

EVOLUTION OF EMPLOYMENT AND GENDER, CURRENT PERSPECTIVE IN THE CUNDIBOYACENSE REGION BOYACÁ-CUNDINAMARCA). PERIOD (2020-2022)

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Abstract

Job creation is a subject that fascinates various researchers, its results depend on the behavior of relevant variables, the actions of world economic agents and economic policies in any order. In recent years, decent jobs obtained in formality have lost importance, giving way to non-decent work provided in informality, having an impact on the generation of employment and equity between men and women, with marked differences in salary and working conditions, despite the constant conventions established by the International Labor Organization (ILO). The research focuses on deepening and updating the results obtained in the works of (Moreno, 2016), on employment with gender equality, in the geographical space of eastern Colombia in municipalities between 100 and 200 thousand inhabitants included in the departments of Boyacá, following the methodology established by the United Nations, carried out in different periods of time during the years 2020, 2021 and 2022, the latter period with restrictions and skepticism about the effects of the pandemic. It is concluded that a greater asymmetry was generated between formal and informal employment with an increase in the loss of wages and conditions for women.

Keywords: Employment, Equity, Formality, Informality.

1. INTRODUCTION

The economic and social events presented in the last five (5) years due to global macroeconomic adjustments with new scenarios of power of some powers, generated commercial confrontations between the United States and China, and for the control of oil prices in a fissured pact between Russia and the Arab countries (Saudi Arabia). This condition produced a notable loss of growth in the dominant economies and in the same way a considerable impact on emerging and developing economies, together with this, the effects of the so-called COVID-19 in December 2019, which spread with great speed from China to all parts of the global village, aggravated the economic and social



situation in all countries (Caballero Argaez and Rodríguez 2020). Global Effects and Different Economic Reforms in Colombia (Argáez and Rodríguez 2023).

Employment, one of the variables most affected by the loss of millions of jobs in the world, has caused a decrease in the income of people dependent on a salary, who carry out different activities of production of goods and services, and others have been forced to submit to new working conditions by carrying out less dignified activities different from those previously carried out in order to maintain some income. thus increasing informal employment and gender inequality. (ILO 2022)

Gender equity within the ILO seeks to guide elements for the formalization of decent, well-paid, productive work carried out in optimal and dignified conditions of the human being; in the eyes of the ILO, gender equity is a decisive element in terms of activities related to the four strategic objectives of the ILO: 1) To promote and comply with standards and fundamental principles and rights at work; 2) Generate greater opportunities for women and men to have a decent job and income; 3) Improve the coverage and effectiveness of social security for all; 4) Strengthen tripartism and social dialogue (OIL 2009, ILO 2014).

For the study developed, it is based on the research dynamics of years ago whose origin is based on the work of (Moreno 2016, MORENO, CANO et al. 2019), with the purpose of deepening the variables related to employment in its formal and informal modalities and with special attention to gender equity and its behavior in eastern Colombia, which motivates a more in-depth investigation of the effects on employment and gender equity from the new scenarios of the world order in economic matters, social and health.

The research contribution will allow us to continue deepening with the analysis of more variables and their behavior in other areas of the country and the Latin American region. Obtaining the results from the methodology expressed by the ILO, (ECLAC 2012, DANE 2021) and applied for the Colombian case by the National Department of Statistics (DANE) the surveys and interviews were combined in a physical and telephone sweep, in turn, interviews based on the qualitative method were incorporated under the remote modality, seeking to eliminate possible errors that occurred (Baptista Lucio, Fernández Collado et al. 2006, Baptista, Sampieri et al. 2006)

The research will allow to identify in a specific way the situation that has been occurring in this area and in the municipalities under study, on the other hand, it also leaves great lessons to the three (3) research groups that were actively linked, defying all the inconveniences that occurred in the period of applicability of the instruments.

2. METHODOLOGY

The study area includes the eastern Colombian area, corresponding to the departments of Boyacá, Cundinamarca, a border region with the neighboring country of Venezuela and of great importance for being a road corridor connected to the capital of the country. In addition, it is a supplier of agricultural and livestock products, with a promising tourist and industrial development that makes it an attraction for investors and visitors.

