Operational Financial Performance In The Coal Sector, A Frontier Context

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Abstract

The research work on the operating finances, solvency and profitability of the coal sector in the Norte de Santander Department of Norte de Santander, analyzes the financial management factors that allow maintaining an adequate working capital management. The participation in the creation of jobs and in the royalties that support the economy at regional level supports the importance of the study. The objectives were: To relate operational finances, solvency and profitability of the coal mining industry in Norte de Santander and to propose strategic financial guidelines to help the coal mining sector in Norte de Santander. A descriptive correlational research was carried out with a documentary and field design. With the support of businessmen of the sector, critical factors that affected the financial management of the sector were identified. Between the turnover of accounts receivable and accounts payable there is a mismatch between accounts payable and accounts receivable; this led to accounts receivable being financed with non-operating resources, hence the need for operating funds.

Keywords: Operational finance, frontier context, coal sector

1. Introduction

1.1.   *Financial analysis*

Financial analysis according to (Alvarado Chacín, 1999) is a process of analysis that consists of applying a set of analytical techniques and tools to the financial statements to derive a series of measures and relationships that are meaningful and useful for decision making in order to evaluate the current and past

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financial position of the company, as well as the results of its operations, with the basic objective of determining, in the best possible way, an estimate of future position and results (Musons, 2005; Uribe, 2010). Therefore, the essential function of financial statement analysis is to convert data into useful information, which is why financial statement analysis must be basically decisional.

It also raises the following questions:

-What has been the evolution of the company's results?

- What are the future prospects for its evolution?

- Does the earnings trend represent growth, stability or decline?

- Is there any significant trend variability?

- What is the short-term financial position and what factors are likely to affect it in the near future?

Five main areas of interest are noted:

-The company's asset structure

The company's working capital and short-term liquidity

-Cash flow

-Economic results of operations

-Performance and profitability

1.2.   Financial indices

It is important to note that, in all cases of financial ratio analysis, an isolated ratio is as useless, or even worse, as financial statements, since it provides little or no information (Henry Orlando, Marvin Vladimir, et al., 2022). He argues that financial ratios are really useful if they are calculated for a series of years, allowing averages and trends to be determined; and even better, if they can be compared with different companies in the same or similar industry as the one being analyzed(Gonzáles Mendoza et al., 2022; Henry Orlando, Wlamyr, et al., 2022). He comments that the financial ratios or indexes are nothing more than relationships established between the figures of the financial statements to facilitate their analysis and interpretation, and indicates that through them, trends, seasonal variations, cyclical changes and irregular variations that may occur in the figures of the financial statements can be detected(Albornoz Silva et al., 2017).

Depending on the orientation given to the calculation of the financial ratios, they can be divided or grouped into four major groups (liquidity, leverage, activity and profitability), which are analyzed below(de Galicia, 2010; Inciarte, 2008; Nava & Martínez, 2010).

2. Method

In relation to the methodological framework, this chapter defines the level and type of research, the universe or population, the sample, the instruments and techniques for data collection and analysis. Al

respect (Balestrini, 2002) states that "the methodological framework is intended to situate in the research language, the methods and instruments that will be used in the proposed research, from the location about the type of study and the research design" (p.126).

2.1.   Research Level

The level of research indicates the degree of depth with which the study will be carried out and indicates that it may be exploratory, descriptive or explanatory. For (Arias, 2006) "descriptive research consists of the characterization of a fact, phenomenon, individual or group, in order to establish its structure or behavior", the author also indicates that correlational research is to determine the degree of relationship or association (non-causal) existing between two or more variables.

For the reasons described above, the research was framed as a descriptive and correlational research, since it will relate the operational finances, solvency and profitability of the coal sector of the Norte de Santander Department in Norte de Santander.

2.2.   Research Design

Research design is defined as the approach and strategy adopted by the researcher to develop the work and achieve the objectives set.

According to (Arias, 2006), the research design is classified as follows: Documentary Research, Field Research and Experimental Research (Documentary research refers to those investigations in which "it is a process based on the search, recovery, analysis, criticism and interpretation of secondary data, i.e., those obtained and recorded by other researchers in documentary sources: printed, audiovisual or electronic" (p.27).

