

Agriculture Cooperatives in Brazil and The Importance for The Economic Development

Murillo de Oliveira Dias

*Coordinator/Instituto de Desenvolvimento Educacional
Fundação Getulio Vargas
Rio de Janeiro/ 222010-050/Brazil*

murillo.dias@fgv.br

Andre Teles, LL.M

*Professor/ Lecturer at
Fundação Getulio Vargas
Rio de Janeiro/ 222010-050/Brazil*

andre.teles@fgv.br

Abstract

This case investigated the agriculture cooperatives in Brazil, in comparison with the top ten in the world. The first Brazilian cooperative was created in 1889, with the dawn of the Republic, Cooperativa Econômica dos Funcionários Públicos de Ouro Preto, located at Minas Gerais state, southeastern Brazil. Originally, it was founded to foster the cooperate consumption of agriculture products. However, it took 82 years until the Brazilian Federal Government regulates Cooperatives, issuing Law no 5,764, from December 16, 1971. There are currently 13 different types of cooperatives operating in Brazil (Agriculture ones included), represented by the Brazilian Cooperatives Organization (Organização das Cooperativas Brasileiras – OCB). In this article, we compared the current facts and figures of the Brazilian agriculture cooperatives along with World Co-operative Monitor's, discussed in this descriptive single case. We found increasing participation of the agriculture cooperatives in the Brazilian economy, approximately 1,618 cooperatives, representing 23 percent of cooperatives in 2018. Agriculture cooperatives operation in Brazil were then analyzed, critical success factors and best practices to the sector were discussed in this article. Finally, future research recommendations complete the present article.

Keywords: Agriculture Cooperatives, Co-operatives, Co-op, Coop.

1. INTRODUCTION

The present work investigated the Brazilian agriculture cooperatives (sometimes named agriculture unions), as the unit of analysis of this descriptive single case study [1]. Agriculture cooperatives include: (a) rural producers, (b) agro-pastoral and (c) fishing activities [6] – [31]. Cooperatives are also named co-op, co-operatives, or coop, in this work "an autonomous association of persons united voluntarily to meet their conventional economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise" [2]. Hereafter simply cooperatives.

In 1995, the International Cooperative Association (in which Brazil is a member since 1988), established the core values regarding the cooperative activity, on a particular statement of identity issued on ICA's General Assembly, remarkably: "self-help, self-responsibility, democracy, equality, equity, and solidarity. In the tradition of cooperative founders, cooperative members believe in the ethical values of honesty, openness, social responsibility and caring for others." [2]. According to Dias & Ramos (2018) "Cooperatives' members also "share a sense of cooperation and co-participation in the whole stages of the cooperatives' decision-making process" [3].

The International Labour Organization (ILO) acknowledges, through Recommendation 193, the activity of cooperatives worldwide. Resolution 193 was issued at the 90th session of the International Labour Conference, on June 3rd, 2002 [4]- [5].

Cooperatives work in approximately 100 countries, employing 250 million people, directly and indirectly, over 1 billion people, roughly 2.6 million cooperatives [2]. International Cooperative Association (ICA), acknowledges 13 types of cooperatives, somehow different from the Brazilian ones (see next paragraphs): (a) special; (b) agriculture, banking and financial; (d) agriculture; (e) housing; (f) labor; (h) tourism; (i) production; (j) education; (k) infrastructure; (l) mineral; (m) transportation [2]. Cooperatives are different from other forms of associations, as depicted in Figure 1, as follows:

Differentiation parameters	Cooperatives	Associations	Companies
Economic purpose	For economic purposes, but not for profit	Non-profit, with impossibility to perform a commercial function	For-profit
Minimum quantity of members	20	2	1
Objective	To provide service to the cooperative	To represent the interest of the members	profit
Vote	1 member = 1 vote	1 member = 1 vote	the more capital, the greater the voting power
Incorporation of the share capital	Quotes	NA	Shares
Transferability of quotes	Can not be transferred to third parties	NA	Can be transferred to third parties

FIGURE 1: Differences between cooperatives, associations, and companies in Brazil.
Source, Sescoop, 2017[18], Dias & Ramos, 2018[3].

