

# Analysis of the growth of the solidarity economy in the Colombian agricultural sector and its application to education

Analisis del crecimiento del sector de economía solidaria en el área de agricultura y su aplicación a la formación

对农业领域团结经济部分的增长分析及其在培训中的应用

Анализ роста сектора солидарной экономики в области сельского хозяйства и его применение к обучению

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### **Abstract**

This research focuses on the study of the agricultural sector in Colombia in relation to the growth of the solidarity economy in the agriculture, hunting, forestry, and fishing sectors. The aim of this study was to determine the level of growth of solidarity economy sector organisations in the aforementioned economic sectors in the period 2002-2017. This research is descriptive in nature. A quantitative approach was used to analyse statistical trend data. The results allowed us to determine the growth of solidarity economy organisations in the agricultural sector in the country. However, this growth is still very far from the average growth of the solidarity economy sector, revealing the need to strengthen the mechanisms for the development of social and solidarity economy organisations in the agricultural sector in order to boost the competitiveness and development of the agricultural sector in Colombia.

Keywords: agriculture, association, cooperatives, economic and social development.

#### Resumen

Esta investigación se enmarca en el estudio del sector agrícola de Colombia en relación con el crecimiento de la economía solidaria en la actividad de agricultura, caza, silvicultura y pesca. El objetivo de esta investigación es determinar cuál ha sido el crecimiento del sector de economía solidaria en este tipo de actividades económicas en los periodos 2002-2017. Esta investigación es de carácter descriptivo, con un enfoque cuantitativo de analisis de datos estadísticos de tendencias. Los resultados permitieron identificar el crecimiento de las organizaciones de economía solidaria en el sector agrícola en el país, sin embargo, este crecimiento aún está muy lejos de la media de crecimiento del sector de economía solidaria, lo que muestra que se deben fortalecer los mecanismos para el desarrollo de organizaciones de economía social y solidaria en el sector agrícola, con el fin de incrementar la competitividad y el desarrollo del sector agrícola en Colombia.

Palabras Claves: Competitividad, sector Agrícola, economía solidaria, economía social.

### 摘要

这项研究隶属关于哥伦比亚相关农业部门在农业,狩猎,林业和渔业活动中团结经济增长情况的研究项目。研究目的是确定2002年至2017年期间上述经济活动中团结经济部分的增长状况。该研究采用描述性,定量方法分析趋势统计数据。结果认同了该国农业部门的团结经济组织的增长,但是,这一增长仍与团结经济的平均增长水平相差甚远。结论表明,应强化农业部门发展团结社会经济组织的机制,提高哥伦比亚农业部门的竞争力和发展。

关键词: 竞争力, 农业部门, 团结经济, 社会经济。

### Аннотация

В рамках данного исследования изучается сельскохозяйственный сектор Колумбии в связи с ростом солидарной экономики в деятельности сельского хозяйства, охоты, лесного хозяйства и рыболовства. Цель данного исследования - определить, каков был рост сектора солидарной экономики в данном виде экономической деятельности в периоды 2002-2017 гг. Данное исследование носит описательный характер, с количественным подходом статистического анализа тенденций. Результаты позволили выявить рост организаций солидарной экономики в сельскохозяйственном сек-

торе страны, однако этот рост все еще далек от среднего роста сектора солидарной экономики, что свидетельствует о необходимости укрепления механизмов развития организаций социальной и солидарной экономики в сельскохозяйственном секторе для повышения конкурентоспособности и развития сельскохозяйственного сектора Колумбии.

Ключевые слова: Конкурентоспособность, сельскохозяйственный сектор, экономика солидарности, социальная экономика.