He also explains that field research is (Hernández Sampieri et al., 2019) "that which consists of collecting data directly from the subjects under investigation, or from the reality where the facts occur (primary data), without manipulating or controlling any variable, i.e. the researcher obtains the information, but does not alter the existing conditions." (p.31).

According to the above, the research was proposed as a documentary research for the analysis of financial and field information, requesting the support of experts in the area to know their opinions regarding the analysis of the environment that impacts the coal sector of the Norte de Santander Department of Norte de Santander.

2.3.   Population

For (Estupiñan Roa et al., 2022) "a population is determined by its defining characteristics, that is, it is the totality of the phenomenon to be studied in which the population units have a common characteristic, which is studied and gives rise to the research data" (p.92). (p.92). While for (Arias, 2006), "the population is a finite or infinite set of elements with common characteristics for which the conclusions of the research will be extensive. This is delimited by the problem and the objectives of the study" (p.81).

The population in this study was determined by the companies in the coal sector in the department of Norte de Santander, which report to the Superintendence of Companies attached to the Ministry of Industry and Commerce of the Republic of Colombia and which are related to the Association of Coal Entrepreneurs of Norte de Santander (ASOCARBON).

2.4.   Sample

Since the population is small, a sample is not selected and we work with the entire population, i.e. a census will be applied. The census is by definition a procedure that allows obtaining primary information and covers all population units, it can be periodic, sporadic or one-time, it is used for different populations, both human, animals and objects.

2.5.   Data Collection Techniques and Instruments

For (Hernández Sampieri et al., 2019) when referring to this point they indicate that collecting data involves three activities closely linked to each other: First, selecting a measurement instrument from those available in the study of behavior or developing one they point out that the instrument must be valid and reliable, because otherwise it should not be based on its results. The second step is to apply that measurement instrument and finally to prepare the measurements obtained so that they can be analyzed correctly.

(Arias, 2006) mentions that "data collection techniques are the procedures or particular ways of obtaining information" (p.67).

To analyze the financial information, tables were designed to classify the companies' data. This information was considered as a primary source, and the information provided by state entities or the sector's guilds was taken as secondary sources.

For the field study, the survey technique was used, using the questionnaire as an instrument.

2.6.   Data Processing and Analysis Techniques

The research was supported by the documentary analysis technique with the purpose of knowing and investigating the relationship between operating finances, solvency and profitability of the coal sector in the Department of Norte de Santander.

Afterwards, the data was classified and organized and a descriptive analysis was carried out in order to characterize the behavior of the variables. For the analysis and data processing, the tools of the Microsoft Office® Excel program were used, which allowed calculating the statistical correlation relations between the variables under study.

Supported by the opinion of the sector's businessmen, we inquired about financial management in order to develop the proposal and provide financial guidelines that are expected to help optimize financial management in the sector under study

3.   Results

Operational finance refers to the financing of the company's current operations. It refers to the financing of current assets or current assets. It is related to the operation of the business, what the business needs on a day-to-day basis. The operating cash flow needs (OCF) is a financial concept that gives an overall picture of the volume of financing needs caused by the operations, and can be defined as:

NOF = Operating current assets - Operating short-term liabilities.

3.1.   Composition of the active

In the development of this objective, the component items of current assets and current liabilities were analyzed. Table 1 shows the consolidated balance sheet of the sector's assets in the study period.