According to the Brazilian representative of cooperatives, OCB - *Organização das Cooperativas no Brasil* (Brazilian Organization of Cooperatives, free translation), there are currently 13 types of cooperatives spread over the country: (a) consumption, (b) credit, (c) farming, (d) special (social), (e) housing, (f) infrastructure, (g) mineral, (h) production, (i) health, (j) labor, (k) transportation, (l) educational, and (m) tourism & leisure [6]. OCB was created in the middle of the dictatorial regime (1964-1985), in 1969, and controls all cooperatives' activities in 27 Brazilian states and the Federal District.

Cooperatives in Brazil are part of the Federal Constitution 1988, issued on Article 5, paragraph XVIII, the non-state intervention on Cooperatives' activities: "cooperatives, are independent of authorization, and state interference in their operation is prohibited." [7]. This article is limited to investigate Brazilian agricultural cooperatives, restricted to Law no 5,764, from December 16, 1971 [8].

There are in Brazil, 6,887 cooperatives, in which 1,618 are agriculture ones, representing approximately 23 percent of the total cooperatives [6]. In total, cooperatives in Brazil gather 14,267,483 associates, and employs 398,110 workers [6], as depicted in Figure 2, as follows:

Activity	Co-operatives	Associates	Employees
Agricultural	1.618	1.017.481	198.654
Consumption	179	2.585.182	12.629
Credit	929	8.941.967	60.237
Educational	270	53.403	3.367
Special	8	321	8
Housing	284	106.659	577
Infraestructure	135	1.006.450	5.692
Mineral	97	23.515	182
Production	239	5.777	2.960
Health	805	238.820	103.015
Labor	943	188.435	943
Transportation	1.357	98.713	9.835
Tourism and Leisure	23	760	11
T O T A L	6.887	14.267.483	398.110

FIGURE 2: Cooperatives in Brazil. Source: OCB, 2018.

In comparison to worldwide credit cooperatives, the French Credit Agricole holds the first position among ten credit co-operatives, according to the World Co-operative Monitor [2], as depicted in the following Figure 3:

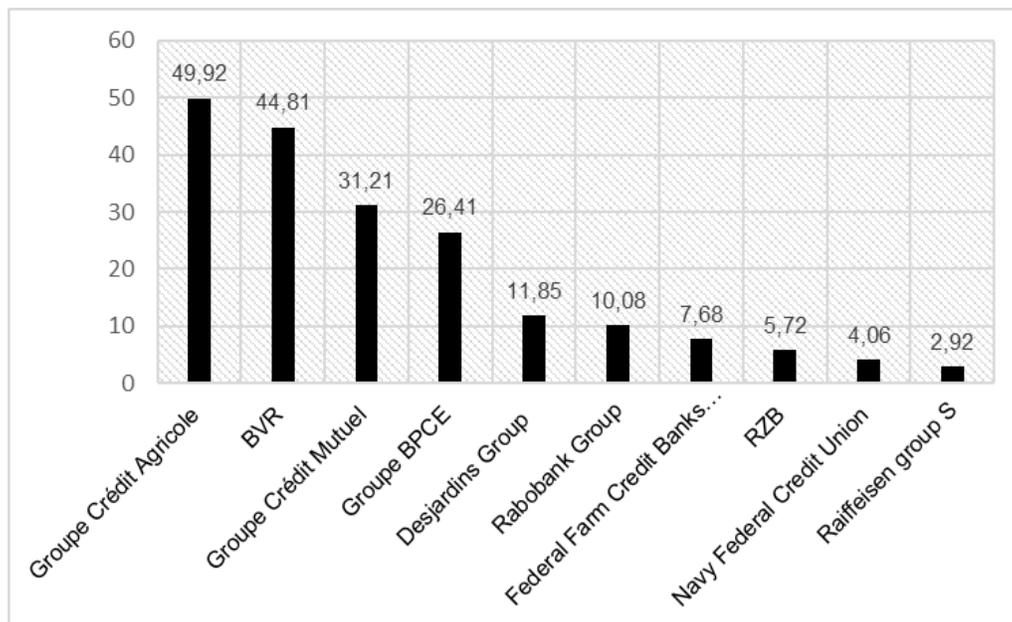


FIGURE 3: Credit Cooperatives Worldwide.