For this reason, the study focused on municipalities whose population is within the range of one hundred thousand and two hundred thousand inhabitants (See municipalities in the section of the results), however, for the National Department of Statistics (DANE), these are not considered important, a decision that directed the research seeking to obtain data through primary sources in order to find the answers to the research question oriented to the generation of the evolution of employment and gender equity. The result produces the delivery of new data, which are updated from the investigative work in 2016, based on the lack of statistics by the aforementioned agency; However, the research project focused on obtaining updated data and aimed at other variables different from those obtained in previous studies with greater participation of new research groups. To find the different conceptual frameworks applied to labor market indicators, the recommendations issued by the (ILO) are originated, to classify the population of each of the study variables, according to the concepts and definitions of the labor force established by the International Conference of Labor Statisticians (ICLS), of the Office of the International Labor Organization in 1983 and its updates in 2023, where the theoretical and conceptual framework for the different variables

of the labor force (employment, unemployment and inactivity), concept and definition of each variable, reference periods, main activity, rules of priority of the variables, etc., was established and standardized, and also introduced the differentiation of the population (Negrete Prieto and Ramírez Reynoso 2015).

Table 1. Great Integrated Household Survey - Eastern Colombia

DEPARTMENTS AND MUNICIPALITIES	NUMBER OF PEOPLE SURVEYED PER HOUSEHOLD	NUMBER OF HOMES SELECTED	URBAN HOMES	HOUSING
BOYACÁ				
Tunja	551	170	40.850	38838
Duitama	308	110	24.997	25177
Sogamoso	322	115	27.082	26255
CUNDINAMARCA				
Facatativá	315	105	26.077	24032
Fusagasugá	280	100	23.985	22915
Zipaquirá	248	99	23.530	22561

Fountain: Authors' elaboration based on surveys, following the methodology of (Statistics 2006, Statistics-DANE 2023, ILO 2003) (ILO, 2018)

The period of application of the instrument in urban areas was developed in three stages for the periods 2020, 2021 and 2022. In 2020 in the months of October to December, in 2021 in June, July, August and September and for the year 2022 in the months of September, October and November (DANE 2021)

The study is initially exploratory in nature, since by examining any research that is the object of little study where the researcher has previous knowledge, it allows him to specify it to expand to other fields (Sampieri, Collado et al. 2006, Moreno 2016), in turn, is explanatory because through the investigation of the problem that is addressed, the results provide new data for the analysis of the phenomenon posed. At the same time, it is descriptive since there are several aspects that are auscultated, among them, economic decisions that allow determining the impact on the generation of decent or indecent employment, observing gender equity (Baptista, Sampieri et al. 2006).

Secondary sources supported by the available literature were used by searching Scopus¹, and governmental and non-governmental institutions, multilateral organizations, and academics.

The analysis of the reliability and intentionality of the source is part of the research process for its development, in the first stage the Nvivo software was used for qualitative research and bibliographic exploration with the Scopus search technique. In the second stage, regarding the primary source, the statistical software SPSS and Statgraphics Centurión were used to consolidate the respondents' data.

3. RESULTS

Economic scenario

In the last five (5) years, the Colombian economy has slowed down markedly due to several internal factors and external shocks. In the domestic case, due to the reduction in productive capacity in imports of agricultural products, the decrease in the level of consumption and the constant social protests due to nonconformity in the loss of purchasing power (Argáez and Rodríguez 2023). In the studies supported by (Soto 2017) and (Molina-Rodríguez and Quiroz-Quiroz 2022), it is established that in the external field, the growing devaluation of the currency against the dollar and the vertiginous reduction of international oil prices close to 70%, generated the fall in the terms of trade

¹ (equity AND of AND gender AND in Colombian AND companies) OR (gender and equity AND en AND colombiano AND empresas) AND (LIMIT-TO (SUBJAREA, "SOCI")



that Colombia faced from the second half of 2019 to the third quarter of 2021, therefore, in ECLAC studies, it is inferred that the behavior of the Gross Domestic Product (GDP) in the last two years produced a decrease in domestic demand and public spending, an essential element for economic growth (Titelman 2023)

The different variables indicated above establish the degree of impact on the economic activities of the most dynamic productive sectors in Colombia and its regions, impacting companies, job creation, income level, unemployment, formal and informal economies and the asymmetry of the gender of production and remuneration. At the regional level, this national economic situation does not escape the departments of Boyacá, Cundinamarca, characterized by a diversity of agricultural sectors and little industrial fabric, with the presence in the area of family businesses, microenterprises and small enterprises (MSMEs), which represent 90% according to recent reports from the chambers of commerce of the region (Fajardo and Ladino 2019) (from Bogotá 2020). It is specified that the slowdown of the departmental economies in the last two years is decreasing, with a negative GDP in dynamic sectors such as manufacturing, construction and commerce, where these represent on average 53% and also occupy a number of jobs close to 70%, as corroborated by the reports of the chambers of commerce (from Bogotá 2020) (Fajardo and Ladino 2019). (Guzmán Vásquez and Trujillo Dávila 2022).

