanent and continuous audit between the manager and middle managers.

Very similar to the German model, where strict control of resources prevails and based on internally established demands, the Japanese model includes the figure of presidential honorability to distinctively seal an organization focused on values and regulation (Carreón et al., 2022). The system increasingly excludes other parties involved and delegates to financial experts all matters related to investments and expenses to concentrate on managers and auditors the responsibility for objectives, strategies and goals (Raju, 1997).

Unlike the Anglo-Saxon model where the parties involved build a co-management system, German and Japanese governance tend towards self-management. Diametrically opposed to the German and Japanese models, the Hindu model recovers the stakeholders in the knowledge management and regulation process with the purpose of establishing a co-management system (Raju, 1997). Even unlike the German, Japanese and Anglo-Saxon models, the Indian model subjects its managers to scrutiny through a mechanism of regulation and internal and external auditing with broad participation of the parties involved.

The human capital structure comprises at least five items; 1) demography, 2) education, 3) labor, 4) research and 5) sociocultural. Each one gives rise to the other and is structured according to the selectivity of individual capacities (Azim, 2012).

Based on this structure, human capital is distinguished by including academic, professional and work training (Aguayo et al., 2021). From the university, through professional experience and culminating in job performance, the formation of capital involves continuous learning, but if this takes place in knowledge-creating organizations such as HEIs, then we are witnessing a type of capital that literature identifies as intellectual to highlight the importance of linking school training to job requirements.

Intellectual capital is made up of values and norms learned in the organizational sphere. This is so because the interrelation between organizational actors will generate tacit and implicit knowledge that, in their job training, the intellectual capital will recode for the benefit of the organization (Orzea & Bratianu, 2012). In its most recent version, human capital refers to deliberate, planned and systematic training processes, while capital relations refer to the trust to decode the implicit knowledge generated by the organizational structure and human capital. In this trilogy of human capital, structure and relationships, intellectual capital is created, developed and consolidated together with financial and physical capital (Myzin & Gurban, 2011).

It is precisely in capital relations where corporate governance is created and linked to intellectual capital. The fusion between corporate governance and intellectual capital was proposed in a financial and banking field after the economic crisis forced the generation of models to understand the relationship between these variables (Suroso et al., 2017). In the intangible assets model, intellectual capital and corporate governance are determining factors, but measured as manifest variables. This means that they are part of a manifest structure that can give rise to a latent prediction system.

In contrast, the financial execution model only includes intellectual capital and corporate governance as latent and determining variables (Smuda, 2019). Very different from the model of intangible assets in which governance and intellectual capital are concomitant, but with a low correlation to be able to anticipate growth. In contrast, the financial execution model defines both variables as determinants that interact in the prediction. This means that other modulating variables can increase the proposal until a robust prediction model is developed. In the same sense, the social responsibility model recovers intellectual capital and corporate governance no longer as determinants but as concomitants (Althuner et al., 2019).

Unlike the intangible assets model and the financial execution model, the social responsibility model assumes the inclusion of the parties involved (Cruz et al., 2022). Such a distinction is relevant when carrying out the modeling of the variables that explain the relationship between corporate governance and intellectual capital.

Therefore, the objective of this work was to establish the determining mediating factors of the corporate image, considering the contrast of the theoretical structure reviewed in the

literature from 2019 to 2022 with respect to the expectations of a sample surveyed at a public university in the center of Mexico.

Are there significant differences between the structure of theoretical mediating and determining relationships of the corporate image with respect to the expectations of a public university sample from central Mexico?

The premises that guide the present work suggest that the Anglo-Saxon model which emphasizes the hierarchy of functions and decisions will adjust to the observations of the present work as long as the anti-COVID-19 policies are disseminated in the information channels of the public university (García, Espinoza & Carreón, 2022). If a line of communication does not prevail, then the German and Japanese self-management-oriented model will prevail in the corporate image. In this way, the formation of intellectual capital can be oriented towards co-management if administrative interests prevail over teachers.

2. Method

A cross-sectional, exploratory and psychometric study was carried out with a sample of 100 administrative staff (M = 34.2 SD = 5.4 age and M = 17'987.23 SD = 4'562.34 monthly income), teachers (M = 36.8 SD = 5.98 age and M = 18'980.23 SD = 6'7822.19 monthly income) and students (M = 18.2 SD = 1.4 age and M = 6'089.23 SD = 345.6 monthly income) from a public university in central Mexico.