Source: World Cooperatives Monitor, 2017

Note: graphic from Dias & Ramos, 2018, reprinted under permission.

2. METHODS

The present study is qualitative research, which combined multiple methods, interpretive, descriptive single case study [1], combined with extensive archival research. The unit of analysis is the Brazilian agriculture cooperative societies. Secondary data were collected and then analyzed through archival research based on data available on the OCB database, and Brazilian Federal Laws, such as: (a) Brazilian Federal Constitution, (b) Federal, (c) State Laws, and (d) Resolutions, as well as (e) ICA's standards and (f) ILO's Recommendation 193.

Brazilian Federal Constitution 1988 encompassed the cooperatives in Brazil under the following articles, in the sequence of appearing: (a) Art.1 (definitions of free initiative and work associations), (b) Art. 3 (fundamentals of Republican activities), (c) Art. 5 (recognition of cooperative societies), (d) Art. 146 (cooperatives taxation), (e) Art. 170 (economic activities), (f) Art. 174 (cooperatives' state control, regulation and normalization activities), (g) Art. 187 (agriculture policy including cooperatives), and (h) Art.192 (national financial system).

Brazilian Federal Cooperative Law no. 5,764, was issued on December 16, 1971 [8], and restricts the present article to its terms, as well as Complementary Law 130/2009 [9].

Also Decree 8.163/2013 – Pronacoop Social, which establishes the National Program of Support to Associativism and Social Cooperative (Pronacoop Social) [11].

This work is also restricted to the Presidential Provisory Measure 2.168-40/2001 [12] (*Medida Provisória*, in Portuguese), responsible for the creation of SESCOOP, private educational cooperatives' organization, "with the objective of organizing, administering and executing the education of professional formation, development and social promotion of the worker in cooperative and of the cooperative" [3], ruled by Decree 3.017/1999, issuing the Cooperative Learning National Service (*Serviço Nacional de Aprendizagem do Cooperativismo*, in Portuguese, our translation) [13].

Next, agriculture cooperatives in Brazil are also limited by the Brazilian Civil Code, created by Law 10,406 from January 10, 2002, chapter VII, articles 1093, 1094 and 1095 [14].

Finally, the following resolutions limit the scope of the present article, issued by the *Conselho Federal de Contabilidade* – CFC (Federal Accounting Council, our translation): (a) Resolution CFC 920/2001 [15] – *Aspectos contábeis de entidades cooperativas*, destined to approve the Brazilian Accounting Standard for Cooperative Entities (NBC T 10.8); (b) Resolution CFC 1.013/2005 [16] – *Entidades Cooperativas*, designed to rule the technical interpretation of the Accounting Council on specific criteria and procedures for valuation, recording of changes in equity and structure of Financial Statements and minimum information to be included in explanatory notes on NBC T 10.8 - Cooperative Entities [3]-[16]. The next section presents the case of the agriculture cooperatives evolution in Brazil.

3. AGRICULTURE COOPERATIVES IN BRAZIL

3.1 Background

The first agriculture cooperative in Brazil was founded in 1889, the year of the Republic proclamation, 1889, at Minas Gerais state, named *Cooperativa Econômica dos Funcionários Públicos de Ouro Preto*, inspired on the British still working agriculture cooperative, at Rochdale-Manchester (UK), created in 1844 [3]- [6]. Local workers (27 men and one woman), decided to buy and stock food in scale, getting low fares and stored them in a conventional warehouse. Following the principles of cooperatives, co-participation, and share of responsibilities, the total goods gathered was equally divided at the final. In 1852, there were 3,450 members registered at the Rochdale Society of Equitable Pioneers, near 140,000 associates today [24].

