

ISSN 2281-8235 Working Paper n. 104 | 18

**Chiara Carini**  
**Carlo Borzaga**  
**Maurizio Carpita**

**Advancing statistics on  
cooperatives:  
Reflections on six country  
case studies**

---

Please cite this paper as:

Carini, C., Borzaga, C. & Carpita, M. (2018), Advancing statistics on cooperatives: Reflections on six country case studies, *Euricse Working Papers*, 104|18.

# Advancing statistics on cooperatives: Reflections on six country case studies\*

Chiara Carini\*, Carlo Borzaga♦ and Maurizio Carpita^

## Abstract

In recent times, both researchers and policymakers have identified the need to develop statistics on cooperatives that can be compared at the international level. This need has also been discussed at the 19th International Conference of Labour Statisticians (ICLS) held in Geneva in October 2013, which recognized the importance of having more comprehensive and internationally comparable statistics on cooperatives by adopting a resolution for advancing work on the topic (International Labour Organisation [ILO], 2013).

This paper summarizes the main results of the project “Terms of References for National Practices in Developing Statistics on Cooperatives” that is part of the series of initiatives undertaken by the ILO to better understand how data on cooperatives are collected and realised across the world<sup>1</sup>. The project aimed at deepening the data collection methodologies and understanding the data collection process and the role of the institutions involved, the sources of data and the definitions, questions sets, classification schemes, methods and tools applied to collect and analyse data on cooperatives in Brazil, Canada, Colombia, the Philippines, the Russian Federation and the United Kingdom. The paper presents a synthesis of these country practices putting them into a common framework with proposals for a definition of cooperatives, as well as recommendations for a classification system and methods to release statistics on cooperatives.

## Keywords

Cooperatives, Statistics, Definition, Classification schemes, Data collection methods

## JEL Codes

C81, C82, C83

---

\* The writing of this paper has been supported by the Autonomous Province of Trento, Italy.

♦ European Research Institute on Cooperative and Social Enterprises (Euricse). Email: [chiara.carini@euricse.eu](mailto:chiara.carini@euricse.eu)

♦ Università degli Studi di Trento and Euricse. Email: [carlo.borzaga@unitn.it](mailto:carlo.borzaga@unitn.it)

♦ Università degli Studi di Brescia and Euricse. Email: [maurizio.carpita@unibs.it](mailto:maurizio.carpita@unibs.it)

<sup>1</sup> More information regarding the initiative is available at:

[https://www.ilo.org/global/topics/cooperatives/areas-of-work/WCMS\\_550541/lang--en/index.htm](https://www.ilo.org/global/topics/cooperatives/areas-of-work/WCMS_550541/lang--en/index.htm) and <https://www.ilo.org/global/topics/cooperatives/publications/country-stats/lang--en/index.htm>

## 1. Background

Cooperatives are organisations that combine economic and social objectives more than any other type of enterprise, especially when managing activities to benefit economically marginalised people (Moore, 2000). In addition, they often produce goods and services of general interest that public organisations and for-profit companies are not willing or able to generate for various reasons, including low profitability, market failures induced by information asymmetries and positive externalities (Borzaga, 2012). Recognition of the role of cooperatives by scholars, policymakers, and society has been insufficient in the past, and even today, knowledge of the diffusion, size and impact of cooperatives worldwide remains fragmentary (Birchall and Hammond Ketilson, 2009). This could be addressed if a more precise view was available of how cooperatives contribute to the socioeconomic welfare of countries. Therefore, accurately quantifying this phenomenon and its economic, social and employment effects, as well as its evolution over time, is a priority. Recently, both researchers and policymakers have identified the need to develop statistics on cooperatives that can be compared at the international level. This need has also been discussed at the 19th International Conference of Labour Statisticians (ICLS) held in Geneva in October 2013, which recognised the importance of having more comprehensive and internationally comparable statistics on cooperatives by adopting a resolution to advance work on this topic (International Labour Organisation [ILO], 2013).

