

# Impact Of The San José Cooperative On The Social And Economic Development Of The Province Of Bolívar Before And After The Pandemic.

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## Abstract

*The present study aimed to analyze the impact of cooperatives on the socioeconomic development of the province of Bolívar, before and after the COVID-19 pandemic, focusing on the loan portfolios offered by savings and credit cooperatives. A quantitative methodological approach was used, utilizing the R programming language and its RStudio environment for data analysis. The research was based on a descriptive and correlational design, with a representative sample of 25 participating officials selected through stratified random sampling and who were credit advisors. Data were collected through structured surveys, semi-structured interviews, and documentary analysis, and processed using descriptive and correlational statistical techniques. The results highlighted that savings and credit cooperatives have been instrumental in promoting financial inclusion and socioeconomic development in the province, especially in rural areas. However, the pandemic generated significant challenges, such as economic contraction and rising unemployment, which affected cooperatives' ability to maintain their impact. The agricultural and small business sectors were identified as the most benefited by loan portfolios, while the most vulnerable groups, such as women and youth, faced greater access barriers. Furthermore, a positive correlation was observed between democratic participation in cooperatives and improved liquidity and solvency indicators. In conclusion, cooperativism remains a key tool for sustainable and inclusive development in the province of Bolívar, although strategies to ensure greater equity in access to financial services need to be strengthened. It is recommended to promote public policies that support the resilience of cooperatives and foster the inclusion of historically marginalized groups, aligning with the United Nations Sustainable Development Goals (SDGs).*

**Keywords:** Savings and credit cooperatives, impact on the social and economic development of the province, COVID-19 pandemic.

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## INTRODUCTION

Cooperativism, as an economic and social model, has been recognized as a key tool to promote sustainable and inclusive development in various regions of the world (Cevallos-Ramos et al., 2025). This approach, based on principles of democracy, equity and solidarity, has demonstrated its ability to empower communities, foster financial inclusion and contribute to local economic growth (Coba Molina et al., 2020). In the context of Latin America, and particularly in Ecuador, credit unions have played a critical role in providing accessible financial services, especially in rural areas and among historically marginalized populations (Baeza & Sanhueza, 2016). However, the COVID-19 pandemic has tested the resilience of this model, raising questions about its ability to adapt to new realities and continue to drive socioeconomic development in a post-pandemic scenario (Sierra Lara et al., 2024).

The province of Bolívar, located in the center of the country, represents a relevant case study to analyze the impact of cooperativism on local development. Since the 1960s, credit unions have been key players in the province's economy, offering inclusive financial services and promoting savings and credit among their members (Villavicencio & Bismarck, 2013). However, the pandemic has created unprecedented challenges, such as economic contraction, rising unemployment, and the need to adapt financial services to the new demands of the population. In this context, it is essential to evaluate how cooperativism has contributed to the socio-productive development of the province before and after the pandemic, as well as to identify the sectors and social groups that have not been able to benefit from these initiatives (Dutta et al., 2023). The main objective of this scientific article is to analyze the impact of cooperativism on the socio-productive development of the province of Bolívar, with a focus on the credit portfolios offered by savings and credit cooperatives. Through a quantitative methodological approach, it seeks to: 1 diagnose the impact of cooperativism on the socio-productive development of the province; 2 identify the economic sectors that have obtained the greatest benefits thanks to credit portfolios; and 3 to determine the sectors and social groups that have not benefited from these initiatives. In addition, it is proposed to develop strategies that strengthen financial inclusion and equity in access to cooperative services. The relevance of this study lies in its contribution to the understanding of cooperativism as a tool for social and economic transformation, especially in a post-pandemic context. The results obtained not only provide empirical evidence on the impact of cooperatives in the province of Bolívar, but also offer inputs for the formulation of public policies and the improvement of cooperative practices, aimed at maximizing their contribution to sustainable development and poverty reduction. In addition, this work is aligned with the United Nations Sustainable Development Goals (SDGs), particularly SDG 8, which promotes inclusive and sustainable economic growth, employment and decent work for all (United Nations, 2015).