In 1969, the OCB system, the National representative of the cooperatives' sector was created on December 2nd, 1969 [6], as depicted in the following Figure 4:

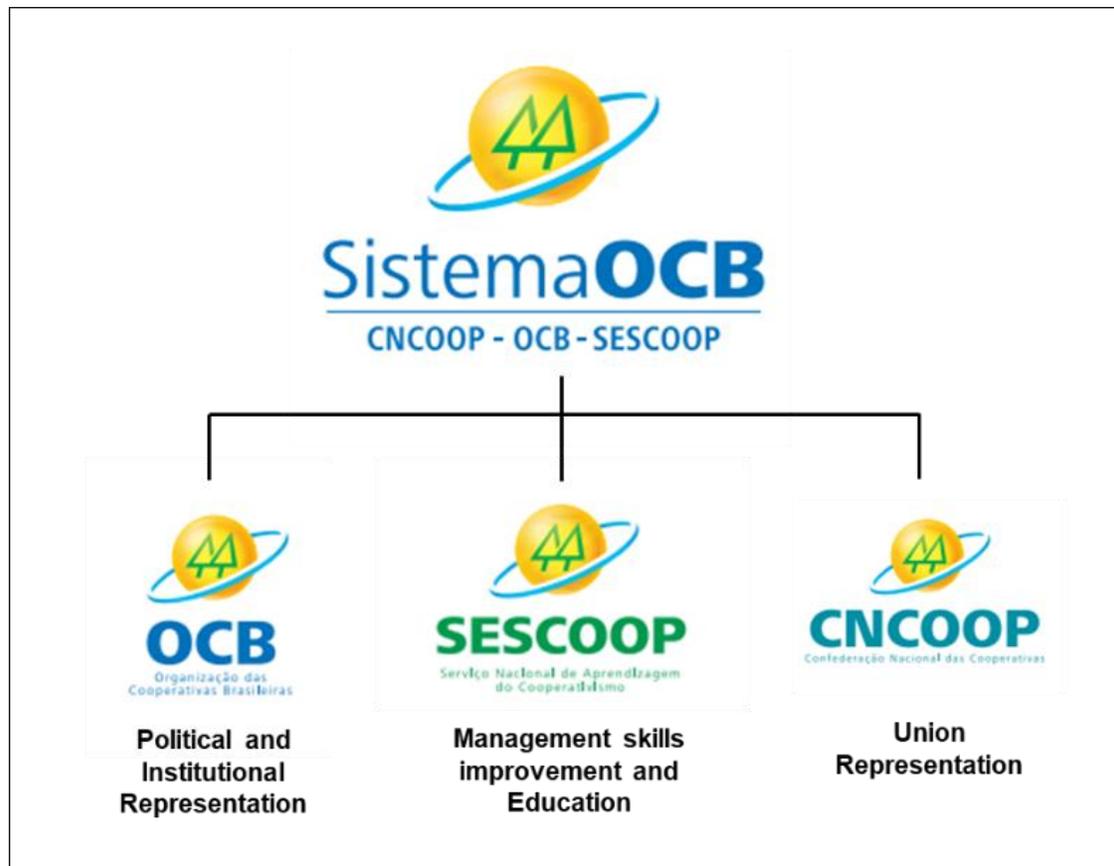


FIGURE 4: OCB System. Dias, 2018. Reprinted under permission.

3.2 Legal Aspects

Agriculture cooperatives in Brazil have the following characteristics, defined by Law 5.764/71 [8], Article 4, items I to XI, as follows:

- I - voluntary adhesion, with an unlimited number of members, except technical impossibility of providing services
- II - variability of the share capital represented by shares;
- III - limitation of the number of shares of the capital for each associate, however, it is possible to establish proportionality criteria, if this is more appropriate for the fulfillment of social objectives;
- IV - non-availability of shares of capital to third parties, outside the company;
- V - the uniqueness of vote, except for those that exercise credit activity, the central cooperatives, federations, and confederations of cooperatives may opt for the proportionality criterion;
- VI - a quorum for the operation and deliberation of the General Assembly based on the number of members and not on the capital;
- VII - the return of net surplus for the year, proportionally to the operations performed by the associate, unless otherwise decided by the General Meeting;
- VIII - indivisibility of Reserve funds and Educational and Social Technical Assistance;
- IX - political neutrality and religious, racial and social indiscrimination;
- X - provision of assistance to members, and, when provided for in the bylaws, to employees of the cooperative;
- XI - Membership admission area limited to the meeting, control, operations and service possibilities [8].

Additionally, Law 5.764/71 [8], established three sorts of cooperatives in Brazil: (a) singular cooperatives; (b) central cooperatives or federations of cooperatives, and (c) confederations of cooperatives, those formed by at least three federations of cooperatives or central cooperatives (Article 5, items I-III). Agriculture cooperatives are stronger in small cities, countryside, than larger ones, due to the proximity from production centers [3]- [19].