## Introduction

The concept of cooperativism is related to the social and solidarity economy deriving from the fusion of two concepts: social economy and solidarity economy (Villalba et al., 2020). This concept is developed based on two main principles: solidarity and mutual assistance. These principles aim to foster joint endeavour and self-help. Guided by these principles, the entities that develop in the social and solidarity economy model regulate the economic and social relations between their members, the community, similar companies and the State (Hernández & Rodríguez, 2015). Moreover, Silva (2012) describes how cooperativism aims to enhance the social purpose of the economy. Therefore, concepts such as competitiveness and profitability, typically associated with traditional economy, are characterised in the social and solidarity economy (SSE) by solidarity, cooperation and inclusion.

Therefore, the aim of this research was to determine the economic growth of solidarity economy organisations in the "agriculture, livestock, hunting, forestry and fishing" sector in Colombia in the period 2002-2017. Thus, this study aimed to answer the following question: What growth was achieved by solidarity economy organisations in the "agriculture, livestock, hunting, forestry and fishing" sector in Colombia during the period 2002-2017?

In Colombia, the solidarity economy model emerged in 1931 with Law 134, introduced to respond to the economic challenges faced by the country as a result of the great depression of the 1930s. This was followed in 1988 by Law 79, which defined the way in which cooperative activity and forms of solidarity association, mutual associations and other associations were organised (Dávila, 2004).

In Article 4 of said law, a cooperative was defined as "a non-profit associative company in which the workers or users, as the case may be, are simultaneously the shareholders and managers of the company, created for the purpose of producing or jointly and efficiently distributing goods or services to satisfy the needs of its members and the community in general " (Law 79 of 1988). As regards the organisation of the structure and the conceptual framework regulating the solidarity economy sector, Law 454 of 1998 transformed the National Administrative Department of Cooperatives ("Departamento Administrativo Nacional de Cooperativas" - "DANCOOP" - in Spanish) into the National Administrative Department of the Solidarity Economy ("Departamento Administrativo Nacional de la Economía Solidaria" - "DANSOCIAL" - in Spanish), and created the Superintendency of the Solidarity Economy ("Supersolidaria") and the Cooperative Sector Guarantee Fund ("Fondo de Garantías del Sector Cooperativo" - "FO-GACOOP" - in Spanish) for Financial, Savings and Credit Cooperatives (Hernández & Olaya, 2018).

Cooperatives and the social and solidarity economy sector in general have contributed to the growth of the Colombian economy through the development of different economic activities related to the structure of the solidarity economy system, which is made up of cooperatives, employee funds and mutual associations, cooperatives being the organisations with the strongest tradition and economic impact in the country.

Despite these advances, the social and solidarity economy is growing at a slow pace and is not as consolidated as in other Latin American countries like Brazil, Argentina and Uruguay (De Guevara et al., 2018). However, stakeholders such as unions, the state, private entities, and urban and rural communities, are working on public policies to recognise and strengthen the solidarity sector in Colombia, since they see this as an effective approach for generating decent work, promoting social cohesion, reducing poverty and achieving sustainable development models (Castelao & Srnec, 2013).

The Colombian cooperative sector participates actively in the economy; for example, within the social and solidarity economy sector, the economic activity that brings together the largest number of organisations is the financial and insurance sector, followed in second place by agriculture and food production (Confederation of Cooperatives of Colombia - Confeccop, 2019a). These types of associated work organisations in agricultural regions of Colombia allow small farmers to promote and strengthen their production in an organised and collective way, achieve greater benefits to improve their transformation processes and marketing activities and boost the value of their products, which can, in turn, be sold in large national and international markets. This helps to reduce barriers to access to markets, information and technology, financial services, training and infrastructures, negotiating in blocks and in better conditions with both customers and suppliers.

Thus, the promotion of the social economy based on rural development, dependency and social integration (Monzón & Chaves, 2016) helps to drive economic development in rural areas and social development in communities. In this sense, Bessis and Hillenkamp (2013) argue that the development of the social and solidarity economy in the rural sector requires the identification of three complementary aspects: firstly, its multiple forms of production, exchange and financing; secondly, its values as a reference point for action; and thirdly, its objective of institutional change and social innovation.