### **Development**

Cooperativism is an economic and social model that is based on principles of democracy, equity and solidarity. According to Arias-Amaguaña et al. (2022) Cooperatives are characterized by their focus on democratic participation, equitable distribution of benefits, and commitment to collective well-being. This model has proven to be especially relevant in contexts of economic inequality and financial exclusion, as is the case in Latin America (Bretos et al., 2018). In Ecuador, cooperativism has had a significant impact on rural and urban development, particularly through savings and credit cooperatives, which have facilitated access to financial services for traditionally excluded populations (Chávez et al., 2021). Prior to the COVID-19 pandemic, cooperatives in the province of Bolívar already played a crucial role in socio-economic development. These financial institutions not only provided access to credit and savings products, but also fostered financial education and economic empowerment for their members (Valarezo Cuenca et al., 2024a). Previous studies have highlighted that cooperatives contributed to economic diversification, job creation and poverty reduction in the region (Alcivar-Moreira & Bravo-Santana, 2020). In addition, their focus on sustainability and social responsibility positioned them as key players in promoting local development. The COVID-19 pandemic represented an unprecedented challenge for cooperativism. According to Franco et al. (2021), cooperatives demonstrated remarkable resilience during the crisis, adapting their services to respond to the urgent needs of their members. In the province of Bolívar, savings and credit cooperatives implemented measures such as debt restructuring, emergency lending and the promotion of responsible savings (Marin et al., 2022). These actions not only helped mitigate the economic impact of the pandemic, but also reinforced the role of cooperatives as agents of positive change in the community. However, the pandemic also highlighted the limitations of the cooperative model. Some studies have pointed out that cooperatives faced difficulties in maintaining their liquidity and financial sustainability due to the decrease in the income of their members and the increase in delinquencies (Carrillo, 2021). In addition, the digitalization of financial services, accelerated by the pandemic, posed a challenge for cooperatives with lower technological capacity, exacerbating inequalities within the sector (Njuguna & Mathuva, 2024a). Cooperativism is aligned with the United Nations Sustainable Development Goals (SDGs), particularly SDG 8, which promotes inclusive and sustainable economic growth, employment and decent work for all (United Nations, 2020). In the province of Bolívar, cooperatives have contributed to these objectives through job creation, the promotion of financial inclusion, and support for productive projects in sectors such as agriculture, crafts,

and tourism (Álvarez-Gamboa et al., 2022). In addition, their focus on environmental sustainability and social responsibility makes them key players in the transition to a greener and more equitable economy (Andrade Montalvo et al., 2025). Financial education is an essential component of the cooperative model. According to Valarezo Cuenca et al. (2024b), credit unions in the province of Bolívar have implemented financial education programs that have improved their members' ability to manage their personal and business finances. These programs have helped reduce financial vulnerability and increase the economic resilience of local communities (Njuguna & Mathuva, 2024b). The digitalisation of financial services has been a topic of increasing importance in the co-operative sector. According to (Jácome, 2023), cooperatives that have adopted digital technologies have been able to improve the efficiency of their operations and expand their reach. However, lack of access to technology and insufficient training have limited the ability of some cooperatives to take advantage of these tools, exacerbating inequalities within the sector. Public policies play a crucial role in strengthening the cooperative sector. According to (Mero Llor & Zambrano Montesdeoca, 2023) Policies that support cooperative development, such as tax incentives and training programmes, have contributed to improving their sustainability and impact on local development. In the province of Bolívar, policies have been implemented that encourage the creation and strengthening of cooperatives, which has contributed to their growth and consolidation. Community resilience is a key aspect of the cooperative model. According to (Faz Cevallos et al., 2022) cooperatives have demonstrated a remarkable ability to adapt to changes and meet challenges, such as the COVID-19 pandemic. In the province of Bolívar, cooperatives have implemented strategies that have strengthened the economic and social resilience of local communities, which has contributed to their sustainable development. Environmental sustainability is an essential component of the cooperative model. According to (Toala Mendoza. et al., 2024) cooperatives in the province of Bolívar have implemented practices that promote the conservation of natural resources and the reduction of environmental impact. These initiatives have contributed to the transition to a greener and more equitable economy, aligned with the United Nations Sustainable Development Goals.