The next section presents the current agriculture cooperatives' facts, and figures are presented and analyzed. Discussion and recommendations complete this study.

3.3 Agro Business Impact on Brazilian Economy

According to The Ministry of Agriculture, Livestock and Supply, to the biennium 2017/2018, the Agricultural Plan and Livestock, there is an increasing investment on agriculture, estimated in BRL 200 billion (approximately \$ 50 billion), 2.4% more in credits than the previous harvest, BRL 38.1 billion (approximately \$ 10 billion), is to finance investments, 12 percent more than in the previous year [30]. Agro-business in Brazil represents the average of 6 percent of the overall Brazilian GDP [17], while Industry 21 percent, and Services 73 percent, as depicted in Figure 5, as follows:

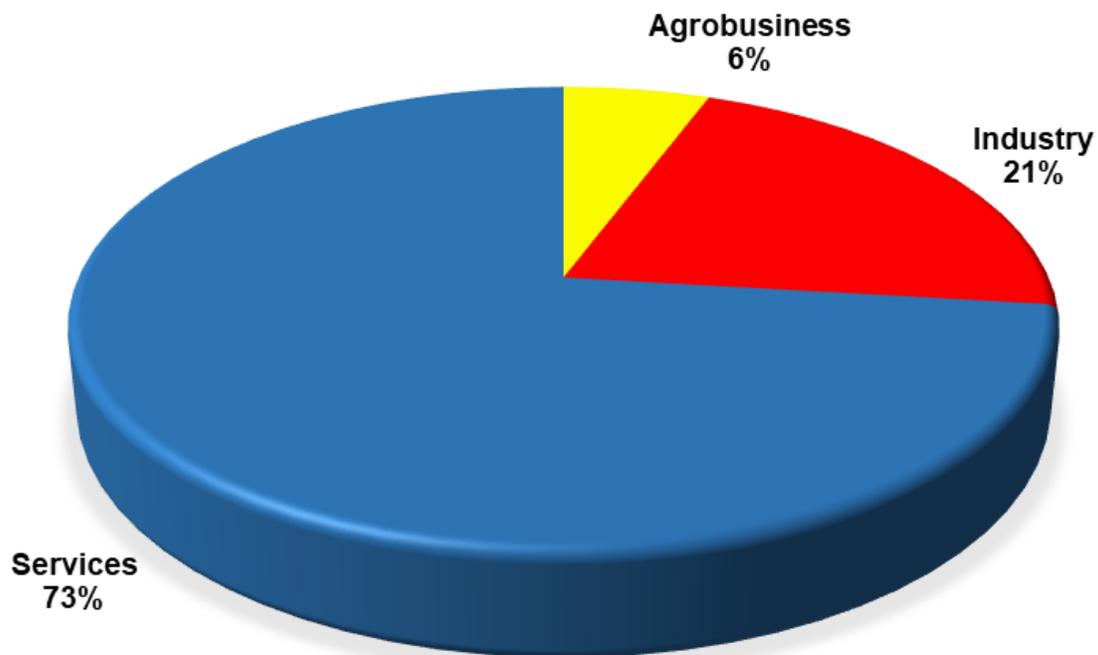


FIGURE 5: Economic activities in the Brazilian GDP. Source: IBGE, 2018.

3.4 Top Five Agriculture Cooperatives In Brazil

The five most representative agriculture cooperatives in Brazil are:

(a) **Aurora Alimentos** - created in 1969 representing eight Santa Catarina cooperatives, at Santa Catarina state, southern Brazil. Aurora Alimentos is today Brazil's largest food producing cooperative and a world reference in technology and meat production. Currently, the company has 12 affiliated cooperatives and more than 75 thousand associated families, 28 thousand direct employees and more than 8 thousand employees of the cooperatives affiliated to the Aurora System. In 2016, the gross operating revenue was near BRL 9 billion (approximately \$ 2.5 billion) [25].