The Bogotá - Cundinamarca region generates more than 40% of Colombia's services in financial and insurance, artistic, entertainment and other services, information and communications, and real estate activities; 30% in public administration and defense activities, professional, scientific, technical and trade activities, repairs, restaurants and hotels; 14% in other activities with the exception of mining and quarrying, an activity with a marginal participation in the District (from Bogotá 2020)

In the case of the department of Boyacá, the agriculture, construction and commerce sectors showed a downward behavior, it is then established that the three economies of eastern Colombia did not contribute to the production of goods and services, which affected the variables of income, employment, formality and informality with direct repercussions on gender equity with an inflection similar to the national situation (DANE 2021)

In this regard, year after year, the relationship between the generation of employment in the formal and informal sectors is affecting the supply of decent employment, with repercussions on gender equality. Despite the different resolutions issued by the ILO, closing this gap will depend on all economic actors and their effective actions, although the state through the government is a main actor, the rest must be linked to this new scenario that is developing and that is being worsened by the appearance of the COVID-19 virus (Argáez and Rodríguez 2023), the different local economic policies (Guzmán Vásquez and Trujillo Dávila 2022)

Employment generation and gender

There are prominent elements to highlight that make informality have these results with respect to Latin America, the low levels of investment feed back into the low rates of labor productivity (PL) and the strong correlation with Total Factor Productivity (TFP), its behavior has historically been negative on average, with the exception of some periods, including again that of the commodity supercycle and global bonanza (ILO 2019) (ECLAC 2020), and the imminent declines in human capital levels and the lack of infrastructure, make the levels of Foreign Direct Investment (FDI) unattractive (ECLAC, 2019).

For the LAC region, the generation of employment in recent years showed a significant distance from formal to informal employment by 54%, on the other hand, in terms of gender equality there are greater opportunities in a considerable percentage in favor of men compared to women; A trend of 12 percentage points (PPS) is expected to decrease to the detriment of women according to the behavior marked in recent years of this difference, due to greater vulnerability of performance and confidence in the work and activities of the different sectors (Maldonado and Moriarty 2019) as ratified by the work of (Kimbu and Ngoasong 2016, ECLAC 2019, Farah, Elias et al. 2020). This situation has been aggravated by the effects of the pandemic and global economic effects, causing



the loss of jobs, lower wages, working hours and therefore a lack of social protection in both the formal and informal sectors (Hernández 2020); Due to the current relevance, one of the sectors most affected by the contagion is health, where 72.8% of women indicate that they have been more vulnerable to job loss, less social protection, increased unpaid work, greater exposure to domestic violence and less access to sexual and reproductive health. hence, it has been shown that women perform three times as much domestic work and unpaid work in the home compared to men (ECLAC 2019, Mejía, Cadena et al. 2020).

In 2022, the unemployment rate for women in Colombia was 7.22% higher than for men (ECLAC 2020, p. 6), which can be seen in Gontero's study on the employment rate and gender differences in Latin America (Gontero and Novella 2021) Therefore, working women are more vulnerable to this situation for various reasons, including a greater probability of being informal, less possibility of obtaining remote work at home and holding professional and managerial positions due to distancing and prohibition of movement, producing lower incomes against women in the formal sector (ECLAC 2020, Hevia and Neumeyer 2020).

Gender equity and informality in eastern Colombia.

The economic repercussions at the global, regional and Colombian levels, affected and impacted variables such as informality and gender equity in the generation of employment aggravated by the COVID-19 virus and the consequences of an adjustment in the macroeconomic sector, below, the researchers allow themselves to present the results of the localities under study (See Tables 2, 3 and 4).

Department of Boyacá

The municipalities that support the department's study present activities of commerce and services, metalworking and agribusiness; in the case of Duitama, a historical sector that has stood out is the production and assembly of bodywork, being pioneers at the national and regional level.