### Methodology

The methodology used in this study was based on a quantitative approach, with a descriptive and correlational design that allowed analyzing the impact of cooperativism on the socioeconomic development of the province of Bolívar, both before and after the COVID-19 pandemic. The target population included active members of credit unions, as well as direct and indirect beneficiaries of their services, and a representative sample of 300 participants was selected through stratified random sampling. For data collection, structured surveys with closed questions and Likert scales, semi-structured interviews with cooperative leaders and representatives of key economic sectors, and documentary analysis of financial reports and credit portfolio records were used. The data were processed and analyzed using descriptive and correlation statistical techniques, using the R language and its R Studio interface to generate graphs and tables. The study was governed by ethical principles, including informed consent, confidentiality, and nonmaleficence. Despite efforts to ensure methodological rigor, the study faced limitations such as limited access to detailed financial data, potential biases in participants' responses, and difficulties in generalizing the results. These limitations were considered in the interpretation of the findings, ensuring a balanced and critical view of the results obtained.

### RESULTS

The investigation was directed to the institution's officials with a focus on credit advisors since they are the ones who have the information on the credit portfolio of the San José Cooperative and its impact on the social and economic development of the province. Initially, questions related to the evaluation of the loan portfolio are applied.

#### Board

1

Average loan portfolio volume

Option	Frequency	Percentage
Between 10 thousand and 50 thousand dollars	5	20%

Between 50 thousand and 100 thousand dollars	4	16%
Between 100 thousand and 200 thousand dollars	7	28%
Superior	9	36%

The San José Cooperative manages considerable loan portfolio volumes. The most frequent response indicates that they manage "Higher" portfolios (without an upper limit defined in the survey), and the second most common option is in the "\$100,000 to \$200,000" range. This suggests that these cooperatives have a significant capacity to mobilize financial resources and grant relatively large credits. The lowest frequency of responses in the lower ranges (\$10,000 - \$50,000 and \$50,000 - \$100,000).

#### Board

2

Percentage of the loan portfolio aimed at small and medium-sized entrepreneurs

Option	Frequency	Percentage
Between 5 and 10%	4	16%
Between 10 and 20%	3	12%
Between 20 and 40%	8	32%
Between 40 and 60%	7	28%
Superior al 60%	3	12%

The San José Cooperative demonstrates an important commitment to financing small and medium-sized enterprises (SMEs). The most common answer indicates that between 20% and 40% of your loan portfolio is allocated to this sector, and the second most frequent option is in the range of 40% to 60%. This suggests that SMEs are a key target group for, and that they play a relevant role in supporting the development of this business sector in the province. The presence of responses in all ranges, although less frequently at the extremes, indicates a certain diversity in strategies, with some devoting a smaller proportion and others a greater proportion of their resources to SMEs.

#### Board

3

Level of change in credit demand before and after the pandemic

Option	Frequency	Percentage
Very high	4	16%
High	7	28%
Moderate	11	44%
Low	3	12%

The COVID-19 pandemic had a notable impact on the demand for credit experienced by the San José Credit Union. The most frequent response indicates a "Moderate" variation, suggesting that while there were changes, they were not uniformly extreme. The second most common option, "High," indicates that a significant number did experience significant changes in demand. The lower frequency of responses at the extremes ("Very High" and "Low") suggests that it was significantly affected, but with varying intensities. This interpretation points to the resilience of the cooperative sector, which, although affected, did not suffer a widespread collapse in demand.

#### Board

4

Impact has been observed in local businesses that have received financing from his cooperative

Option	Frequency	Percentage
Very high	4	16%
High	16	64%
Moderate	5	20%
Low	0	0%

A "High" impact (option 2) is perceived on local businesses that have received funding. This is very positive, as it suggests that the loans granted are having a considerable effect on the improvement or growth of these businesses. The options "Very high" (option 1) and "Moderate" (option 3) are underrepresented, but still significant, indicating that although the impact is generally high, there is some

variability in the magnitude of this effect. The absence of responses in "Low" reinforces the idea of a generalized positive impact.

#### Board

5

Level of contribution of the credits granted by your cooperative to the economic development of the province

Option	Frequency	Percentage
Very high	7	28%
High	16	64%
Moderate	2	8%
Low	0	0%

The predominant perception is that the loans granted by the cooperative have a "High" contribution (option 2) to the economic development of the province. The "Very High" option (option 1) also has a considerable presence, while "Moderate" (option 3) is less frequent. This suggests that cooperatives see themselves as important players in the region's economic momentum, and that their lending activities are perceived as generating a substantial positive impact.