(b) **Lar - Cooperativa Agroindustrial Lar** - created in 1964 by a group of 55 farmers from the Rio Grande do Sul and Santa Catarina, southern Brazil. First named Cooperativa Mista Agrícola Sipal Ltda., Comasil, renamed Lar in 1980. It produces a wide range of agriculture products (300 products), including frozen, canned meat, chicken cuts, and grains. Lar is present in 11 municipalities of the West of Paraná state, southern Brazil, east of Paraguay (10 units), in Mato Grosso do Sul (center-western region), with headquarters in Dourados and 13 units, and in Santa

Catarina, in the municipality of Xanxerê for seed production. It plans to close 2018 with a turnover of BRL 5.7 billion (approximately \$ 1.5 billion) [26].

(c) **COAMO Agro-industrial Cooperativa - COAMO**, an agro-industrial cooperative, was born in 1970 after the union of 79 farmers associated at Campo Mourão, center-west of Paraná state, southern Brazil. Today accounts for approximately 3.5% of all Brazilian grain and fiber production and 17% of the Paraná harvest [27].

(d) **Copersucar** - Copersucar is the most significant Brazilian sugar and alcohol cooperative and one of the largest exporters in the world. With almost 50 years of existence, it has 34 production units located in São Paulo, Minas Gerais, and Paraná. Its consolidated net profit after the harvest of 2016/2017 was BRL 254 million (approximately \$ 70 million), with revenues of BRL 28.3 billion (approximately \$ 8 billion) [28].

(e) **Frimesa** - The Frimesa cooperative, was created from the union of six thousand farmers from four cooperatives in Paraná. Today it is the fourth largest pork producer in Brazil and employs more than 7,000 employees. In 2016, its turnover represented BRL 2.56 billion (approximately \$ 700,000) 15 percent higher than the previous year [29].

4. DISCUSSION

In 2003, Mladenatz investigated the history of the cooperative doctrines [31]. The present study aimed at consolidating current data, from past research, into a new perspective about the following issues, which have been investigated in separate studies: (a) differences between types of associations; (b) global perspective on the cooperatives segment; (c) ILO Resolution 193; (d) Brazilian Federal, State Cooperative Laws, Resolutions from Brazilian regulatory agencies among others, which are usually studied in separate [6]; (e) the inclusion, and presentation of the five most significant Brazilian agricultural cooperatives; (f) current facts and figures from agricultural cooperatives in Brazil.

In this sense, the present work consolidated complementary but separate past body of knowledge, providing a concise and broad vision on the subject under investigation.

In the biennium 2017-2018, according to the Brazilian Central Bank, the cooperatives' balance was positive [21]. Therefore, the current agriculture cooperative model proved to be a success in Brazil. Some of the following, are critical success factors, among them:

(a) the model of Cooperatives is voluntarist, based on self-help, cooperativity philosophy, which embraces equal vote and shared responsibility, interest for the community, participative and integrated decision making process [22]- [23].

(b) Government support and efficient organization: cooperatives in Brazil are protected by Federal Constitution 1988, Federal Law 5.746/71, state Laws and resolutions that regulates the cooperative system, turning it into a stable on in comparison to other forms of association [8].

(c) *Organização das Cooperativas do Brasil (OCB)*, along with the OCB System (See Figure 4), play a fundamental role in representing the entire cooperatives sector in Brazil [6]. It is one of the pillars for the success of agriculture cooperatives in Brazil.

(d) technical support to the associated farmers is one of the most powerful tools that agriculture cooperatives, maintain such as veterinarians, agronomists, to support the producers, guaranteeing bigger and better productions, which is interest of both the cooperative and the cooperative, especially for the newcomers at the segment [6].

(e) Special services. Cooperatives also provide services to the producer, such as the processing of coffee, milk pasteurization, packaging of products. These services are expensive if done by each farmer, on an individual basis.

(f) Cooperatives attend not one individual or firm, but the entire network/group. On the one hand, a given company is designed primarily for-profit and self-interest. On the other hand, Cooperatives are involved with an entire community, strengthening the alliance between its members, local farmers, authorities, and even the entire community [8]- [21].

Therefore, the present work achieved the consolidation of past research into a single, and concise study, which is helpful to practitioners, students, cooperative professionals, among others, to provide the updated and extensive insights on the panorama over the Brazilian agriculture cooperatives.

Finally, the agricultural cooperatives serve to obtain the best possible agricultural production.