The Carreón Corporate Governance Scale (2020) was used, which includes eight dimensions related to image ("The university is distinguished by entrepreneurship in the face of crises"), reputation ("The university is considered as an incubator of talent in the face of crises"), prestige ("The university is ranked among the ten most entrepreneurial in the country"), coupling ("The university synchronizes its strategies with SMEs through social service and professional practice"),

collaboration ("The university synchronizes its objectives with SMEs in the formation of intellectual capital"), identity ("The university is in communion with entrepreneurship in the face of crises"), isomorphism ("The objectives of the university are disseminated in all its instances"). All the items include five response options ranging from 0 = "I do not agree at all" to 5 = "I quite agree". Reported reliability ranges between .789 and .856 and validity ranges between .356 and .654 for four indicators per construct. In the present study, the general reliability was .790, ranging between .765 and .864 for each of the eight subscales, and the validity was between .456 and .657.

The sample was contacted through their institutional mail, indicating the objectives of the study and those responsible for the project. Confidentiality and anonymity of the respondents were guaranteed in writing, following the guidelines of the American psychological and medical associations. The homogenization of concepts was established using the Delphi technique in which expert judges rated the relevance of the items to the sample.

Normality, homoscedasticity, adequacy and sphericity analyzes were performed for reliability and validity analyses. The regression coefficients were estimated in order to be able to establish the relationships between the determining dimensions of the corporate image. Values close to unity were assumed as evidence of reliability and validity.

3. Results

Table 1 shows the direct relationships between the factors where the effect of reputation on corporate image stands out as a significant value. In other words, the balance between external and internal expectations regarding the university as a manager of knowledge in the face of the pandemic affected the image of the institution in the face of the health crisis.

Table 1. Direct effects

| | | | Estimate | Std. Mistake | z- value | p | 95% Confidence Interval | |
							Lower	Upper
Reputation	→	Image	-0.055	0.015	-3,729	< .001	-0.084	-0.026
Prestige	→	Image	-0.010	0.013	-0.732	0.464	-0.036	0.016

| | | | Estimate | Std. Mistake | z- value | p | 95% Confidence Interval | |
							Lower	Upper
Identity	→	Image	-0.018	0.016	-1,188	0.235	-0.049	0.012
isomorphism	→	Image	-0.002	0.017	-0.108	0.914	-0.035	0.031
Biosafety	→	Image	-0.015	0.015	-0.998	0.318	-0.044	0.014

Note: Delta method standard errors, normal theory confidence intervals, ML estimator.

Table 2 shows the values that concern the mediating effect of the variables that increase or decrease the impact of the determinants of corporate image. Since neither value is significant, the mediator effect is considered provisional and susceptible to new modeling. According to the literature, coupling and collaboration are two mediating factors that stand out before the pandemic and in economic crisis, but not health. Therefore, support and cooperation would be two factors more in line with the analysis of the impact of COVID-19 on the image of educational institutions.

Table 2. Indirect effects

| | | | | | Estimate | Std. Mistake | z-value | p | 95% Confidence Interval | |
									Lower	Upper
Reputation	→	coupling	→	Image	0.002	0.003	0.901	0.367	-0.003	0.008
Reputation	→	Collaboration	→	Image	0.006	0.004	1,398	0.162	-0.002	0.014
Prestige	→	coupling	→	Image	0.002	0.002	0.903	0.367	-0.003	0.007
Prestige	→	Collaboration	→	Image	-3.074e-4	0.002	-0.127	0.899	-0.005	0.004
Identity	→	coupling	→	Image	-0.005	0.004	-1,199	0.230	-0.012	0.003
Identity	→	Collaboration	→	Image	-0.003	0.003	-0.913	0.361	-0.009	0.003
isomorphism	→	coupling	→	Image	-0.007	0.005	-1,298	0.194	-0.017	0.003
isomorphism	→	Collaboration	→	Image	0.005	0.004	1,179	0.238	-0.003	0.012
Biosafety	→	coupling	→	Image	1,385e-4	0.002	0.065	0.949	-0.004	0.004
Biosafety	→	Collaboration	→	Image	-0.003	0.003	-0.956	0.339	-0.009	0.003

Note: Delta method standard errors, normal theory confidence intervals, ML estimator.