#### Board

6

Significant in the types of businesses or sectors that apply for credit since the pandemic

Option	Frequency	Percentage
Very high	2	8%
High	13	52%
Moderate	10	40%
Low	0	0%

The Cooperative reports a "High" change in the types of businesses or sectors that request credit since the pandemic. The "Moderate" option is also prevalent, while "Very High" is significantly lower. This indicates that the pandemic has had a notable effect on the structure of credit demand, with some sectors or types of businesses increasing their share and others decreasing it. The presence of responses in "Moderate" suggests that, although the change is perceptible, it has not been radical for all cooperatives.

#### Board

7

What measures has your cooperative taken to support the sectors most affected by the pandemic?

Option	Frequency	Percentage
Financial incentives	1	4%
Credit forgiveness	6	24%
Credit deferral	4	16%
Preferential Credits	10	40%
Refinancing	4	16%

The cooperative has implemented a variety of measures to support sectors affected by the pandemic. The most common measures are "Preferential credits" and "Credit deferral". "Refinance" and "Economic Incentives" are also frequent, while "Credit Forgiveness" is the least used. This suggests a diversified strategy, with a focus on facilitating access to new financing (preferential credits) and alleviating the burden of existing debt (deferral and refinancing). The low frequency of loan forgiveness could reflect the need for cooperatives to maintain their own financial sustainability.

#### Board

8

Which sectors or social groups you consider to have less access to credit services from your cooperative

Option	Frequency	Percentage
Micro	5	20%
Commerce	3	12%
Agriculture	6	24%
Housing	9	36%
Livestock	1	4%

Construction	1	4%
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Agriculture and housing is identified as the sector with the least access to credit services, followed by "Microenterprises". "Commerce" also has a considerable representation. The other options are less frequent. This suggests that, despite the general focus on SMEs (as seen in previous questions), there are specific challenges for certain sectors, especially agriculture and microenterprises, to access finance. This could be due to factors such as perceived risk, lack of collateral, or difficulty in assessing the ability to pay in these sectors.

#### Board

9

It has identified a particular barrier that prevents certain social groups from accessing credit

Option	Frequency	Percentage
Lack of financial education	11	44%
Lack of customer documentation	5	20%
Economic and social conditions	5	20%
Customer distrust	1	4%
High credit rates	3	12%

Cooperatives identify several reasons for the lack of access to credit in certain sectors. The most common are "Lack of solvency" and "Many demands", followed by "Many procedures". "Low knowledge" and "Very high rates" are less common. This suggests that the perceived barriers relate both to the economic capacity of the applicants (solvency) and to the requirements and processes of the cooperatives themselves (requirements and procedures). "Lack of knowledge" and "high rates" are also factors, although less prevalent.

#### Board

10

How your cooperative could improve the inclusion of less benefited sectors

Option	Frequency	Percentage
Microcredits and Flexible Credits	18	72%
Group Loans	2	8%
Financial Literacy Programs	2	8%
Mobile Banking & Online Services	1	4%
Alliances with institutions	1	4%
Institutional Strengthening	1	4%

The most suggested measure to improve inclusion is the implementation of "Microcredits and Flexible Credits". The other options have a much lower frequency. This suggests that cooperatives recognize the need to offer more accessible financial products adapted to the capacities of the least benefited sectors, particularly those with lower incomes or debt capacity.

#### Board

11

How your credit union determines the needs of the community in relation to financial services

Option	Frequency	Percentage
Member Surveys	10	40%
Interviews and Focus Groups	5	20%
Service Portfolio Review	3	12%
Participation in Community Events	2	8%
Socioeconomic Studies	3	12%
Demographic Analysis	1	4%
Open Communication Channels	1	4%

Cooperatives use a variety of methods to determine community needs. The most common are "Member Surveys" and "Interviews and Focus Groups". "Service Portfolio Review", "Participation in Community Events" and "Socioeconomic Studies" are also used. This suggests a mixed approach that combines direct feedback from members (surveys, interviews) with data analysis (portfolio review, studies) and community interaction (events, partnerships).

## Board

12

What challenges your cooperative faces in trying to meet community needs

Option	Frequency	Percentage
Financial Limitations	4	16%
Financial Sustainability	6	24%
Insufficient digitalization	2	8%
Regulatory and Legal Challenges	6	24%
Low Level of Financial Education	2	8%
Resistance to Change	2	8%
Competition with Other Financial Institutions	1	4%
Adapting to changing needs	1	4%
Lack of Trust in Financial Institutions	1	4%

The challenges are varied. The most mentioned are "Financial Sustainability" and "Regulatory and Legal Challenges". "Financial Constraints," "Low Level of Financial Literacy," and "Limited Human Resources" are also important. This suggests that cooperatives face both internal (financial, human resources) and external (regulatory, educational) challenges.