Tunja

Informality in the capital of the department of Boyacá increased by 10% in 2022 (65.3%) compared to the first half of 2020 (56.5%), where women reached 53% of work without decent working conditions, despite having a higher level of education than men. Women lost their income from remuneration compared to what they earned in previous years, receiving \$150 in the period under review, that is, \$120 less than what men are paid for labor force. The salary conditions between women and men in terms of security also worsened in their contribution compared to previous years by 14%, compared to the contribution made by men, having an impact on health when they moved to the subsidized regime protected by the state. When they lost their jobs, women stopped contributing to pensions 8% less than men and of the total number of positions occupied, only 40% contributed to the system.

Sogamoso

Informality in the municipality of Sogamoso stood at (73%) by 2022, it expanded by 12% compared to 2020 (61%), employment for women achieved 52% of indecent work, despite the constant preparation that surpassed men at all levels of education. For women, their remuneration was reduced by about 100 dollars than in previous years, since today they reach a remuneration of 120 dollars, that is, 140 dollars less for the payment of the labor force to men. Wage conditions between women and men in social security also decreased by 16% in the 2020-2022 period. Pension contributions make a difference in favor of men by 8%, but for both genders their decrease for this concept was 14%. On the other hand, employers are not complying with the guarantee of affiliation in health and pensions due to the prevailing conditions.

Table 2. Summary of employment, formality, informality and gender - Boyacá

Municipality:	TUNJA										
	Busy		Total health of employed people			Contributions	Education informal workers				Wage remuneration for informal employees
	Informality	Formality	R. Contributory	R. subsidized	Special R	Pension	None	Primary	High school	Superior	
	YEAR 2020										
Men	27,00%	25,70%	34,10%	12,70%	0,81%	26,70%	1,63%	22,57%	17,10%	2,97%	60%
Women	28,3%	19,0%	23,55%	13,05%	0,94%	23,03%	2,35%	24,65%	19,46%	3,04%	40%
	YEAR 2021										
Men	26,3%	22,5%	29,82%	12,52%	0,87%	24,08%	2,05%	22,37%	17,64%	2,86%	61%
Women	32,5%	18,7%	19,55%	13,68%	0,95%	19,80%	2,24%	24,43%	19,26%	3,13%	39%
	YEAR 2022										
Men	31,7%	18,3%	28,64%	12,57%	0,88%	23,11%	1,92%	21,83%	17,26%	2,86%	63,0%
Women	34,8%	15,2%	15,37%	13,73%	0,96%	15,40%	2,10%	23,84%	18,85%	3,12%	37,0%
Municipality:	SOGAMOSO										
	Year 2020										
Men	28,0%	18,5%	30,05%	12,05%	0,87%	22,18%	2,01%	13,34%	29,77%	2,88%	62%
Women	33,0%	20,5%	31,31%	12,95%	0,94%	14,85%	2,16%	14,34%	32,01%	3,09%	38%
	Year 2021										
Men	28,5%	18,0%	25,06%	12,63%	0,88%	22,26%	2,09%	13,04%	29,35%	2,61%	59%
Women	36,0%	17,5%	24,31%	13,57%	0,94%	13,94%	2,24%	14,02%	31,55%	2,80%	41%
	Year 2022										
Men	35,0%	15,0%	23,88%	12,67%	0,89%	21,88%	1,94%	12,86%	28,77%	2,62%	64,00%
Women	38,0%	12,0%	22,13%	13,63%	0,95%	12,13%	2,09%	13,82%	30,93%	2,82%	35,00%
Municipality:	DUITAMA										
	Year 2020										
Men	29,3%	15,2%	24,02%	11,44%	0,50%	22,27%	0,57%	30,43%	13,18%	1,07%	59.3%
Women	36,0%	19,5%	22,23%	13,56%	0,59%	20,85%	0,67%	36,09%	15,63%	1,27%	41%

	Year 2021										
Men	30,0%	18,0%	22,1%	11,5%	0,5%	21,5%	0,63%	30,58%	13,01%	0,98%	58,00%
Women	36,0%	16,0%	20,2%	13,6%	0,6%	20,1%	0,75%	36,26%	15,43%	1,16%	42,00%
	Year 2022										
Men	32,0%	16,0%	21,6%	11,5%	0,5%	21,3%	0,83%	30,90%	13,05%	0,92%	66,00%
Women	38,0%	14,0%	18,2%	13,6%	0,6%	19,4%	0,99%	36,65%	15,47%	1,09%	34,00%