The need for robust and reliable statistics draws the attention to the debate surrounding the methods and tools used for the collection and analysis of data on cooperatives and more generally to the quality of the statistical process, where the term “quality” refers not only to the concept of data accuracy but also to a wider spectrum of issues (Organisation for Economic Cooperation and Development [OECD], 2011). It is in fact necessary to evaluate several dimensions related to both the output/product and to the statistical process itself (Eurostat, 2014a; Eurostat, 2014b): relevance, accuracy and reliability, timeliness and punctuality, coherence and comparability, and accessibility and clarity (United Nations Statistics Division [UNSD], 2003; International Monetary Fund [IMF], 2003; Eurostat, 2009).

That said, based on an analysis of the data collection processes and the roles of the institutions involved (producers and/or providers of data)—as well as the data sources and definitions, question sets, classification schemes, methods and tools applied in six countries—this paper aims to build a common framework that synthesises these countries’ practices in order to provide recommendations and proposals for a standard classification system for cooperatives.

This paper summarises the main results of a research project that is part of the series of initiatives undertaken by the ILO to better understand how data on cooperatives are collected and statistics are realised around the world (Carini, Borzaga and Carpita, 2017).

The paper is structured as follows: Section 2 presents the aim and methodology of the study; Section 3 presents the main findings in terms of the data providers, definitions, classifications, methods and variables released. Finally, Section 4 articulates the main conclusions of the research.

## 2. Research design

The analysis is based on case studies covering six countries—Brazil, Canada, Colombia, the Philippines, the Russian Federation and the United Kingdom—that have been selected based on the preliminary results of the global mapping initiative conducted by the ILO (Galhardi, 2016) to cover different areas of the world that differ in terms of the types of data provider and the types of methods used to collect data on cooperatives (Table 1).

**Table 1. Countries, data providers and methods**

Country	Main data provider	Type of data provider	Method used to collect data
Brazil	Secretaria Nacional de Economia Solidária do Ministério do Trabalho (MTb/SENAES) and Departamento Intersindical de Estatística e Estudos Socioeconômicos (DIEESE) <sup>2</sup>	Government agencies in charge of cooperatives	Statistical register, survey
Canada	The Co-operatives Policy office of Innovation, Science and Economic Development Canada <sup>3</sup>	Government agencies in charge of cooperatives	Administrative register, survey
Colombia	Confederación de Cooperativas de Colombia (Confecoop) <sup>4</sup> and Centro de Investigación del Cooperativismo (Cenicoop) <sup>5</sup>	Cooperative movement organisations	Administrative register
Philippines	Cooperative Development Authority <sup>6</sup>	Government agencies in charge of cooperatives	Administrative register
Russian Federation	Federal State Statistics Service (Rosstat) <sup>7</sup>	National Statistical Office (NSO)	Statistical register, census
United Kingdom	Co-operatives UK <sup>8</sup>	Cooperative movement organisations	Administrative register, survey

*Source:* Authors based on Galhardi (2016)

<sup>2</sup> In Brazil, since 2003, MTb/SENAES and DIEESE have been working on mapping organisations in the Brazilian solidarity economy. In 2015, this work culminated in the creation of the National Observatory on the Solidarity Economy and Cooperatives (Observatório Nacional da Economia Solidária e do Cooperativismo): <http://ecosol.dieese.org.br/>

<sup>3</sup> [www.ic.gc.ca/eic/site/693.nsf/eng/h\\_00037.html](http://www.ic.gc.ca/eic/site/693.nsf/eng/h_00037.html)

<sup>4</sup> <http://confecoop.coop/>

<sup>5</sup> <http://www.confecoop.coop/estadistica/cenicoop/>

<sup>6</sup> <http://www.cda.gov.ph/index.php/resources/updates/statistics>

<sup>7</sup> [http://www.gks.ru/wps/wcm/connect/rosstat\\_main/rosstat/en/main/](http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/en/main/)

<sup>8</sup> [www.uk.coop](http://www.uk.coop)

The study was conducted through desk research and interviews with key informants. The desk research focused on: i) the context in which the data provider operates and in which the statistical processes are conducted; ii) the data providers themselves, with an emphasis on their professional independence; the existence of a legal mandate to collect data; and their statistical confidentiality, impartiality and objectivity; iii) definitions and classifications; and iv) methodologies and tools used for the collection and analysis of data.

