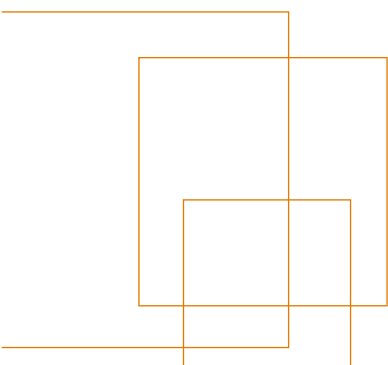




International
Labour
Office
Geneva

Conceptual Framework

for the Purpose of Measurement
of Cooperatives and its Operationalization



Conceptual Framework

on Measurement of Cooperatives and its Operationalization

Report discussed at the
COPAC Technical Working Group
on Cooperative Statistics Meeting
Geneva, May 2017

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Conceptual Framework

**on Measurement of Cooperatives
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Preface

At the 19th International Conference of Labour Statisticians (ICLS) held in Geneva in October 2013, government, workers' and employers' representatives reaffirmed the importance of obtaining more comprehensive and internationally comparable statistics on cooperatives. Pursuant to this the ICLS adopted a Resolution concerning further work on statistics of cooperatives. The Resolution recommended that the International Labour Office, in cooperation with the ILO's constituents and interested National Statistical Offices, carry out further developmental work on the measurement of cooperatives, in particular on the number and characteristics of cooperatives, members of cooperatives, workers employed in cooperatives and value added by cooperatives.

Since then the ILO Department of Statistics and the Cooperatives Unit of the Enterprises Department have been working together on advancing the understanding of statistics on cooperatives. Through this joint initiative, and in collaboration with other partners, a number of outputs, including an analysis of statistics on cooperatives in more than 70 countries around the world and 11 country case studies, have been produced. The "Conceptual Framework on Measurement of Cooperatives and its Operationalization" is the latest of these outputs which defines and describes key concepts concerning the identification and classification of cooperatives, including a discussion on core components and boundary areas, for measurement.

The conceptual framework was developed by Marie J. Bouchard, Madeg Le Guernic and Damien Rousselière. It was then presented and discussed at the Technical Working Group on Cooperative Statistics established by the Committee for the Promotion and Advancement of Cooperatives. The ILO is guided by the work of this technical working group that brings together producers and users of statistics on cooperatives from around the globe. The objective is to overcome the main obstacles to the production of coherent statistics on cooperatives, namely the lack of an agreed statistical definition of cooperatives and the methodology and tools to measure their different characteristics. We are confident that through this joint initiative of our departments within the ILO and in close coordination with our partners we are well on our way to developing international standards, concepts, definitions and methodologies on statistics of cooperatives. We look forward to presenting our progress on statistics of cooperatives at the 20th International Conference of Labour Statisticians in October 2018 to the National Statistical Offices.

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Abstract

This report presents a general overview of how cooperatives and key concepts are measured for statistical purposes. It is based on extant work and literature. The first part of the report reviews the most important statistical studies on cooperatives. Conceptual and methodological issues are identified concerning the identification and classification of cooperatives, including a discussion about core components and boundary areas. The report then proposes a conceptual framework for defining and classifying cooperatives for measurement purposes. This framework suggests a set of four structural-operational qualification criteria to identify cooperatives. It also proposes a double classification of cooperatives, based on the main economic activity and on a characteristic helping to distinguish types of cooperatives. The report also raises some issues about the measurement of membership and value added, as well as employment in cooperatives. On these aspects, the report concludes that focusing on membership rather than on measuring individual members may be the best path. To measure the economic contribution of cooperatives referring to the concept of value added is not recommended unless it is adapted to cooperatives. Other modes of calculation of the cooperative's economic contribution will need to be explored. The nature of employment in cooperatives will also need to be reflected accurately in overall employment statistics.

List of abbreviations and acronyms

CICOPA	International Organisation of Industrial and Service Cooperatives
CIRIEC	International Centre of Research and Information on the Public, Social and Cooperative Economy
CNC	Conseil National de la Coopération (Belgium)
COPAC	Committee for the Promotion and Advancement of Cooperatives
GDP	Gross Domestic Product
GVA	Gross Value Added
FAO	Food and Agriculture Organization of the United Nations
ICA	International Co-operative Alliance
ICLS	International Conference of Labour Statisticians
ILO	International Labour Organization
INSEE	Institut National de la Statistique et des Études Économiques (France)
ISCO	International Standard Classification of Occupations
ISIC	International Standard Industrial Classification of All Economic Activities
NAICS	North American Industry Classification System
NGC	New Generation Cooperatives
NPI	Non-Profit Institution
NSO	National Statistical Office
OMOV	One Member, One Vote
SNA	System of National Accounts
SPS	Social Purpose Status
UNDESA	United Nations Department of Economic and Social Affairs
USDA	United States Department of Agriculture
VAT	Value Added Tax
WFO	World Farmers' Organization