**Table 1.** Assets of the Coal Sector of the Department of Norte de Santander, period 2006- 2009

	PERIODS			
	2006	**2007**	**2008**	**2009**
ASSETS				
CURRENT ASSETS				
1105 Cash	0,27	0,96	0,67	0,56
1110 Banks	0,85	5,06	2,76	3,60
1120 Savings Accounts	5,52	1,44	4,65	1,14
11 SUBT. CURRENT ASSETS	6,64	7,47	8,08	5,32
12 CP INVESTMENTS	0,54	0,84	2,25	9,10
1305 Trade accounts receivable	27,36	15,65	2,66	2,53
1315 Accounts Receivable from Head Office	-	-	30,77	-
1325 Accounts Receivable from Partners and Shareholders	0,85	0,06	0,03	0,55
Shareholders	1,55	8,26	28,79	8,07
1330 Advances and Advances	-	0,01	0,01	-
1335 Deposits	0,11	0,16	0,07	0,06
1340 Pledges of Purchase and Sale	0,11	0,08	0,01	0,01
1345 CP Receivables	5,74	3,38	2,70	3,92
1355 Antic Taxes and Taxes or Balances in	0,03	0,01	0,05	0,03
In Favor	0,80	0,57	0,38	0,61
1360 Claims (CP)	0,29	6,17	0,78	0,78
1365 Accounts Receivable Workers	0,06	0,06	0,11	0,47
(AP)	36,88	34,42	66,36	17,01
1370 Loans to individuals	-	-	-	23,10
1380 Sundry Debtors (CP)	1,18	0,93	0,34	0,15
13 SUBT. ACCOUNTS RECEIVABLE CP	0,69	16,51	1,45	0,85
1405 Raw Materials	-	-	-	0,09
1425 Crops under development	-	0,08	-	0,26
1430 Finished Products	1,87	17,52	1,79	24,45
1435 Merchandise Not Manufactured by the Company 1455 Materials, Spare Parts and Accessories	3,36	3,13	1,44	0,93
14 SUBT. INVENTORIES	-	0,24	0,18	0,12
1705 Prepaid Expenses CP	3,36	3,37	1,62	1,05
1710 CP Deferred Charges	49,30	63,61	0,11	56,93

Based on the information presented in the table above, figure one and table two show the composition of the assets in the sector under study.

Table 2. Composición de los activos.

	Total non-current assets	Total assets
2006	50,7	49,3
2007	36,39	63,61
2008	19,89	80,11
2009	43,07	56,93

Figure 1. Composition of the coal sector assets of the Department of Norte de Santander 2006-2009
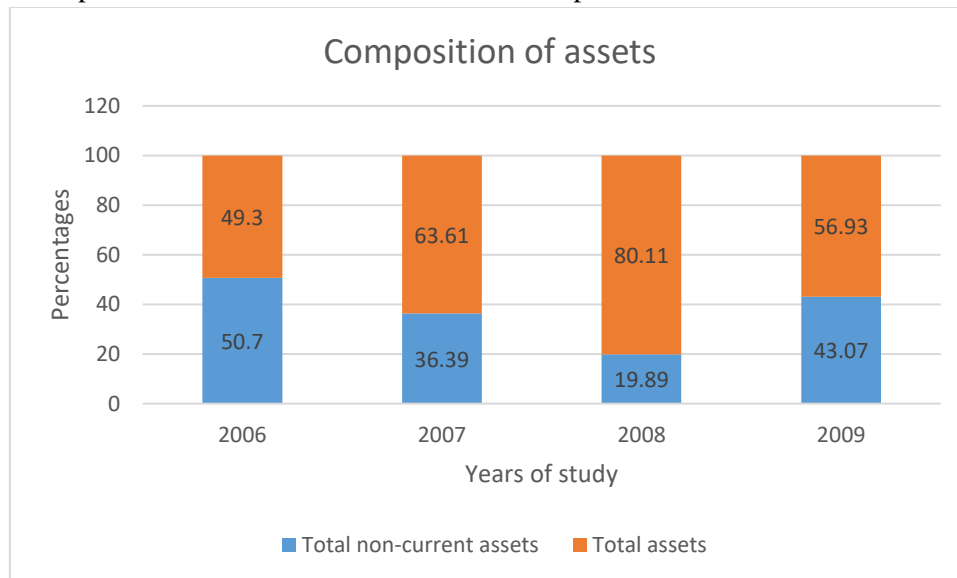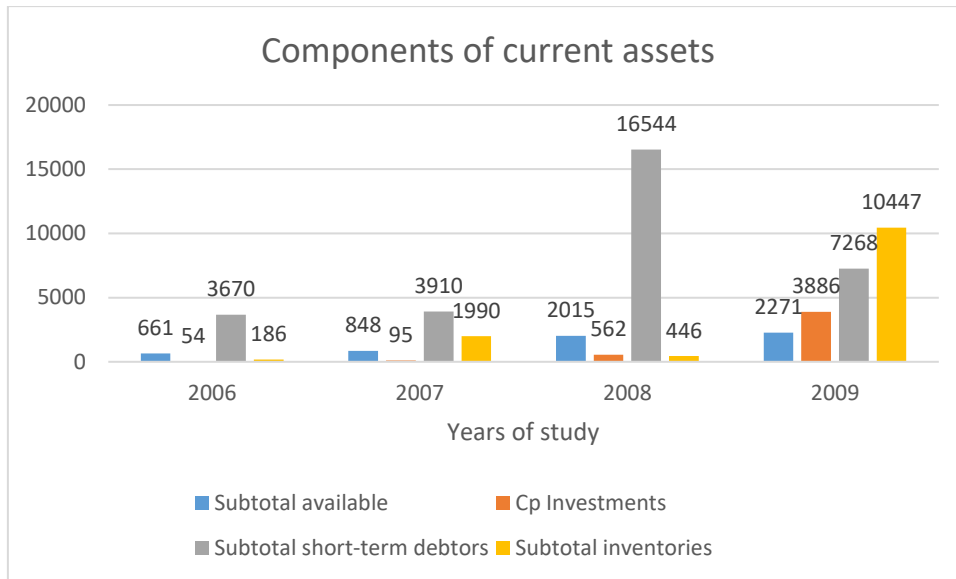