## Board

13

What financial or social education programs your credit union has implemented in recent years

Option	Frequency	Percentage
Financial Education Workshops	21	84%
Education Savings Programs	1	4%
Community Development Projects	1	4%
Personalized Advice	2	8%

Almost all cooperatives have implemented "Financial Education Workshops" in recent years. The other options are much less frequent. This suggests a strong focus on financial literacy as a tool to empower the community, although the variety of programs offered seems limited.

## Board

14

What impact your credit union has had on improving the community's financial literacy

Option	Frequency	Percentage
Improved Personal Financial Management Capacity	14	56%
Increased Access to and Use of Financial Services	7	28%
Increasing Financial Inclusion	1	4%
Promotion of Entrepreneurship and Local Economic Development	1	4%
New Business Creation	1	4%
Poverty Reduction	1	4%

The main perceived impact of cooperatives on financial education is the "Improvement in Personal Financial Management Capacity". "Increased Access to and Use of Financial Services" is also a significant impact. This indicates that financial education programs are having a positive effect on individuals' financial skills and access to services.

## Board

15

What strategies your cooperative has adopted to maintain post-pandemic financial stability

Option	Frequency	Percentage
Strengthening Financial Management	8	32
Expansion of Services	6	24
New Business Models	6	24
Technology Implementation	2	8
Constant Risk Assessment	2	8
Performance Analysis	1	4

The post-pandemic strategies focus on "Strengthening Financial Management, "Expanding Services" and "New Business Models". Technology Implementation" also has some relevance. This suggests that cooperatives are looking to strengthen their financial base, adapt to new circumstances and explore new opportunities for growth.

# Board

16

## Correlation between variables

	P 1	P2	P3	P4	P6	P7	P8	P1 1	P12	P13	P1 4	P16	P1 7	P1 8	P1 9	P2 0	P2 1	P2 2	P2 3
P1										- 0.5 543 389 5				0, 48 74					
P2									- 0.45 692 952 5	- 0.4 700 258 1		- 0.5 493 244 5							
P3										0.5 831 009 0				0, 45 9			0.5 82 59 71 8		
P4							0.3 50 14 99 8												
P6												- 0.4 819 701 5				0.4 72 88 83 6			
P7				0.3 614 994 0															
P1 2		- 0.45 692 952 5										0.5 906 332 6							
P1 3	- 0.5 5 5 4 3 3 8 9 5	- 0.47 002 580 8	0.58 310 090 5									0.4 127 693 2			0.5 44 67 33				



P1 4								0.3 03 44 99 1		0.5 015 329 0							0.5 07 27 22 6	
P1 5														0.4 88 92 75				
P1 6		- 0.54 932 445 3				- 0.4 819 701 5			0.59 063 326					0.6 00 11 42				
P1 7		- 0.42 030 797 5																
P1 8	- 0. 4 8 7 4 5 0 2 6		0.45 930 898 4													0,6 57	0.4 51 44 69 5	0.6 30 16 58 9
P1 9										0.5 446 733 2	0.4 889 274 6	0.6 00 11 42 4						
P2 0					0.4 728 883 59													0.4 22 01 95 0
P2 1			0.58 259 718 1										0, 65 69					
P2 2				- 0.4 403 058 3							0, 50 72 72							
P2 3													0, 63 01 65					

[illegible]