Table 3 shows the values that correspond to the total direct effects of the determining variables on the target variable. The only significant relationship corresponds to the impact of reputation on image. It then means that the external and internal expectations of the image of the university as a manager of knowledge in the face of the pandemic is the determining and preponderant factor of the model.

Table 3. Total direct effects

| | | | Estimate | Std. Mistake | z- value | p | 95% Confidence Interval | |
							Lower	Upper
Reputation	→	Image	-0.047	0.015	-3,201	0.001	-0.076	-0.018

		Estimate	Std. Mistake	z- value	p	95% Confidence Interval	
						Lower	Upper
Prestige	→ Image	-0.008	0.014	-0.577	0.564	-0.035	0.019
Identity	→ Image	-0.026	0.015	-1,682	0.093	-0.056	0.004
isomorphism	→ Image	-0.004	0.017	-0.245	0.807	-0.036	0.028
Biosafety	→ Image	-0.018	0.015	-1,171	0.242	-0.047	0.012

Note: Delta method standard errors, normal theory confidence intervals, ML estimator.

Table 4 shows the values that explain the total indirect effects. A mediating relationship between prestige and image is appreciated. In other words, the competitive advantage of the university as a manager of knowledge in the face of the pandemic explains its image among administrators, teachers, and students.

Table 4. Total indirect effects

		Estimate	Std. Mistake	z- value	p	95% Confidence Interval	
						Lower	Upper
Reputation	→ Image	0.008	0.005	1,664	0.096	-0.001	0.018
Prestige	→ Image	0.002	0.003	0.571	0.568	-0.005	0.009
Identity	→ Image	-0.008	0.005	-1,510	0.131	-0.017	0.002
isomorphism	→ Image	-0.002	0.006	-0.352	0.725	-0.015	0.010
Biosafety	→ Image	-0.003	0.004	-0.774	0.439	-0.010	0.004

Note: Delta method standard errors, normal theory confidence intervals, ML estimator.

Table 5 shows the explanatory values of the associations between the factors. The level of significance suggests a new modeling of the factors. The literature indicates that a model of direct determinants could be generated with other mediating factors such as cooperation and support in crisis scenarios.

Table 5. Residual covariances

		Estimate	Std. Mistake	z- value	p	95% Confidence Interval	
						Lower	Upper
coupling	↔ Collaboration	0.054	0.084	0.645	0.519	-0.111	0.219
Reputation	↔ Prestige	5,479	0.000			5,479	5,479
Reputation	↔ Identity	0.693	0.000			0.693	0.693
Reputation	↔ isomorphism	14,383	0.000			14,383	14,383
Reputation	↔ Biosafety	-21,142	0.000			-21,142	-21,142

Note: Delta method standard errors, normal theory confidence intervals, ML estimator.