It was observed that current assets have a slightly higher weight than non-current assets in the structure. This corresponds to the recommended structure in a commercial company where it is suggested that the weight of current assets be greater than non-current assets. Figure two below shows the breakdown of current assets in each year of the study.

Table 3. Components of current assets

	Subtotal available	Cp Investments	Subtotal short-term debtors	Subtotal inventories
2006	661	54	3670	186
2007	848	95	3910	1990
2008	2015	562	16544	446
2009	2271	3886	7268	10447

Figura 2. Componentes del activo corriente

Components of current assets

It was detailed that short-term debtors have maintained the greatest weight in the conformation of current assets. It is observed that in 2008 debtors presented their highest volume with 66.36% of participation and inventories their lowest value with 1.79%. It is noteworthy that in 2009 inventories rose to 24.45% of current assets, this could be explained by the increase in sales between 2008 and 2009, it was also observed that debtors fell to 17.01% of participation, while the available practically remained the same when comparing 2009 with respect to 2008.

3.2.   *Composition of liabilities*

Table 4 shows the balance of liabilities for the sector during the study period.

Table 4. Liabilities of the coal sector in the Department of Norte de Santander 2006-2009

LIABILITIES	2.006	2.007	2.008	2.009
21 FINANCIAL OBLIGATIONS (CP)	311.574	591.768	557.547	1.671.591
22 SUPPLIERS	631.805	180.985	1.153.420	2.081.520
2310 To Parent Company (CP)			14.722.427	2.897.118
2315 To related companies (CP)			687.777	
2335 Costs and Expenses payable CP	190.547	3.917.806	126.736	1.089.043
2350 Royalties payable CP			17.613	1.890
2355 Payable to Shareholders or Partners (CP)				3.322.599
2360 Dividends or Profit sharing payable (PA)	214.718	216.722		
2365 Withholding at Source	29.354	21.863	39.346	74.272
2367 Withholding Sales Tax	12.710	20.401	14.210	13.069
2368 Industry and Commerce Tax Withheld	932	1.787	3.011	3.285
2370 Withholdings and payroll contributions 2380 Sundry creditors (CP)	127.354	113.878	139.444	190.467
2380 Sundry creditors (CP)	83.097	93.489	103.017	794.048
23 SUBTOTAL SHORT-TERM ACCOUNTS PAYABLE	658.712	4.385.946	**15.853.581**	**8.385.791**
24 TAXES LEVIES AND FEES	440.965	318.951	297.034	921.294
25 SHORT-TERM LABOR OBLIGATIONS	145.660	114.599	145.227	275.845