The desk research was based on the collection of information available on the website of the data provider, focusing on the analysis of methodological manuals, metadata webpages, online databases and statistics reports. For each country, the desk research also included an analysis of the laws (if any) concerning cooperatives and of the laws (if any) that govern the creation of administrative registers on cooperatives.

The interviews were conducted to complete or crosscheck information collected through desk research. Two types of key informants were identified: people involved in the collection and analysis of the data and data users (i.e., researchers and experts not directly involved in the data collection process but with a recognised knowledge of the data and strong proven experience in its use).

### **3. Findings**

#### *3.1 Data providers*

In the six countries analysed, the data providers—i.e., the national statistical offices (NSOs), government agencies in charge of cooperatives and cooperative movement organisations—present both strengths and weaknesses to varying degrees.

NSOs release official statistics, usually under a legislative mandate but in independence from political interference. They act in accordance with ethical and professional principles and according to standards, frequently defined at the international level, that should ensure quality data and allow for international comparisons. The main problem is that, so far, NSOs have expressed little interest in collecting and analysing data on cooperatives.

Government agencies and departments also pay attention to the methodologies used to collect and analyse data. In some cases, however, less attention is paid to metadata, which may be entirely unavailable or unavailable in a complete and exhaustive form. On the other hand, whereas NSOs demonstrate a strong knowledge of statistical methodologies and methods, government agencies appear to know the cooperative sector more deeply than NSOs, which may be advantageous in developing relevant statistics on cooperatives.

Finally, cooperative movement organisations generally release statistics to compensate for a lack of official statistics. They have a good knowledge of the sector and are in direct

contact with the cooperatives, which may also be advantageous in collecting data; however, they might demonstrate less scientific rigor in the collection and analysis of data, and because they represent the cooperative sector in the country, they tend to interpret the data with a positive bias.

### 3.2 Definition of “cooperative”

The case studies have highlighted that data providers identify statistical units using an operational definition based either on the legal definition of “cooperative” outlined in the national law—as in the case of Canada Colombia and the Philippines—or using a statistical definition, such as in the case of Brazil, the Russian Federation and the United Kingdom (Table 2).

**Table 2. Types of definitions used to identify cooperatives**

Country	Definition adopted
Brazil	Statistical definition proposed by CONCLA <sup>9</sup>
Canada	Legal definition, including cooperatives incorporated under provincial or federal law
Colombia	Legal definition according to Law 79/1988
Philippines	Legal definition according to Republic Act No. 9520
Russian Federation	Statistical definition based on OKOPF classification <sup>10</sup>
United Kingdom	There is no single legal definition of cooperatives. Co-operatives UK defined criteria and a process to identify cooperatives

*Source:* Carini, Borzaga and Carpita (2017)

As for the statistical definition of a cooperative, it is also interesting that we have two different levels of formalisation of the classifications. On the one hand, in Brazil and in the Russian Federation, the data providers refer to the official statistical system of classification of legal forms in the country released by the NSO or by a government agency, with the aim of translating into statistical terms the criteria regulating cooperatives set out in the national legislation. On the other hand, in the United Kingdom, the absence of a single definition of cooperatives in the law led the data provider to establish a step-by-step process to identify cooperatives across the legal forms of enterprises recognised by law.

<sup>9</sup> The statistical classification system on the legal nature of organisations issued by the National Commission on Classification (Comissão Nacional de Classificação [CONCLA]):

<http://concla.ibge.gov.br/estrutura/na%7Cjur-estrutura/natureza-juridica-2016>

<sup>10</sup> The Russian Classification of Organizational and Legal Forms (OKOPF):

<http://www.gks.ru/metod/classifiers.html>

Although different, these definitions all refer to some key characteristics set out in the seven cooperative principles recognised by the International Co-operative Alliance<sup>11</sup>, which can be summarised into four dimensions, as already highlighted in previous studies on cooperatives (European Commission, 2006; Deller et al., 2009): i) private legal entities, ii) carrying out an economic activity aimed at satisfying the needs of members, iii) voluntary membership, and iv) democratic governance.