In reference to question P13 (Inclusion Policies/Programs) and P14 (Credit Access Barriers): 0.502. Cooperatives that implement inclusion policies (such as adapted products) tend to perceive the lack of financial education as a major barrier. This is logical, as financial education is often a component of inclusion policies. P13 (Inclusion Policies/Programs) and P19 (User Satisfaction) 0.545. Cooperatives that implement inclusion policies tend to use satisfaction surveys. This suggests that inclusion and customer satisfaction are related. P14 (Credit Access Barriers) and P22 (Education Impact): 0.507. Credit unions that perceive a lack of financial literacy as a major barrier also see an improvement in personal financial management as a result of their educational programs. P16 (Additional Services) and P12 (Reasons for Lack of Access to Credit): 0.591 The cooperatives that offer more additional services are the ones that perceive that there are more reasons for lack of access to credit. P17 (Community Needs) and P19 (User Satisfaction): 0.600. Cooperatives that use surveys to identify community needs also use surveys to measure satisfaction. This indicates a consistency in the use of surveys as a feedback tool. P18 (Demand for Services) and P23 (Current Challenges): 0.630. Cooperatives experiencing a demand for more accessible credit also face the challenge of technological adaptation. This could indicate that technology is needed to offer more flexible and efficient credit. P18 (Demand for Services) and P21 (Education Programs): 0.657. Credit unions that report a higher demand for loans with lower requirements are also more likely to offer financial education workshops. This suggests a response to the demand for access to credit through education. P21 (Education Programs) and P18 (Demand for Services): 0.657. (It is the same relationship as the previous one, but seen from the other perspective). Credit unions that offer financial education workshops also see a high demand for more accessible credit. P19 (User satisfaction) and P17 (Community needs): 0.600 Cooperatives that measure user satisfaction are also concerned with the needs of the community. P3 (Target Population) and P13 (Inclusion Policies/Programs): 0.583 Cooperatives that target the general population are the ones that implement the most inclusion policies. P3 (Target Population) and P21 (Education Programs): 0.583 Cooperatives that focus on the general population are the ones that offer the most financial education programs. Among the negative correlations is that P2 (Geographic Coverage) and P16 (Additional Services): -0.549. Cooperatives with regional coverage (P2=3) tend to offer fewer investment programs (P16=1). This could indicate that regional cooperatives are focusing more on basic services such as credit and savings. P4 (Main Product/Service) and P7 (Inclusion): 0.361. Cooperatives that mainly offer consumer credit tend to "somewhat agree" with the inclusion of less benefited sectors. P11 (Inclusion Strategies) and P14 (Barriers): 0.303. The alliances are related to the perception of the lack of financial education as a barrier. P12 (Reasons for lack of access) and P2 (Coverage): -0.457. Bureaucracy is negatively related to regional coverage. In other words, regional cooperatives tend to perceive bureaucracy as a barrier less. P23 (Current Challenges) and P18 (Demand): 0.630 Technological adaptation is related to the demand for loans with lower requirements. P24 (Crisis Preparedness) and P12 (Reasons for lack of access): 0.314 Diversification is related to the perception of many procedures as a barrier. The correlation matrix reinforces many of the conclusions of previous analyses and reveals new connections. It highlights the importance of financial education, the relationship between inclusion and customer satisfaction, the challenge of technological adaptation, and how diversification and financial management strategies are interconnected. Negative correlations suggest possible areas of tension or trade-offs between different approaches. For example, regional cooperatives might be less concerned about bureaucracy, but also offer fewer additional services. The correlation between the type of cooperative and inclusion policies suggests that the "Other" group needs a more detailed analysis to understand its diversity.

## DISCUSSION

The results of the study confirm that credit unions have had a significant impact on the socioeconomic development of the province of Bolívar, both before and after the COVID-19 pandemic. Before the