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2610 For Labor Obligations			583	
2615 For Tax Liabilities	387.149			
26 SUBTOTAL ESTIMATED LIABILITIES AND PROVISIONS	387.149		583	
2805 Advances and Advances Received (CP)			169.231	481
2810 Deposits Received (CP)			605	
2815 Revenues Received for Third Parties (CP)	18.740	6.224	19.021	19.154
28 SUBTOTAL OTHER SHORT-TERM LIABILITIES	18.962	7.155	188.857	19.635
SUB TOT. CURRENT LIABILITIES	**2.594.827**	**5.599.404**	**18.196.249**	**13.355.676**
21 FINANCIAL OBLIGATIONS (LP)	292.315	317.230		2.775.433
22 SUPPLIERS (LP)				317.556
23 SUBTOTAL LONG-TERM ACCOUNTS PAYABLE	189.266	312.520	323.328	2.239.286
27 SUBTOTAL LONG-TERM DEFERRED LIABILITIES				11.377.099
SUBTOT. NON-CURRENT LIABILITIES	**481.581**	**629.750**	**323.328**	**16.709.374**
TOTAL LIABILITIES	**3.076.408**	**6.229.154**	**18.519.577**	**30.065.050**
31 SUBTOTAL SHAREHOLDERS' EQUITY				
32 CAPITAL SURPLUS SUBTOTAL				4.780.557
33 RESERVES	380.076	499.045	550.758	700.734
34 REVALUATION OF SHAREHOLDERS' EQUITY	1.185.327	1.444.062	1.431.124	1.579.158
36 RESULTS FOR THE YEAR	1.669.970	-1.085.812	1.164.694	139.180
37 RESULTS OF PREVIOUS YEARS	2.060.320	2.375.752	1.011.316	2.124.585
38 REVALUATION SURPLUS	858.320	809.213	1.024.863	482.194
0 TOTAL SHAREHOLDERS' EQUITY	6.872.703	5.130.950	6.409.445	12.654.165
0 TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	**9.949.111**	**11.360.104**	**24.929.022**	**42.719.215**

Table 5 and Figure 3 show the composition of the liabilities of the sector under study for the years 2006-2009.

Table 5. Composition of liabilities

	Total equity	Subtotal non-current liabilities	Subtotal current liabilities
2006	69,08	4,84	26,08
2007	45,17	5,54	49,29
2008	25,71	1,3	72,99
2009	29,62	39,12	31,26

Figure 3. Composition of liabilities
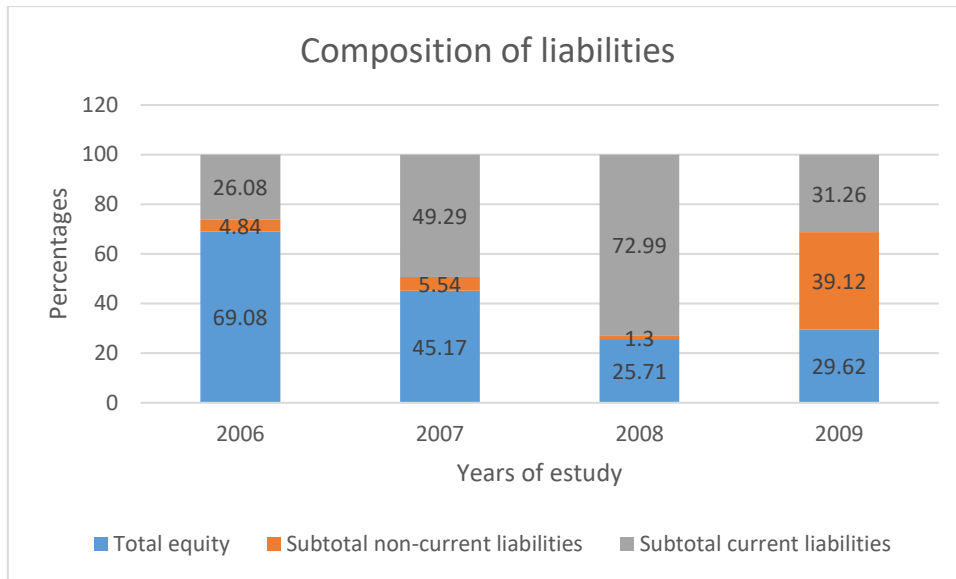
The financial structure of the sector was transformed from being financed by the shareholders in 2006 with 69.08% to a participation of 29.62% in 2009. Current liabilities went from 26.08% in 2006 to 31.26% in 2009, having a weight of 72.99% in 2008. Non-current liabilities increased from 4.84% to 39.11% in 2009. The weight of current liabilities increased the perception of risk in the sector, this figure when compared to the composition of assets where debtors presented the highest level showed how operating finances move, since it is evident that accounts receivable were financed by supplier credit.