Fountain: Authors' elaboration based on surveys, following the methodology of (Statistics-DANE 2023)

Duitama

Informality in the municipality of Duitama, stood at (70%) for the year 2022, totaling 10% compared to 2020 (60%), Duitama women represented 55% of the total informal employment despite their frequent preparation in educational levels, while their remuneration was more limited than in the other two municipalities of the department. corresponding to 160 dollars less than what is earned by men; At present, their average remuneration is 80 dollars for carrying out their activities in the different economic sectors of the locality, and with respect to social security, it is below 40% in pensions of contributors and only 28% are affiliated to social security, being the municipality most affected by the current conditions. Of the employed people, jobs were accentuated by branches of activity in the informal sector produced in transport 13% on average, commerce, hotels and restaurants 7% and construction 5%. For formal employment, emphasis was placed on transportation, construction with 6% and real estate activities with 4%.

Department of Cundinamarca

The three municipalities that make up the object of study belonging to the department of Cundinamarca are largely dedicated to the agricultural and manufacturing sector, 89% of companies that have less than 10 employees for the study period stand out.

Facatativá

Informality in the municipality stood at (65%) for the year 2022 with an increase of 5% compared to what happened in 2020 (59.8%), the level of labor demand for women reached 51% of work without legal working conditions. In this municipality, the preparation and training of women improved, accentuating at the basic secondary level compared to men; however, their labor income depreciated by 125 dollars and they currently receive 110 dollars, that is, 130 dollars less than what they pay for their labor power to men. Salary conditions between women and men in terms of security also deteriorated by 17% in the 2022-2020 period. Pension contributions make a difference in favor of men by 10%, but for both genders the decrease for this concept was 15%.

Fusagasugá

Of the total number of employed people, informality in the municipality of Fusagasugá for the year 2022 is (68%), grew by 7% compared to 2020 (61%), employment by women in the labor force reached 51% of work in informality. In this municipality, the level of preparation of women was lower at the primary and secondary levels than men, but there is a predominance that there are 3% more of them with a higher level compared to the other gender. Like the other municipalities, the loss of income per factor of production was 104 dollars and today they are paid at 125 dollars, that is, 110 dollars less than what they pay men for their labor force. Salary conditions between women and men in terms of security were also reduced by 14% in the 2022-2020 period. Pension contributions diverge in favor of men by 13%, this concept decreased by 11% for both genders.

Zipaquirá

Of the total number of employed people, informality in Zipaquirá for the year 2022 (65%) rose by 5% compared to 2020 (60%), employment by the productive force of women accounted for 50% of the work in the informal sector. In this municipality, the level of preparation of women was higher than that of men, at all levels of education. The same behavior as the other municipalities of the income received by women, the job loss was around 109 dollars and currently they receive 118 dollars, that is, 106 dollars less than what they pay men for their labor force. Salary conditions between women and men in terms of security were also reduced by 16% in the 2022-2020 period. Pension contributions differ in favor of men by 14.3%, but for both genders the decrease for this concept was 13%.

Table 3. Summary employment, formality, informality and gender region - Cundinamarca

Municipality:	FACATATIVÁ										
	Busy		Total health of employed people			Contributions	Education informal workers				Wage remuneration for informal employees
	Informality	Formality	R. Contributory	R. subsidized	Special R	Pension	None	Primary	High school	Superior	
	YEAR 2020										
Men	28,50%	18,30%	30,10%	12,70%	0,81%	24,70%	1,63%	22,57%	17,10%	2,97%	58,40%
Women	31,4%	20,8%	28,55%	13,05%	0,94%	18,03%	2,35%	24,65%	19,46%	3,04%	41,60%
	YEAR 2021										
Men	29,1%	18,7%	25,82%	12,52%	0,87%	22,08%	2,05%	22,37%	17,64%	2,86%	60,20%
Women	31,8%	20,4%	22,55%	13,68%	0,95%	15,12%	2,24%	24,43%	19,26%	3,13%	39,80%
	YEAR 2022										
Men	32,0%	15,0%	23,64%	12,57%	0,88%	20,37%	1,92%	21,83%	17,26%	2,86%	61,3%
Women	33,0%	20,0%	21,37%	13,73%	0,96%	10,43%	2,10%	23,84%	18,85%	3,12%	38,7%
Municipality:	FUSAGASUGÁ										
	Year 2020										
Men	29,4%	19,0%	30,05%	12,05%	0,87%	29,18%	2,01%	13,34%	29,77%	4,88%	62%
Women	31,6%	20,0%	29,31%	12,95%	0,94%	18,85%	2,16%	14,34%	32,01%	4,09%	38%
	Year 2021										
Men	30,8%	18,7%	26,06%	12,63%	0,88%	26,26%	2,09%	13,04%	29,35%	5,61%	61,50%
Women	33,2%	18,7%	24,31%	13,57%	0,94%	16,94%	2,24%	14,02%	31,55%	5,40%	38,50%
	Year 2022										