5. RECOMMENDATIONS

For further research, it is encouraged to revisit the case on agriculture cooperatives in Brazil, to investigate their evolution. Further studies on Cooperatives are also recommended, once they promote the sense of mutual value creation through joint action, mutual needs satisfaction by maximizing on the synergy and economies of scale, including shared responsibilities and fostering mutual trust. The impact on cooperatives' performance should be investigated.

6. REFERENCES

- [1] Yin, R. (1988) Case Study Research: Design and Methods. Newbury Park, CA: Sage Publications.
- [2] International Co-operative Alliance (2018). World Co-operative Monitor_ 2017_EN. Retrieved from <https://monitor.coop/es/media/library/research-and-reviews/world-co-operative-monitor-2017en>, on September 29, 2018.
- [3] Dias, Murillo de Oliveira; Ramos Alambert R. Murilo (2018). Credit Cooperatives in Brazil. In: International Journal of Science and Research (IJSR). Volume 7 Issue 10, October 2018, pp. 598-603. ISSN: 2319-7064. DOI: 10.21275/ART20191901.
- [4] ILO (2002). Recommendation 193. International Labour Organization. Retrieved from http://www.recma.org/sites/default/files/ILO_RECOMMENDATION_NO._193_ON_THE_PROMOTION_OF_COOPERATIVES.pdf, on September 30, 2018.
- [5] ILO (2018). Promoting Co-operatives, A guide to ILO Recommendation 193. Retrieved from https://www.ilo.org/global/docs/WCMS_160221/lang-en/index.htm , on September 30th, 2018.
- [6] OCB (2018). Organização das Cooperativas do Brasil. Ramos do Cooperativismo. Retrieved from <https://www.ocb.org.br/ramos>, on September 30th, 2018.
- [7] Brasil (1988), Governo Federal. Constituição da República Federativa do Brasil.
- [8] Brasil (1971). Lei nº 5.764, de 16 de dezembro de 1971. Define a Política Nacional de Cooperativismo, institui o regime jurídico das sociedades cooperativas. Retrieved from http://www.planalto.gov.br/ccivil_03/leis/L5764.htm, on September 29, 2018.
- [9] Brasil (2009). Lei Complementar 130/2009 – Sistema Nacional de Crédito Cooperativo. Dispõe sobre o Sistema Nacional de Crédito Cooperativo e revoga dispositivos das Leis nos 4.595, de 31 de dezembro de 1964, e 5.764, de 16 de dezembro de 1971. Retrieved from http://www.planalto.gov.br/ccivil_03/leis/lcp/Lcp130.htm, on September 29, 2018.