Table 6. Balance sheet structure of the sector (Based on 100% of total assets)

	Total current assets	Total non-current assets	subtotal current liabilities	subtotal non-current liabilities	Total equity
2006	49,3	50,7	26,08	4,84	69,08
2007	63,61	36,39	49,29	5,54	45,17
2008	80,11	19,89	72,99	1,3	25,71
2009	56,93	43,07	31,26	39,11	29,62

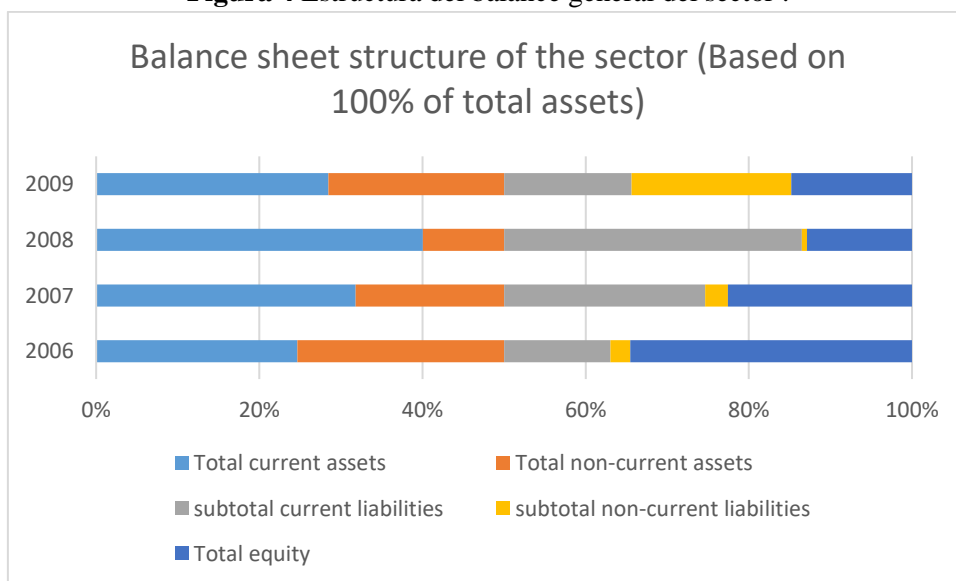**Figura 4** Estructura del balance general del sector .

Figure 4 shows how the structures of assets and liabilities moved in the coal sector in the Department of Norte de Santander during the period studied. It was determined that current assets predominate over non-current assets and in liabilities it was found that equity has decreased in its participation and that for the year 2009 the weight of current liabilities decreased by approximately 50% and non-current liabilities became the component with the greatest weight in the financial structure.

4. Discussion and conclusions

When characterizing the behavior of the operating finances, it was observed that current assets have a higher percentage weight than non-current assets in the asset structure of the sector. This conformation of structure corresponds to a commercial company.

When analyzing the current asset items, it was found that short-term debtors maintained the greatest weight in the current assets structure during the period studied. In 2009, inventories significantly increased their weight in current assets, which could be explained by the increase in sales between 2008 and 2009, and it was also observed that the available assets remained practically at similar levels in the last two years.