The first common point across all definitions of a cooperative is in fact that the statistical units for which statistics are compiled are the “enterprises” incorporated into the form of a cooperative according to the legislation of the country or, in the absence of a specific law, according to the cooperative tradition of the country. This means that statistics are compiled for organisational units whose existence is recognised by law independently of the individuals or institutions that may own or belong to said units.

Second, to satisfy members’ needs, the cooperative engages in an activity “carried out under the responsibility, control and management of an institutional unit, that uses inputs of labour, capital, and goods and services to produce outputs of goods and services” (Eurostat et al., 2009: 630). Unlike conventional enterprises, cooperatives enter markets via organisation by members for their individual and mutual benefit. This also suggests that, if the main goal of a cooperative is the satisfaction of the members’ needs, there are no limitations to the types of activity that the cooperative can carry out.

Finally, membership in a cooperative cannot be compulsory, as emphasised in the International Co-operative Alliance definition and in other studies (European Commission, 2006), and control of the cooperative must be distributed among members on a democratic basis, commonly in the form of voting rights allocated either according to the volume of transactions or simply as “one member, one vote”.

### *3.3 Classifications*

There are several criteria that are used in the six countries examined to classify cooperatives (Carini, Borzaga and Carpita, 2017); among those on which it is interesting to focus are the economic activity carried out by the cooperative and the cooperative’s type.

As to the economic activities carried out by the cooperative (Table 3), the official national classifications of economic activities are generally used. Such classifications are comparable to the United Nations’ International Standard Industrial Classification of All Economic Activities (ISIC),<sup>12</sup> or, in case they are not completely comparable, there are correspondence tables with ISIC, which ensures the comparability of cooperative

---

<sup>11</sup> <http://ica.coop/en/whats-co-op/co-operative-identity-values-principles>

<sup>12</sup> The International Standard Industrial Classification of All Economic Activities (ISIC) is a standard UNSD classification of economic activities arranged so that entities can be classified according to the activity they carry out: [https://unstats.un.org/unsd/publication/seriesm/seriesm\\_4rev4e.pdf](https://unstats.un.org/unsd/publication/seriesm/seriesm_4rev4e.pdf)

statistics with the statistics of other forms of enterprises both nationally and internationally.

**Table 3. Classifications by economic activity and membership in the six countries**

Country	Economic activity	Membership
Brazil	CNAE <sup>13</sup>	-
Canada	NAICS <sup>14</sup>	Consumer, producer, worker, multi-stakeholder
Colombia	ISIC Rev. 3	-
Philippines	-	Credit, consumers, producers, marketing, service, multipurpose, advocacy, agrarian reform, bank, dairy, education, electric, financial service, fishing, health services, housing, insurance, transport, water service, workers, other types as may be determined by the Authority
Russian Federation	OKVED <sup>15</sup>	Productive, consumer, agricultural
United Kingdom	SIC <sup>16</sup>	Co-operatives, community of interest, consumers, employee trust, enterprises, multi-stakeholder, self-employed, tenants

*Source:* Carini, Borzaga and Carpita (2017)

On the other hand, a more complex situation is presented by looking at the second criterion adopted, namely, the type of cooperative. The lack of international standards means that each country has developed its own classification, in line with national legislation, based on the cooperative tradition of the country or on the basis of criteria defined by the data provider. This implies that the criteria according to which the classifications are defined are not always the same, and even if the same criteria are adopted, the degree of detail of the categories varies greatly from country to country.

Having international standards for cooperative classification would make it possible to compare classifications among countries. The case studies and pre-existing literature on the topic reveal several criteria that could be used, even combined, to classify the types of cooperatives (ILO, 2017). Among these criteria, it might be interesting to investigate the relationship between members and the cooperative. In particular, it might be useful to complete the information provided by the classification according to economic activity by providing more information on how the needs of the members are met through the economic activity carried out by the cooperative.