Figure 1 shows the structure of relationships between the determining dimensions of the corporate image. The collaboration and coupling between the public university and SMEs determine the expectations generated by this system of strategic alliances; social service and professional practices in the study community. In other words, an increase in conventions and agreements between the interested parties generates a positive image of the university in
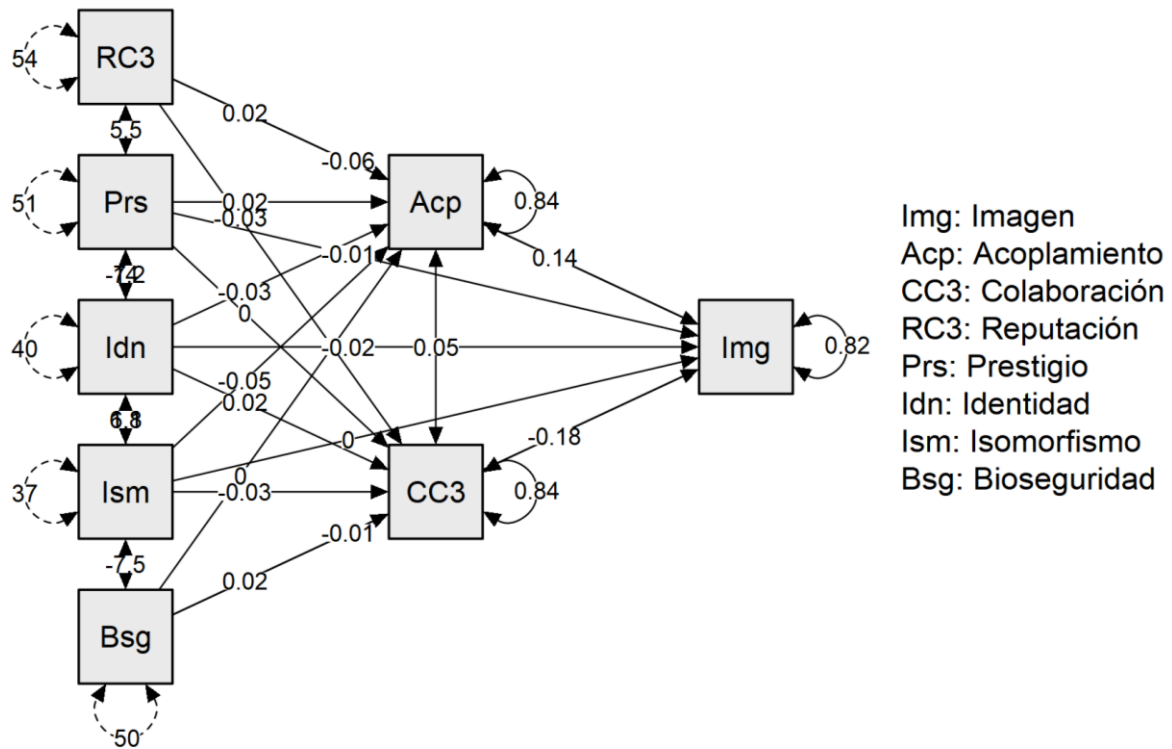
the face of the pandemic.

Figure 1. Mediating factorial model of corporate image in the face of COVID-19

Source: Prepared with study data.

The results suggest the non-rejection of the hypothesis regarding the significant differences between the theoretical structure of the determinants of corporate image with respect to the responses of the sample of administrators, teachers and students involved in the system of professional practices and social service.

4. Discussion

The objective of this work was to establish a model of the determinants of corporate image. The results suggest that collaboration and coupling, understood as alliances, agreements and co-responsibilities between organizations, determine the expectations of knowledge management in the face of the health crisis. In this sense, anti-COVID policies, focused on distancing and confinement, limited inter-organizational coupling, leading to a deterioration in the corporate image. In other words, if public policies encourage strategic alliances between organizations, they would have intervened in the image of universities and their allies for social service and professional practice purposes.

Studies of the effect of micro financing on organizations suggest sectoral development. In the present work, it was shown that the Anglo-Saxon model, focused on decision hierarchy and unilateral communication, is more counterproductive than the German, Japanese or Hindu model with respect to the construction of a positive corporate image in the face of the pandemic. In fact, the micro-financing policies carried out in most of the nations indirectly generated the improvement of the image of institutions and organizations that manage knowledge. In the case of Mexico, the anti-COVID -19 policies focused on mitigating and containing the pandemic to the detriment of the corporate governance of the institutions that make up the educational system.

5. Conclusion

The objective of this work was to establish the structure of the determinants of corporate image in the face of COVID-19. The results show that collaboration and coupling are determining factors of a positive image in the study sample. Compared to the state of the art where the corporate image prevails as a result of

knowledge management, the findings suggest a scenario of opportunities centered on strategic alliances, agreements and agreements between the parties. Therefore, micro financing is recommended as an agreement between credit and educational institutions.

References

Aguayo, JMB, Nájera, MJ, Lirios, CG, & María del Rosario Molina González. (2021). Review of justice for sustainability in the Covid-19 era. *Journal of Economic Information*, *8*(3), 88-96. https://doi.org/10.31580/jei.v8i3.1854.

Altuner, D., Çelik, S. and Güleç, TC. (2015). "The linkages among intellectual capital, corporate governance and corporate social responsibility", *Corporate Governance, 15*(4), 491-507. https://doi.org/10.1108/CG-04-2014-0044

Azim, MI. (2012). Corporate governance mechanisms and their impact on company performance: A structural equation model analysis. *Australian Journal of Management, 1*, 1-25. http://dx.doi.org/10.1177/0312896212451032.

Bustos-Aguayo, JM, Juárez-Nájera, M., & García Lirios, C. (2022). Review of entrepreneurship in the COVID-19 era. *Magazine Wit*, *19*(1), 60-66. https://doi.org/10.22463/2011642X.3173.