Colombia faces different economic and social problems, mostly concentrated in the country's rural areas. However, the agricultural sector is not immune to the effects of globalisation and this has impacted small and medium producers (Romero, 2009). However, through the consolidation of the solidarity economy, agricultural communities are able to work on economic models with collective benefits and mutual support. Therefore, the presence of cooperative organisations is a major factor for achieving human, economic, territorial and sustainable development. Hence, it is recognised as a good alternative for the production of satisfiers of human needs or to improve production processes themselves (Salazar, 2016).

Interest has grown in recent years in understanding the importance of local, peasant and rural economic systems, as alternatives to improve their economies based on the self-management and associativity of communities (Cardona, 2020). The solidarity economy model facilitates access to resources and technology, which allow them to become more competitive and stronger in the market. In these scenarios, the solidari-

ty economy represents an opportunity for the growth, entrepreneurship and development of rural communities in the country and also a space for the region to participate in the fourth industrial revolution (Sánchez & Moreno, 2019)

Finally, as reported by Monterrosa (2018), there are currently around 300 rural cooperatives representing 112,000 small and medium producers; this number has been growing thanks to the Colombian Peace Accords and the lower intensity of the armed conflict in rural areas of Colombia. However, there is still much to do, especially in terms of public policies to promote the different forms of association of cooperatives and their coexistence with other models. Experts agree that efforts must be made to replicate successful cases of agricultural cooperatives, such as those created in the milk sector, for example COLANTA, a cooperative which began with 60 farmers and today represents 7,000 associated workers and 12,000 producers; COLANTA has maintained innovation in its processes and products and has provided technical support and financed processes in the field. This cooperative pays fair prices for production, and seeks to provide more services and social benefits to peasants to help them and their families remain in their territories and not be forced to migrate to cities in search of opportunities.

## Method

This research is presented based on the descriptive model, which aims to reveal some of the fundamental characteristics of homogeneous sets of phenomena, using systematic criteria to identify the structure or behaviour of the studied phenomena, providing systematic information that can be compared with that obtained from other sources through a statistical and numerical analysis of quantitative data (Guevara et al., 2020). The information analysis was carried out using a quantitative approach, due to the need to link statistical methods to the analysis of the data from the sample (Hernández-Sampieri & Mendoza, 2018).

The study was carried out in three stages: data collection, quantitative information analysis and literature review from secondary sources, focusing on the main aspects of the research.

- Stage one: the financial reports database for the years 2015 to 2018 was downloaded from the website of Supersolidaria, which is the entity that monitors and controls the solidarity sector, to which cooperatives belong.
- Stage two: the information in the database was filtered and organised using an
  Excel spreadsheet, first performing a general analysis of the growth of cooperatives and then the growth of solidarity economy entities in the "agriculture, livestock, hunting and forestry and fishing" sector, compared to the general growth
  of the sector in the country during the period 2015-2018 by department and by
  type of entity.
- Stage three: literature review and consolidation of the document with the results obtained after data analysis.

## **Results**

After analysing the data obtained from secondary sources on the evolution of new solidarity economy entities in the country from 2002 to 2017, as shown in Figure 1, it was observed that since 2002 the number of newly-created solidarity economy organisations had gradually increased, with an increase of 160% in 2017 compared to the previous year. However, and despite this increase in the creation of new cooperatives and solidarity economy entities, most growth was concentrated in solidarity economy entities in the financial services and insurance sector, as the most represented sector among all economic solidarity organisations registered in Colombia during the period 2002-2017. Figure 1 shows that the creation of solidarity economy entities, engaging in the economic activities of agriculture, livestock, hunting and forestry and fishing, was below the national average in each of the years analysed.

Although the growth of such organisations fosters the development of rural communities, it is low compared to other types of economic activities in the solidarity economy sector; agriculture, livestock, hunting and forestry and fishing entities occupy third place in the solidarity economy in Colombia, as shown in Figure 2; the first and second positions in the economic activities table correspond to other service activities (micro-credit activities) and financing and insurance cooperatives.