Men	33,0%	16,0%	24,88%	12,67%	0,89%	25,88%	1,94%	12,86%	28,77%	5,92%	64.05%
Women	35,0%	20,0%	22,13%	13,63%	0,95%	12,13%	2,09%	13,82%	30,93%	5,82%	35,50%
Municipality:	ZIPAQUIRÁ										
	Year 2020										
Men	28,0%	16,0%	26,02%	11,44%	0,50%	28,27%	0,57%	30,43%	13,18%	1,07%	56%
Women	32,0%	15,0%	24,23%	13,56%	0,59%	22,05%	0,67%	36,09%	15,63%	1,27%	44%
	Year 2021										
Men	29,4%	16,3%	23,1%	11,5%	0,5%	26,5%	0,63%	30,58%	13,01%	0,98%	58,00%
Women	34,9%	19,4%	20,2%	13,6%	0,6%	19,1%	0,75%	36,26%	15,43%	1,16%	42,00%
	Year 2022										
Men	32,4%	16,3%	22,9%	11,5%	0,5%	25,3%	0,83%	30,90%	13,05%	0,92%	61,00%
Women	32,6%	18,7%	17,2%	13,6%	0,6%	12,4%	0,99%	36,65%	15,47%	1,09%	39,00%

Fountain: Authors' elaboration based on surveys, following the methodology of (Statistics 2006, Statistics-DANE 2023, ILO 2003)

The Cundiboyacense region was affected in its economic activity, in all branches of the productive sectors, due to global fluctuations and the effects of the COVID-19 pandemic, and the slowdown of the economy due to inflation, interest rates, among other variables; It was possible to establish that the generation of employment decreased considerably above the national level, and the loss of jobs, income and assigned hours, producing the transfer of people employed in the formal to the informal sector, in self-employed activities, in the street and local. The most dynamic sectors such as commerce and food supply recovered productive activity from the authorization of the national and territorial government. It should be noted that the respondents expressed their dissatisfaction with the measures to help the formal productive sectors and the frequent stalking by the public forces in not letting them work.

According to DANE reports, the employment rate in the department of Boyacá for the years 2022-2020 was reduced to 4.4 pps (55.4% to 51%), resulting in the increase in the unemployment rate by 1.1% (7.5% to 8.6%), and according to the results of the surveys carried out by the work team of this project, unemployment for Tunja, Duitama and Sogamoso² reflected a progressive increase, the city in which the most people ceased their unemployment income was Duitama with 13.4%, while employment suffered a loss of close to 10%.

For the municipalities of Cundinamarca, the loss of jobs was close to 10% and the municipality that suffered the most in the period refers to Zipaquirá with 11%, and the employment rate was on average below 50% for three municipalities; In the department, unemployment grew by 1% (10.1% to 11%). It

² For the municipalities under study: Boyacá departments (Tunja the employment rate fell by 11.3%; unemployment went from 11.3% to 19.1%, Duitama, employment rate decreased 4.3%; increased 8 pps; unemployment 10.6% to 24%, Sogamoso, employment rate fell 2.3% in unemployment from 12.98% to 22%); In Cundinamarca (Facatativá, the employment rate fell by 5% and unemployment increased by 8.5% Fusagasugá, the employment rate decreased by 3% and unemployment increased by 9%; for Zipaquirá, the employment rate lost about 6% and unemployment increased by 10%); following the ILO methodology. In the case of the departments, the figures are up to 2022



can be deduced that the unemployment rate increased in the departments and their municipalities, but with less impact it was generated in the capital cities.

Respondents stated that the average daily income is \$7,000 (2 dollars). 6% of respondents are beneficiaries of a government program³. For the international community, the government presents positive programs and results to mitigate the current scenario (Home , World Cup and for America 2020).