Carreón-Guillén, J., Bustos-Aguayo, JM, Sandoval-Vázquez, FR, Juárez-Nájera. M., & Garcia-Lirios, C. (2022). Governance in the COVID-19 era: Expectations on water services. *FIGEMPA: Research & Development, 14*(2), 68-80. https://doi.org/10.29166/revfig.v14i2.3525.

Cruz García Lirios, Francisco Espinoza Morales, & Javier Carreón Guillén. (2022). Corporate reputation and intellectual capital formation. *Social Science Learning Education Journal*, *7*(07), 135-142. https://doi.org/10.15520/sslej.v7i07.3556.

Cruz GL, José MBA, Margarita JN, Francisco RSV. (2022). Verification of a water management model. *Acad. J. Food, 10*(3), 029-038.

García Lirios, C., Bermúdez-Ruíz, G., & Juárez-Nájera, M. (2022). Entrepreneurial dimensions of the reactivation of the economy based on tourism in central Mexico. *Ara: Journal of Research in Tourism, 11*(1), 100-114. Retrieved from https://revistes.ub.edu/index.php/ara/article/view/34526.

García Lirios, C., Carreon-Guillen, J., Sanchez-Sanchez, A., & Martinez -Muñoz, B. (2022). Modeling of spatiality, habitus and capabilities in the Covid-19 era. *Journal of Academic Research Without Borders: Division of Economic and Social Sciences, (38)*, 23. https://doi.org/10.46589/rdiasf.vi38.466.

Garcia-Lirios, C. (2021). Tutorial networks in the elaboration of the research protocol. *Communication, Culture and Politics, 12.* https://doi.org/10.21158/21451494.v12.2021.3083.

Larker, D. & Tayan, B. (2015). Introduction to corporate governance. Pearson, New York.

Myzin, A. L. and Gurban, AI. (2011). Issues of human capital assessment in the context of research into the national wealth of the Russian. Forming social качества economic rosta, 1, 110-115.

Orzea, I., & Bratianu, C. (2012). Knowledge contribution to the Intellectual Capital within Romanian Business Environment. In: *Proceedings of the 4th European Conference on Intellectual Capital*, Arcadia University of Applied Sciences, Helsinki, Finland, 23-24 April 2012, pp. 345-355. Academic Publishing International, Reading, UK. (15) (PDF) Knowledge Contribution to the Intellectual Capital within Romanian Business Environment. Available from: https://www.researchgate.net/publication/288994129_Knowledge_Contribution_to_the_Intellectual_Capital_within_Romanian_Business_Environment.

Raju, BY (1997). Corporate Governance: Models of Growth. *Journal of Management, 27,* 1-15. https://www.asci.org.in/journal/Vol.27(1998)/V27_byraju.html.

S. Suroso, Tri Widyastuti, M. Salim, I. Setyawati. (2017). Intellectual Capital and Corporate Governance in Financial Performance Indonesia Islamic Banking. *International Journal of Economics and Financial Issues*, https://www.semanticscholar.org/paper/Intellectual-Capital-and-Corporate-Governance-in-Suroso-Widyastuti/806a1cae5c4fcb416d36e0330f718c77d2e26b79.

Sánchez-Sánchez, A., Espinoza-Morales, F., Quiroz-Campas, CY, Sandoval-Vázquez, FR,

Carreón-Guillen, J., Bustos-Aguayo, JM, García-Lirios, C., & Meriño- Cordoba, VH. (2022). Meta-analysis of perceptions of occupational risks in the COVID-19 era. *Changes and Stays, 13*(1), 312-326. Retrieved from https://revistas.uis.edu.co/index.php/revista cyp/article/view/13328.

Sandoval-Vázquez, F., Juárez Nájera, M., Bustos-Aguayo, J., & García Lirios, C. (2022). Confirmatory model of environmental expectations in the COVID-19 era. *Journal of Academic Research Without Border: Division of Economic and Social Sciences,* (37). https://doi.org/10.46589/rdiasf.vi37.442.

Smuda, M. (2019). Corporate governance vs management of the intellectual capital of banks: Structural equation modeling (SEM). *International Journal of Management and Economics, 55*(4), Pages 319-330, eISSN 2543-5361, https://doi.org/10.2478/ijme-2019-0022.