<sup>13</sup> The National Classification of Economic Activities (Classificação Nacional de Atividades Econômicas): <http://concla.ibge.gov.br/estrutura/atividades-economicas-estrutura/cnae>

<sup>14</sup> The North American Industry Classification System: <http://www.statcan.gc.ca/eng/subjects/standard/naics/2012/index>

<sup>15</sup> All-Russian Classification of Economic Activities: <http://www.gks.ru/metod/classifiers.html>

<sup>16</sup> UK 2007 Standard Industry Classification: <http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/standard-industrial-classification/index.html>



The issue of how to categorise cooperatives based on their relationship with and benefits to members has been widely debated by academics and has led to the identification of four types of cooperatives: user, producer, worker and multi-stakeholder cooperatives. The first three types are based on a single class of stakeholder membership (Ben-Ner, 1987; Hansmann, 1996; Dow, 2003), where the stake is consumption, production and work, respectively, whereas the multi-stakeholder type is characterised by the presence and influence of a plurality of stakeholders (Münkner, 2004; Borzaga and Fazzi, 2011; Lund, 2011; Negri Zamagni, 2012; Defourny and Nyssens, 2013). These four categories might be the starting point for defining typologies that can be used to compare statistics across countries.

### *3.4 Methods*

Four different methods for the collection of statistical data were identified: administrative databases, statistical databases, censuses and surveys (Table 1). Using only one of these methods might not guarantee a rigorous and comprehensive coverage of the target population and might not provide a comprehensive range of variables. Therefore, as the case studies suggest, it might be necessary to combine two or more methods.

The administrative registers are generally public registers, and cooperatives are generally required to register to them. However, there might be problems concerning the quality of the data within these registers, including errors in data entry, poor data cleaning, infrequent updating and a small range of covered variables. In addition, registers do not always cover all the cooperatives in the country, and even if they cover all cooperatives, they may also include ones undergoing liquidation or those that have ceased operations.

Statistical registers, defined using administrative registers as data sources, ensure greater rigor in identifying the relevant units and guarantee good coverage of the population, excluding cooperatives undergoing liquidation or those that have ceased operations. However, statistical registers only contain variables available in administrative registers, so it might be necessary to integrate their data with data obtained using other methods.

Surveys and censuses are methods that can be used to overcome the limitations of the registers because they can be used to crosscheck data of the registers and to collect data not available in the registers. The problem is that they present high costs in terms of economic and human resources, the need for a stricter methodology, and—in the case of censuses—slow release of information.

### *3.5 Variables released*

There are basically two issues to bring to light. The first concerns the range of variables issued, while the second concerns differences in variable definitions across countries. The variables released cover four areas: number of cooperatives, number of employees,

number of members and economic performance (Table 4). Statistics on the number of cooperatives and their employment are released for all six countries. Data on turnover are released for all the countries except for Brazil, whereas other economic variables (e.g., assets, equity, etc.) vary from country to country. As for the data on membership, this is not available for Brazil or for the Russian Federation, where the collection of data on cooperatives is part of a wider data collection strategy including other forms of enterprise (DIEESE, 2016). In addition, it should be noted that the four countries that release data on membership may double count; it is not possible to verify whether a member of a cooperative is also a member of other cooperatives.

**Table 4. Variables released by country**

Country	Number of organisations	Employees	Members	Economic variables
Brazil	x	x	-	-
Canada	x	x	x	x
Colombia	x	x	x	x
Philippines	x	x	x	x
Russian Federation	x	x	-	x
United Kingdom	x	x	x	x

*Source:* Carini, Borzaga and Carpita (2017)

However, the main problem is represented by the definitions of these variables that are adopted in the different countries: the variables may not be defined in the same way across all countries. This is the case for economic variables and for the variable “number of cooperatives”. In fact, the case studies highlight two concepts that do not always coincide: the number of cooperatives registered in administrative registers and the number of cooperatives that can be considered active (Cenicoop and Confecoop, 2014; Cooperative Development Authority, 2014; Co-operatives UK, 2015; Rosstat, 2006; Innovation, Science and Economic Development Canada, 2015). Given the shortcomings in the process of cleaning and updating the data in administrative registers, the number of cooperatives registered to the administrative register may include cooperatives that are no longer active (in liquidation or dissolved). The number of active cooperatives instead refers to cooperatives that, during the period analysed, carried out an economic activity (meaning they had employees or turnover). This is not a trivial issue: the inclusion of inactive cooperatives in the administrative register could result in an overestimation of the number of cooperatives in a country.