CONCLUSIONS.


The economic impact could not be contained, despite the economic policies established by the governments that, in the case of Colombia, their effects on unemployment reached close to 20%, triggering informality in the different sectors. In the Cundiboyacense region under study, the result of which made it possible to determine a high employment in the informal economy close to 70%, with women being the most affected by this situation, who lost the level of income for their work, forging a wage and working conditions gap of around 40% compared to men, despite the fact that every day they are more trained and more competitive in the labor field.

The result of this study provides updated data for the region in the formal and informal sectors and the ability to offer current statistics that will make it possible to avoid disproportionality and differences in terms of gender, in order to find government actions implementing sectoral policies, in compliance with international agreements on the subject. It also motivates other studies in its field in other national and international spheres where statistics on the subject do not exist.

REFERENCES

- [1] Argáez, C. C. and G. D. M. Rodríguez (2023). Crisis and reforms: the challenges of the Colombian economy in the third decade of the 21st century, Universidad de los Andes.
- [2] Baptista Lucio, P., Fernández Collado, C., & Hernández Sampieri, R. (2006). Research Methodology. McGraw-Hill Interamericana Publishing House, Mexico City.
- [3] Caballero Argaez, C., & Rodríguez, G. D. M. (2020). From the 'end of the century' crisis to that of the 'Coronavirus'. The Colombian economy in the first two decades of the twenty-first century (From the 'End of the Century Crisis' to the 'Coronavirus' Crisis. The Colombian Economy in the First Two Decades of the XXI Century). *The Colombian economy in the first two decades of the twenty-first century (From the 'End of the Century Crisis' to the 'Coronavirus' Crisis. The Colombian Economy in the First Two Decades of the XXI Century)*(May 6, 2020). CEDE document(14).
- [4] Cazumbá, I. P., & Minayo, M. d. S. (2020). Weekly reports on the World Bank, the IMF and the IDB at the Global Response to COVID-19-Reports from May 27 to July 29, 2020.
- [5] ECLAC, N. (2012). Report of the Working Group on Labour Market Indicators.
- [6] ECLAC, N. (2019a). Employment Situation in Latin America and the Caribbean: evolution and perspectives of female labor participation in Latin America.
- [7] ECLAC, N. (2019b). Women's autonomy in changing economic scenarios.
- [8] ECLAC, N. (2020). Report on the Economic Impact of Coronavirus Disease (COVID-19) in Latin America and the Caribbean.
- [9] ECLAC, O. (2020). Latin America and the Caribbean Employment Situation, May 2020. The Future of Work in Latin America and the Caribbean: Old and New Forms of Employment and the Challenges for Labor Regulation. Retrieved from: <http://www.oit.org.pe/1/wp-content/uploads/2020/05/ECLAC-ILO-MAYO2020.pdf>.
- [10] ECLAC (2020a), "Latin America and the Caribbean in the face of the COVID-19 pandemic: economic and social effects", COVID-19 Special Report, No. 1, 3 April, Santiago.

³ The government's emergency mitigation fund (FOME) programs: 1. Families in Action; 2. Social protection for the elderly; 3. Youth in Action, contemplated in legislative decree 659 of May 13, 2020.