Analysing the growth of solidarity economy entities by department (see Figure 3), it was observed that the majority of these entities are located in the country's most developed and industrialised departments, such as Bogotá DC, Antioquia, Valle, Santander and Atlántico. However, the solidarity economy organisations in the agriculture, livestock, hunting and forestry and fishing sector are located in large-scale agricultural production departments like Valle, Santander, Meta, Cesar, Casanare and Guaviare, and they are associated with activities that support agriculture, such as poultry, sheep, sugar cane, oil palm, coffee and livestock farming.

Figure 1

Growth of the solidarity sector vs. solidarity economy entities in the agriculture, livestock, hunting and forestry and fishing sector

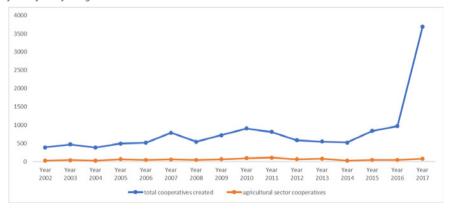


Figure 2
Economic activities in the solidarity economy sector

Economic activity	% Entity SSE
Activities of individual homes in quality of employers	0,0%
Real estate activities	0,1%
Artistic, entertainment and recreation activities	0,2%
Activities of organizations and extraterritorial entities	0,2%
Accommodation and food services	0,3%
Supply of electricity, gas, steam and air conditioning	0,5%
Exploitation of mines and canters	0,5%
Public administration and defense	0,6%
Water distribution	1,5%
Transportation and storage	1,6%
Professional, scientific and technical activities	1,7%
Education	1,7%
Administrative and support services activities	2,2%
Manufacturing industries	2,5%
Building	2,9%
Information and communications	4,0%
Human health care and social assistance activities	4,5%
Wholesale and retail	6,1%
Agriculture, livestock, hunting and silviculture and fishing	7,0%
Financial and insurance activities	28,3%
Other services activities	33,4%

Figure 3
Solidarity economy entities by department vs solidarity economy entities in the agriculture, livestock, hunting and forestry and fishing sectors

	total	agricultural sector	
State	cooperatives	cooperatives	
BOGOTA	27,74%	1,47%	
VALLE	10,689	14,82%	
ANTIOQUIA	10,24%	5,10%	
SANTANDER	7,489	11,03%	
ATLANTICO	5,08%	2,09%	
CUNDINAMARCA	4,54%	8,17%	
HUILA	3,66%	6,21%	
TOLIMA	3,329	6,15%	
CALDAS	3,129	7,52%	
BOYACA	2,889	6,84%	
NORTE DE SANTANDER	2,729	3,62%	
RISARALDA	2,36%	9,94%	
META	2,29%	26,49%	
NARIÑO	2,149	7,80%	
BOLIVAR	1,989	4,21%	
CAUCA	1,979	10,00%	
CESAR	1,649	24,42%	
QUINDIO	1,129	8,11%	
MAGDALENA	1,019	12,78%	
SUCRE	0,919	3,33%	
CORDOBA	0,829	7,41%	
CASANARE	0,639	19,28%	
ARAUCA	0,419	12,96%	
PUTUMAYO	0,369	2,13%	
LA GUAJIRA	0,349	6,67%	
СНОСО	0,219	7,14%	
CAQUETA	0,169	0,00%	
GUAVIARE	0,09%	16,67%	
AMAZONAS	0,05%	6 0,00%	
GUAINIA	0,039	6 0,00%	
SAN ANDRES	0,029		
VICHADA	0,029		
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In terms of the solidarity economy entities that develop their activities in the economic sectors of agriculture, livestock, hunting and forestry and fishing, as shown in Figure 4, a higher percentage are associated work cooperatives, followed by comprehensive savings and credit cooperatives and multi-active cooperatives without savings branches.