The financial structure of the sector was transformed and went from being financed by shareholders in 2006 with 69.08% to a participation of 29.62% in 2009. Current liabilities went from 26.08% in 2008 to 31.26% in 2009, with a weight of 72.99% in 2008. Non-current liabilities increased from 4.84% to 39.11% in 2009.

References

Albornoz Silva, M. J., Ramírez Ramírez, A., Gomez Mantilla, A., Rueda Barrios, G. E., Cadrazco Suárez, M. A., Fernández Aranda, H. armando, García Gómez, A. M., Luna Pereira, H. O., Arévalo Ascanio, J. G., Cabra Arango, G. E., Mujica Granados, C., Ordóñez Santos, M. L., Oliveros Contreras, D., Giraldo Pacheco, J. E., Mayerly Suárez, J., Leuro Casas, G. D., & Anchicoque Cadena, J. P. (2017). *Perfil Emprendedor del Estudiante de las Facultades de Administración, adscritas al Capítulo Oriente Ascolfa* (1st ed.). Ediciones Universidad Simón Bolívar.

Alvarado Chacín, N. (1999). The execution of the amplified mother-infant program in Zulia State and the attitude of the beneficiaries | La ejecución del Programa Ampliado Materno-infantil en el Estado Zulia y la actitud de sus beneficiarios. *Revista Venezolana de Gerencia*, *4*(9), 115–132.

Arias, F. (2006). El Proyecto de Investigación: Introducción a la. In *Metodología Científica. Quinta Edición*.

Balestrini, M. (2002). *Como se elabora el proyecto de investigación* (2nd ed.). BL Consulltores y Asociados.

de Galicia, X. (2010). Financial execution of 2008 annual payment of the operational program feder galicia 2007-2013 | Ejecución financiera de la anualidad 2009 del programa operativo feder galicia 2007-2013. *Revista Galega de Economia*, *19*(2).

Estupiñan Roa, N., González Mendoza, J. A., & Luna Pereira, H. O. (2022). *Deserción, Permanencia y Graduación en la Universidad Francisco de Paula Santander* (1st ed.). Ecoe Ediciones.

Gonzáles Mendoza, J. A., Riaño Solano, M., & Luna Pereira, H. O. (2022). *Competencias Gerenciales de la Industria Hotelera de Cúcuta* (1st ed.). Ecoe Ediciones.

Henry Orlando, L.-P., Marvin Vladimir, D.-P., & José Ivan, L.-P. (2022). Impacto Of The Manufacturing Sector In The Fase Of The Socioeconomics Crisis Case: Colombia-Venezuela. *Journal of Language and Linguistic Studies*, *18*(4), 126–133. www.jlls.org

Henry Orlando, L.-P., Wlamyr, P.-A., & Marvin Vladimir, D.-L. (2022). Application Of International Financial Reporting Standards (Niif) In Smes Latin American Borders Case Colombia Venezuela. *Journal of Language and Linguistic Studies*, *18*(3), 245–256. www.jlls.org

Hernández Sampieri, Roberto., Fernández Collado, C., & Baptista Lucio, M. del P. (2019). *Metodología de la Investigación* (Quinta edición). Mc Graw Hill.

Inciarte, J. R. (2008). Spanish financial sector: The santander case | El sector financiero español. 25 años de transformación. Caso Santander. *Universia Business Review*, *SPEC. ISSU*, 30–39.

Musons, J. I. L. (2005). Operational risk management in financial institutions: A dead-end journey | Gestión del riesgo operativo en las entidades de crédito: Un camino sin retorno. *Cuadernos de Gestion*, *5*(1), 53–78.

Nava, A. R., & Martínez, F. V. (2010). Indicators of profitability and operational efficiency of the banking commercially in Mexico | Indicadores de rentabilidad y eficiencia operativa de la banca comercial en México. *Problemas Del Desarrollo*, *41*(161), 165–191.

Uribe, E. O. (2010). Foreword | Presentación. *Academia Revista Latinoamericana de Administracion*, *45*.