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- [11] ECLAC (2020b), "Dimensioning the effects of COVID-19 to think about reactivation", *COVID-19 Special Report*, No. 2, April 21.
 - [12] ECLAC (2020c), "The Social Challenge in Times of COVID-19," *COVID-19 Special Report*, No. 3, May 12, Santiago.
 - [13] DANE. (2021). *Formality and Informality of the 13 main cities* (Formality and Informality Indicators).
 - [14] de Bogotá, C. d. C. (2020). Balance of the economy of the Bogotá-Cundinamarca region 2019. (editorial production).
 - [15] Estadística-DANE, D. A. N. d. (2023). Great Integrated Household Survey, DANE Bogotá, Colombia.
 - [16] Fajardo, H. C., & Ladino, H. S. (2019). SOCIOECONOMIC INDICATORS OF BOYACÁ JURISDICTION OF THE TUNJA CHAMBER OF COMMERCE.
 - [17] Farah, B., Elias, R., De Clercy, C., & Rowe, G. (2020). Leadership succession in different types of organizations: What business and political successions may learn from each other [Article]. *Leadership Quarterly*, 31(1), Article 101289. <https://doi.org/10.1016/j.leaqua.2019.03.004>
 - [18] Gontero, S. and R. Novella (2021). "The Future of Work and Skills Mismatches in Latin America."
 - [19] Guzmán Vásquez, A. and M. A. Trujillo Dávila (2022). "Evolution of corporate governance practices in family businesses: accompaniment of the Bogotá Chamber of Commerce to the business ecosystem."
 - [20] Hernández, R. A. (2020). COVID-19 and Latin America and the Caribbean: the differential economic effects in the region. *Working Papers (IAES, University Institute of Economic and Social Analysis)*(6), 1-50.
 - [21] Hevia, C., & Neumeyer, A. (2020). The perfect storm: COVID-19 in emerging economies. *International Development Policy | Revue internationale de politique de développement*(12.2).
 - [22] Home, (2020) O. COVID-19 in Latin America and the Caribbean: Overview of Government Responses to the Crisis.
 - [23] ILO. (2018). Statistiques sur les relations de travail 20e Conférence internationale (O. I. d. Trabajo, Ed. first edition ed.). (ILO, Genève, 10-19 October 2018 20e Conférence internationale)
 - [24] ILO, O. (2019). Latin America and the Caribbean Labor Panorama 2019 (O. R. d. I. O. p. A. Latina, Ed. First Edition 2019 ed., Vol. Report VI). International Labour Organization. (International Labour Organization)
 - [25] Kimbu, A. N., & Ngoasong, M. Z. (2016). Women as vectors of social entrepreneurship. *Annals of Tourism Research*, 60, 63-79.
 - [26] Maldonado, L., & Moriarty, H. (2019). Engagement of Urban, Pregnant Puerto Rican Women in Health Disparities Research. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 48(6), 683-692. <https://doi.org/https://doi.org/10.1016/j.jogn.2019.09.002>
 - [27] Mejía, L. F., Cadena, X., Delgado, M. E., Gutiérrez, D., Suárez, H., Lara, D., & Díaz, S. (2020). Economic Trend. Fedesarrollo Monthly Report. No. 204.
 - [28] Moreno-Corredor, L. A. (2016). *The current economic cycle and its relationship with economic rights in the Andean community of nations* [Doctoral thesis, Rey Juan Carlos University].
 - [29] Moreno, L. A., Cano, M. A., & Moreno, S. M. (2019). Gender equity in the Colombian Pacific under the conception of formal and informal employment. *Revista Espacios*, 40(20).
 - [30] Molina-Rodríguez, J. C. and D. A. Quiroz-Quiroz (2022). "Recessions, crises and their effects on the main variables of the macroeconomic situation."
 - [31] Mundial, B., & para América, O. d. E. J. (2020). Semi-annual report of the Latin American and Caribbean region: The economy in the time of COVID-19.
 - [32] Negrete Prieto, R., & Ramírez Reynoso, T. (2015). Resolution I of the XIX International Conference of Labour Statisticians and its impact on labour statistics in Mexico. *Reality, data and space. International Journal of Statistics and Geography*, 6(1), 92-131.
 - [33] OIL, O. (2009). Decent work: meanings and scope of the concept Indicators proposed for its measurement.



- [34] ILO. (2014). Evolution of informal employment in Colombia: 2009 - 2013. O. I. d. Labor.
- [35] ILO. (2016). *The ILO and gender equality*. Retrieved 01/12 from <http://www.ilo.org/gender/Aboutus/ILOandgenderequality/lang--es/index.htm>
- [36] ILO. (2003). *Guidelines on a statistical definition of informal employment, adopted by the Tenth International Conference of Labour Statisticians (November-December 2003)*. International Labour Office: 4.
- [37] ILO (2022). "The ILO and Gender Equality." Retrieved 12/2022, 2022, from <http://www.ilo.org/gender/Aboutus/ILOandgenderequality/lang--es/index.htm>
- [38] Sampieri, R. H., Collado, C. F., Lucio, P. B., Valencia, S. M., & Torres, C. P. M. (1998). *Research Methodology* (Vol. 1, pp. 233-426). Mexico City: McGraw-hill.
- [39] Soto, J. J. E. (2017). Situation of the Colombian economy. *Revista del Banco de la República*, 90(1074), 5-28.
- [40] Titelman, D. (2023). "Macroeconomic Policies for Investment and Sustained and Sustainable Growth." *ECLAC Review* 2023(141): 93-112.