- [10] Brasil (2012). Lei 12.690/2012 – Cooperativas de Trabalho. Dispõe sobre a organização e o funcionamento das Cooperativas de Trabalho; institui o Programa Nacional de Fomento às Cooperativas de Trabalho – PRONACCOOP. Retrieved from http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2012/Lei/L12690.htm, on September 29, 2018.
- [11] Brasil (2013). Decreto 8.163/2013 – Pronacoop Social. Institui o Programa Nacional de Apoio ao Associativismo e Cooperativismo Social (Pronacoop Social). Retrieved from http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2013/decreto/D8163.htm, on September 30th, 2018.
- [12] Brasil (2001). Medida Provisória 2.168-40/2001 Serviço Nacional de Aprendizagem do Cooperativismo (Sescoop). Autoriza a criação do Sescoop, entidade de direito privado com o objetivo de organizar, administrar e executar o ensino de formação profissional, desenvolvimento e promoção social do trabalhador em cooperativa e dos cooperados.
- [13] Brasil (1999). Decreto 3.017/1999 – Serviço Nacional de Aprendizagem do Cooperativismo. Approves the Regulation of the National Service of Learning of Cooperativism – SESCOOP. Retrieved from http://www.planalto.gov.br/ccivil_03/decreto/D3017.htm, on September 30th, 2018.
- [14] Brasil (2002). Código Civil Brasileiro. Lei 10.406 de 10 de janeiro de 2002. Retrieved from http://www.planalto.gov.br/Ccivil_03/leis/2002/L10406compilada.htm, on September 29, 2018.
- [15] CFC (2001). Resolução CFC 920/2001 – Aspectos contábeis de entidades cooperativas. Aprova a Norma Brasileira de Contabilidade das Entidades Cooperativas (NBC T 10.8). Retrieved http://www1.cfc.org.br/sisweb/sre/detalhes_sre.aspx?Codigo=2001/000920, on September 30th, 2018.
- [16] CFC (2005). Conselho Federal de Contabilidade. Resolução CFC 1.013/2005 – Entidades Cooperativas. Esclarece a interpretação técnica do Conselho de Contabilidade sobre critérios e procedimentos específicos de avaliação, de registro das variações patrimoniais e de estrutura das Demonstrações Contábeis e de informações mínimas a serem incluídas em notas explicativas, relativas à NBC T 10.8 – Entidades Cooperativas. Retrieved from http://www1.cfc.org.br/sisweb/sre/detalhes_sre.aspx?Codigo=2005/001013, on September 30th, 2018.
- [17] IBGE (2018). Agricultura e Pecuária. Retrieved from <https://www.ibge.gov.br/estatisticas-novoportal/economicas/agricultura-e-pecuaria.html>, on October 9, 2018.
- [18] Sescoop (2017). Fundamentos do Cooperativismo. Organizadores: Serviço Nacional de Aprendizagem de Cooperativismo e Organização das Cooperativas Brasileiras, coordenadora Giuliana Fardini. Brasília, DF: Sistema OCB – Série Cooperativismo.
- [19] Portal do Cooperativismo no Brasil (2018). Conheça as maiores instituições financeiras cooperativas do Brasil-base 2017. Retrieved from <http://cooperativismodecredito.coop.br/2018/05/conheca-as-maiores-instituicoes-financeiras-cooperativas-do-brasil-base-2017/>, on October 9, 2018.
- [20] Diário Comércio Indústria e Serviços - DCI (2018). Sicoob tem lucro de R\$ 855 milhões no 1º trimestre. Retrieved from <https://www.dci.com.br/financas/sicoob-tem-lucro-de-r-855-milhes-no-1-tri-1.711165>, on October 9, 2018.
- [21] Banco Central do Brasil (2018). Panorama do sistema nacional de crédito cooperativo. Data-base: dezembro/2017. Retrieved from

https://www.bcb.gov.br/pre/microFinancas/coopcar/pdf/panorama_de_cooperativas2017.pdf, on October 10, 2018.

- [22] Dias, Murillo & Navarro, Rodrigo (2017). O Fator Confiança em Relações Governamentais e sua importância para o futuro da atividade. In: Revista Brasileira de Relações Institucionais e Governamentais. 3a. Edição comemorativa, agosto de 2017, pp.38-41.
- [23] Dias, Murillo., (2016). Factors Influencing the Success of Business Negotiations in the Brazilian Culture (Doctoral Thesis). ESC Rennes School of Business, France.
- [24] Dias, Murillo de Oliveira (2018). Evolution of Cooperative Societies in Brazil. In: International Journal of Community and Cooperative Studies, Vol.6 No.4, pp.1-11, November 2018. Page 2.
- [25] Aurora (2018) . A Aurora. Retrieved from <https://www.auroraalimentos.com.br/sobre/aurora-linha-do-tempo>, on October 19, 2018.
- [26] Lar Cooperativa Industrial (2018). História. Retrieved from <http://www.lar.ind.br/v4/institucional/index.php>, on October 19, 2018.
- [27] COAMO (2018) Nossa História. Retrieved from <http://www.coamo.com.br/site/institucional/>, on October 19, 2018.
- [28] Copersucar (2018) Copersucar. Retrived from <https://www.copersucar.com.br/> , on October 19, 2018.
- [29] Frimesa (2018) Nossa essencia. Retrived from <http://www.frimesa.com.br/pt/sobre>, on October 19, 2018.
- [30] Brasil (2018). Ministério da Agricultura, Pecuária e Abastecimento. Plano Agrícola e Pecuário 2017/2018. Retrived from <http://www.agricultura.gov.br/assuntos/sustentabilidade/plano-agricola-e-pecuario/arquivos-pap/folder-pap-2017-18> , on October 19, 2018.
- [31] Mladenatz, Gromoslav. Histórico das doutrinas cooperativistas. Confebras: Brasília, 2003.