Among the six countries examined, the only one in which “active” status has been defined consistently according to statistical criteria is the Russian Federation. The Philippine and Colombian cases show that the use of administrative registers alone is not sufficient to

exclude cooperatives in liquidation or those that have ceased operations. To overcome this deficiency, the Philippines issues both data concerning all cooperatives registered and data restricted to cooperatives that have submitted the required documents annually. On the other hand, in the case of Colombia, the impossibility of determining the legal status of a cooperative from the information contained in administrative registers led Confecoop-Cenicoop to select the availability of an annual report from the last three years in the administrative register as a proxy for “being active”. The same problem also occurred in the Canadian case. Data available on administrative registers for the various provinces do not allow active ones to be identified, which makes a survey necessary. Because of this situation, the data on the number of organisations refers not to an estimated national population of cooperatives but only to the number of cooperatives that completed the survey. There is no certainty that all active cooperatives participated in the survey, which could result in an underestimation of the number of cooperatives in a country and thus influence the measurement of employment, membership and economic performance.

#### **4. Conclusions**

This analysis has documented the diversity of models, available data and statistical processes implemented concerning cooperatives in six countries and leads to the conclusion that no single ideal model exists that can be applied in all contexts throughout the world. However, the case studies identified some common features underlying the measurement of cooperatives, which could be helpful in defining and implementing appropriate processes elsewhere.

As for the data provider, the process of developing statistics on cooperatives should be guided by the NSO, which guarantees scientific and methodological rigor and compliance with quality standards. However, three considerations should be added. The first is that NSOs have not yet shown great attention and interest in the development of statistics on cooperatives. Considering this, an initial step would be to involve the NSO gradually, asking them to introduce some questions to distinguish cooperative enterprises from other forms of enterprise into the investigations they already conduct (business and household surveys). The same request could be applied to the analyses of statistical company registers. Second, the types of data provider identified in the case studies are joined by a fourth type that could also collect data and produce statistics about cooperatives: universities and research centres. These independent institutions carry out research activities and can provide methodological support in data collection, along with in-depth analysis of the data collected. The third consideration is that the NSO should not work alone but should assemble a working group—including representatives of government agencies, cooperative organisations and universities—to provide sectoral expertise, assess the compliance of official data with user requirements, report any information

gaps, propose solutions to fill these gaps and promote in-depth analysis of the resulting data.

As for the definition of the target population, statistics should be released for cooperative enterprises, meaning enterprises incorporated in the form of a cooperative according to national legislation or, in the absence of a specific law, according to the cooperative tradition of the country. However, the boundary of the study population could be extended by taking into consideration that cooperative enterprises are not the only type of organisation carrying out their activity in a cooperative way. There are also two other categories of organisations, distinguished from cooperative enterprises, which operate under cooperative principles and which could be defined as “borderline” cooperative organisations. The first category encompasses enterprises formally constituted and incorporated in a legal form that differs from cooperative status but that operate according to some cooperative principles. A second category could encompass informal cooperative organisations, meaning individuals and families acting in an organisation that operate according to cooperative principles but that are not formally constituted or incorporated under national law.

When discussing cooperative classifications, it is important to include both a classification by economic activity—using official classifications that guarantee the comparability of statistics at the national and international levels and with those of other forms of enterprise—and a classification based on the relationship between members and the cooperative.