Figure 4

Types of solidarity entities in the agriculture, livestock, hunting and forestry and fishing sectors

Solidarity entity type	% solidarity entity type	Solidary entity type "AGRICULTURE, LIVESTOCK, HUNTING AND SILVICULTURE AND FISHING"
Cooperative public administrations	0,34%	4,44%
Contributions and credit	0,86%	4,39%
Mutual associations	3,09%	1,72%
Associated work cooperatives	34,98%	12,92%
Specialized savings and credit	1,11%	0,00%
Specialized without savings section	11,62%	6,52%
Employee funds	20,83%	0,22%
Specialized auxiliary institutions	1,01%	3,01%
Integral with savings and credit	0,02%	13,04%
Integral without savings section	1,92%	5,56%
Multiactive with savings and credit	0,27%	5,46%
Multiactive without savings section	22,45%	10,00%
Economic character organism	0,15%	0,97%
Representation agency	0,78%	5,88%
Other organizations	0,13%	8,33%

The results obtained in this research are consistent with those presented in the studies and reports presented by the Confederation of Cooperatives of Colombia (Confecoop), which indicate that the majority of agricultural cooperatives in Colombia are concentrated in the municipalities of Antioquia, Santander, Cundinamarca, Cesar, Huila, the "Eje Cafetero" (Coffee Belt) and Boyacá. Rural cooperatives represent 109,653 small and medium producers and generate an average of 16,747 rural jobs in Colombia (Confederation of Cooperatives of Colombia (Confeccop), 2019b). However, few studies have described the current state of cooperatives in the agricultural sector, in terms of their economic and social contributions to the regions.

The main limitation of this research was the limited availability of recent data. The most complete studies on cooperatives in the agricultural sector date from 2008. However, financial information was available on the Supersolidaria website; this information helped us to identify the number of cooperatives by sector in Colombia.

This research provides statistical data and figures that can be used as inputs in other research in the same field, thus compensating for the lack of sufficient updated information on the subject. It also highlights the importance of cooperatives in the agricultural sector, their growth trends and the contribution of associated and collaborative work to communities and regional development.

The study also revealed the need to promote and strengthen the creation of cooperatives in the agricultural sector, since associated, collaborative and community work strengthens regional development, improves access to resources and new markets and helps reduce costs.

Therefore, government policies must be formulated to strengthen these organisations and thus enhance the competitiveness of remote regions. Goals and indicators must be established to measure government progress with these organisations, as the cornerstone of rural development in all departments of the country. Consequently, the study evidences the need for government polices regulating the management and creation of such organisations. The absence of such policies hinders the development of the agricultural sector, its competitiveness and sustainability, and its contribution to regional economies.

## **Discussion and conclusions**

The analysis of the data allowed conclusions to be drawn on the growth trend of solidarity economy entities in the "agriculture, livestock, hunting and forestry and fishing" sector during the period 2002-2017, revealing sustained growth in the last 5 years. However, growth in the creation of new cooperatives in the country has been below average.

The "agriculture, livestock, hunting and forestry and fisheries" sector is the third most important economic sector in the solidarity economy. Additionally, most "agriculture, livestock, hunting and forestry and fisheries" cooperatives are concentrated in departments in peripheral regions of Colombia and are mainly associated work cooperatives or savings and credit cooperatives.

This research provides data and information that lay the groundwork for the development of future research in this field, to broaden sources of information on this subject, not only in the analysis of the trend, but also on the economic and financial status of agricultural cooperatives, their sustainability, the population that is being impacted, as well as the contributions to the economic, social and business transformation of the rural sector.

Finally, it is important for the academic sector to contribute to the generation of knowledge on the Colombian agricultural sector through similar research, and also accompany agricultural communities to support the corporate, financial, technical and cultural strengthening of these cooperatives in order to contribute to the development of the country from rural areas.

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