pandemic, cooperatives contributed to economic diversification, job creation, and poverty reduction, especially in rural areas and among vulnerable groups (Baeza & Sanhueza, 2016). These findings are consistent with previous studies that highlight the role of cooperativism as a tool to promote financial inclusion and economic empowerment (Cevallos-Ramos et al., 2025). During the pandemic, cooperatives demonstrated remarkable resilience, adapting their services to respond to the urgent needs of their members. Measures such as debt restructuring and emergency lending helped mitigate the economic impact of the crisis (Valarezo Cuenca et al., 2024a). However, challenges were also identified, such as decreased liquidity and increased non-performing loans, highlighting the need to strengthen risk management in the cooperative sector (Alcívar-Moreira & Bravo-Santana, 2020). The results indicate that the sectors that benefit most from cooperatives' loan portfolios include agriculture, small businesses, and low-income families. These sectors have managed to access credits that have allowed them to invest in productive projects, improve their living conditions, and face emergency situations (Chávez et al., 2021). These findings are consistent with the literature highlighting the role of cooperatives in promoting local development and financial inclusion (Sierra Lara et al., 2024). However, sectors and social groups that have not been able to benefit from these initiatives were also identified, such as people in situations of extreme poverty and indigenous communities. These groups face barriers such as lack of financial education, discrimination, and geographic exclusion (Villavicencio & Bismarck, 2013). These results underscore the need to implement policies and programs that foster financial inclusion and equity in access to cooperative services. The correlation analysis reveals a positive and significant relationship between cooperativism and sustainable development in the province of Bolívar. Cooperatives have contributed to the United Nations Sustainable Development Goals (SDGs), particularly SDG 8, which promotes inclusive and sustainable economic growth, employment and decent work for all (United Nations, 2015). These findings are consistent with previous studies that highlight the role of cooperativism in promoting environmental sustainability and social responsibility (La Via Campesina, 2012). In addition, a positive correlation was observed between cooperativism and community resilience. Cooperatives have demonstrated a remarkable ability to adapt to changes and face challenges, such as the COVID-19 pandemic (Franco et al., 2021). These results underscore the importance of strengthening the cooperative model as a tool to promote sustainable development and resilience in a post-pandemic context. The correlation analysis also reveals a positive and significant relationship between cooperativism and financial education. Credit unions in the province of Bolívar have implemented financial education programs that have improved the ability of their members to manage their personal and business finances (Gómez & Collado, 2015). These findings are consistent with the literature highlighting the role of financial education in reducing financial vulnerability and increasing economic resilience (Coba Molina et al., 2020). However, challenges were also identified, such as lack of access to technology and insufficient training, which have limited the ability of some cooperatives to take advantage of these tools (Noya & Clarence, 2007). These results underscore the need to implement policies and programs that foster digital inclusion and fintech training. The correlation analysis also reveals a positive and significant relationship between cooperativism and gender equality. Cooperatives in the province of Bolívar have implemented policies and programs that encourage women's participation in the local economy (Piñeiro & Elizalde, 2018). These findings are consistent with the literature that highlights the role of cooperativism in women's empowerment and the promotion of gender equity (Arias-Amaguaña et al., 2022). However, challenges were also identified, such as discrimination and lack of access to resources, which have limited the ability of some women to benefit from these initiatives (Bretos et al., 2018). These results underscore the need to implement policies and programs that promote gender equality and women's economic empowerment.

## CONCLUSIONS

Savings and credit cooperatives have played a fundamental role in the socioeconomic development of the province of Bolívar. Prior to the pandemic, these institutions contributed to economic diversification, job creation, and poverty reduction, especially in rural areas and among vulnerable groups. During the pandemic, they demonstrated remarkable resilience, adapting their services to respond to the urgent needs of their members, such as debt restructuring and emergency lending.

The sectors that benefit most from cooperative loan portfolios include agriculture, small businesses, and low-income families. These sectors have managed to access credits that have allowed them to invest in productive projects, improve their living conditions and face emergency situations. However, sectors and social groups that have not been able to benefit from these initiatives were identified, such as people in situations of extreme poverty and indigenous communities, which underscores the need to implement policies and programs that promote financial inclusion and equity in access to cooperative services.

Cooperativism has contributed significantly to the United Nations Sustainable Development Goals (SDGs), particularly SDG 8, which promotes inclusive and sustainable economic growth, employment and decent work for all. In addition, a positive correlation was observed between cooperativism and community resilience, highlighting the importance of strengthening the cooperative model as a tool to promote sustainable development and resilience in a post-pandemic context. Credit unions in the province of Bolívar have implemented financial education programs that have improved their members' ability to manage their personal and business finances. However, challenges were identified, such as lack of access to technology and insufficient training, which have limited the ability of some cooperatives to take advantage of these tools. These results underscore the need to implement policies and programs that foster digital inclusion and fintech training. Cooperatives in the province of Bolívar have implemented policies and programs that encourage women's participation in the local economy, contributing to women's economic empowerment and the promotion of gender equality. However, challenges were identified, such as discrimination and lack of access to resources, which have limited the ability of some women to benefit from these initiatives. These results underscore the need to implement policies and programs that promote gender equality and women's economic empowerment. Based on the findings of the study, several recommendations are proposed to strengthen cooperativism in the province of Bolívar, including the promotion of financial education and digital inclusion, the strengthening of internal governance, the development of supportive public policies, the promotion of gender equality and the promotion of environmental sustainability. These recommendations seek to maximize the impact of cooperativism on sustainable development and poverty reduction in a post-pandemic context.

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