Finally, with regard to the methods to be used for data collection, even in this case, the analysis has shown that there is no single ideal method. Instead, a combination of several methods is often necessary. Among these, in-depth case studies using a combination of statistical registers and sample surveys seem to give the best results in terms of population coverage, the robustness of the data collected and timely release of data. The use of statistical registers guarantees a more thorough coverage of the target population, ensuring a shorter delay and more frequent release of statistics than other methods. However, the NSOs should integrate these methods with surveys to validate the data in registers and expand the range of variables collected. To follow best practices, it is not necessary to create specific statistical databases for cooperatives. Rather, they should be included in the statistical databases of enterprises, ensuring the comparability of cooperative data with those of other companies. In this case, however, additional variables (e.g., number of members, type of cooperative) that are not generally collected for other types of enterprises must be included in the database.

## References

- Ben-Ner, A. (1987). Producer Cooperatives: Why Do they Exist in Capitalist Economies? In: W.W. Powell (Ed.), *The Nonprofit Sector: A Research Handbook*. New Haven and London: Yale University Press, pp. 434–449.
- Birchall, J. & Hammond Ketilson, L. (2009). *Resilience of the Co-operative Business Model in Times of Crisis*. Geneva: International Labour Organisation. Available at: [http://www.ilo.org/empent/Publications/WCMS\\_108416/lang--en/index.htm](http://www.ilo.org/empent/Publications/WCMS_108416/lang--en/index.htm) [Accessed 10 October 2016].
- Borgaza, C. & Fazzi, L. (2011). Processes of Institutionalization and Differentiation in the Italian Third Sector, *Voluntas*, 22(3): 409–427. DOI: <https://link.springer.com/article/10.1007%2Fs11266-010-9159-z>
- Borzaga, C. (2012). Il contributo dell'economia sociale al superamento della crisi [The contribution of the social economy to overcome the crisis]. In: M. Bray & M. Granata (Eds.), *L'economia sociale: una risposta alla crisi* [The social economy: an answer to the crisis]. Roma: Edizioni Solaris, pp. 78–87.
- Carini, C., Borzaga, C. & Carpita, M. (2017). *Case Studies on Brazil, Canada, Colombia, the Philippines, the Russian Federation and the United Kingdom*. Geneva: International Labour Organisation.
- Cenicoop & Confecoop (2014). *Desempeño Sector Cooperativo Colombiano 2014* [Performances of the Colombian cooperatives 2014]. Bogotá: Cenicoop. Available at: [http://confecoop.coop/images/informes\\_anuales/DESEMPE%C3%91OCOOOP2014.pdf](http://confecoop.coop/images/informes_anuales/DESEMPE%C3%91OCOOOP2014.pdf). [Accessed 14 October 2016].
- Cooperative Development Authority (2014). *Statistics on cooperatives*. Available at: <http://www.cda.gov.ph/index.php/resources/updates/statistics> [Accessed 15 September 2016].
- Co-operatives UK (2015). *Open data guide. Explanatory notes for using the co-operative economy open dataset*. Available at: [http://www.uk.coop/sites/default/files/uploads/attachments/open\\_data\\_guide.pdf](http://www.uk.coop/sites/default/files/uploads/attachments/open_data_guide.pdf) [Accessed 14 October 2016].
- Defourny, J. & Nyssens, M. (2013). Social co-operatives: When social enterprises meet the co-operative tradition, *Journal of Entrepreneurial and Organizational Diversity*, 2(2): 11–33. DOI: <https://doi.org/10.5947/jeod.2013.008>
- Deller, S., Hoyt, A., Hueth, B. & Sundaram-Stukel, R. (2009). *Research on the Economic Impact of Cooperatives*. Available at: [http://reic.uwcc.wisc.edu/sites/all/REIC\\_FINAL.pdf](http://reic.uwcc.wisc.edu/sites/all/REIC_FINAL.pdf) [Accessed 20 October 2016].
- DIEESE (2016). *A produção de informações no Observatório Nacional da Economia Solidária e do Cooperativismo*. [The production of information in the National Observatory on the Solidarity Economy and Cooperatives]. São Paulo: Departamento Intersindical de Estatística e Estudos Socioeconômicos. Available at: <http://observatorios.dieese.org.br/ws2/producao-tecnica/arquivo/2/a-producao-de-informacoes-no-observatorio-nacional-da-economia-solidaria-e-do-cooperativismo> [Accessed 13 October 2016].
- Dow, G.K. (2003). *Governing the firm: workers' control in theory and practice*. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9780511615849>

- European Commission (2006). *Manual for drawing up the satellite accounts of companies in the Social Economy: Co-operatives and Mutual Societies*. Liège: CIRIEC.
- Eurostat, IMF, OECD, UN & WB (2009). *System of National Accounts 2008*. New York: Eurostat, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations and World Bank. Available at: <http://unstats.un.org/unsd/nationalaccount/docs/SNA2008.pdf>
- Eurostat (2014a). *ESS Handbook for Quality Reports 2014*. Available online at: <https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-GQ-15-003> [Accessed 10 October 2016].
- Eurostat (2014b). *ESS Equality and Performance Indicators 2014*. Available online at: <http://ec.europa.eu/eurostat/documents/64157/4373903/02-ESS-Quality-and-performance-Indicators-2014.pdf/5c996003-b770-4a7c-9c2f-bf733e6b1f31> [Accessed 10 October 2016].
- Eurostat (2009). *ESS Standard for Quality Reports 2009*. Available online at: <http://ec.europa.eu/eurostat/documents/3859598/5909785/KS-RA-08-015-EN.PDF/4d9a6bfe-c072-477a-add4-3bda0ef00f95> [Accessed 10 October 2016].
- Hansmann, H. (1996). *The Ownership of the Enterprise*. Harvard, MA: Harvard University Press.
- Galhardi, R. (2016). *Methodology for country-case studies: Statistics on Cooperatives*. Geneva: International Labour Organisation.
- Innovation, Science and Economic Development Canada (2015). *Co-operatives in Canada in 2012*. Available at: [https://www.ic.gc.ca/eic/site/693.nsf/eng/h\\_00135.html](https://www.ic.gc.ca/eic/site/693.nsf/eng/h_00135.html) [Accessed 28 September 2016].
- ILO (2017). *Conceptual Framework for the Purpose of Measurement of Cooperatives and its Operationalization*. Geneva: International Labour Organisation.
- ILO (2013). *Report of the Conference: 19th International Conference of Labour Statisticians, 2–11 October 2013, Geneva, Department of Statistics*. Geneva: International Labour Organisation.
- IMF (2003). *Data Quality Assessment Framework and Data Quality Program*. Available at: [www.imf.org/external/np/sta/dsbb/2003/eng/dqaf.htm](http://www.imf.org/external/np/sta/dsbb/2003/eng/dqaf.htm) [Accessed 11 October 2016].
- Lund, L. (2011). *Solidarity as a Business Model: A Multiple Stakeholder Cooperative Manual*. Ohio: Center for Employee Ownership.
- Moore, M.H. (2000). Managing for value: Organisational strategy in for-profit, non-profit and governmental organisations, *Nonprofit and Voluntary Sector Quarterly*, 29(1): 183–204.
- Münkner, H. (2004). Multi-stakeholder co-operatives and their legal framework. In: C. Borzaga & R. Spear (Eds.), *Trends and challenges for co-operatives and social enterprises in developed and transition countries*. Trento: Edizioni31.
- Negri Zamagni, V. (2012). Interpreting the roles and economic importance of cooperative enterprises in a historical perspective, *Journal of Entrepreneurial and Organizational Diversity*, 1(1): 21–36. DOI: <https://doi.org/10.5947/jeod.2012.002>

- OECD (2011). *Quality Framework and Guidelines for OECD Statistical Activities. Version 2011/1*. Available at: [www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=std/qfs\(2011\)1&doclanguage=en](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=std/qfs(2011)1&doclanguage=en) [Accessed 11 October 2016].
- Rosstat (2006). *The Results of All-Russia Agricultural Census, 2006, 9 volumes* (in Russian). Available at: <http://www.gks.ru/news/perepis2006/totals-osn.htm> [Accessed 10 October 2016].
- UNSD (2003). *Handbook of Statistical Organization, Third Edition: The Operation and Organization of a Statistical Agency*, Series F, No. 88. New York: United Nations Statistics Division.