Introduction

Background

Cooperatives are a special type of enterprise. They share some of the characteristics of conventional enterprises such as conducting economic market activities on a commercial basis, but they also have special organizational features, such as aiming at serving the needs of user-members who jointly own and democratically control the organization. Cooperatives also adopt specific strategic behaviours, such as providing their services “at cost” to member-clients, buying their inputs at a fair price from member-producers, or creating jobs and offering good work conditions to member-workers, all of this in priority to generating profits. Cooperatives play a crucial role in the economy, contributing namely to the stabilization of markets, by addressing market failures, countervailing concentrated market powers, internalizing social costs, reducing information asymmetries, or producing collective or trust goods and services. Cooperatives are also important for society, enabling civil society to take an active role in economic, social and political affairs, as well as in contributing to strengthen democracy.

However, cooperatives are often poorly represented in national statistics (ILO 2013b).

Why this report

In 2013, the ILO Resolution concerning further work on statistics of cooperatives, adopted by the 19th International Conference of Labour Statisticians (ILO, 2013a), recognized again the need to produce statistics on cooperatives in all countries of the world. The Resolution recommends improving national statistics related to the number and characteristics of cooperatives, of members of cooperatives, of workers employed in cooperatives and the value added of cooperatives.

In a multi-stakeholder workshop organized by The Committee for the Promotion and Advancement of Cooperatives (COPAC¹) held in April 2016, it was agreed that a core

¹ COPAC is a multi-stakeholder partnership of global public and private institutions whose members are: United Nations Department of Economic and Social Affairs (UNDESA), International Labour Organization (ILO), International Co-operative Alliance (ICA), Food and Agriculture Organization of the United Nations (FAO) and World Farmers Organization (WFO).

definition of cooperatives within a broader framework to allow international comparability needed to be developed. COPAC also decided to set up and coordinate, in collaboration with the ILO, a Technical Working Group on Cooperative Statistics to improve the quality and accessibility of cooperative statistics. The present report was discussed by this working group in Geneva in May 2017. This joint effort should result in recommendations and knowledge prepared for the next International Conference of Labour Statisticians (ICLS) in 2018.

Objectives and overview

The overall objective of this report is to present a conceptual framework for the purpose of the measurement of cooperatives and of its operationalization, in line with the Resolution concerning further work on statistics of cooperatives, which was adopted by the 19th International Conference of Labour Statisticians (ILO 2013a).

The work presented in the first part of this report includes a review of the most important statistical studies on cooperatives and a general discussion about concepts and methodology issues regarding identifying and classifying cooperatives, including a discussion about core components and particular boundary areas and their operationalization. The second part proposes a conceptual framework for defining and classifying cooperatives for statistical purposes. The third part of this report explores how to measure membership and value added. The fourth part is dedicated to the measurement and classification of employment in cooperatives.

Statistics on cooperatives: An overview of existing practices

1. Overview of the definitions of the cooperative

1.1. Institutional definitions

International Labour Organization and International Co-operative Alliance

The Resolution concerning further work on statistics of cooperatives adopted by the 19th International Conference of Labour Statisticians (ICLS) in 2013 (ILO 2013a) recognized and recalled the need to produce statistics on cooperatives in all countries of the world. In order to build a legal framework to promote their development and more generally concerning further work on statistics of cooperatives, the International Co-operative Alliance (ICA) adopted in 1995 the revised Statement on the Cooperative Identity which contains the definition of a cooperative, the cooperatives values, and the seven cooperative principles. This has paved the way for the most widely-used international definition (ICA, 2015) of the cooperative included in the ILO Promotion of Cooperatives Recommendation, 2002 (No. 193):

A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise.

ILO Recommendation No. 193 can be considered the first and only instrument of universal applicability on cooperative policy and law adopted by an international organization. However, as it is a legal definition of a cooperative, this widely-recognized definition² is not meant to be used for statistical purposes as it reflects four of the seven world-wide (see box 1), generally acknowledged principles that guide the cooperative

² The definition has been adopted by many institutions: the 2001 United Nations Guidelines aimed at creating a supportive environment for the development of cooperatives has adopted the definition, but also the Food and Agriculture Organization.

Box 1: The seven cooperative principles

The cooperative principles are guidelines by which cooperatives put their values into practice.

1. VOLUNTARY AND OPEN MEMBERSHIP

Cooperatives are voluntary organizations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.

2. DEMOCRATIC MEMBER CONTROL

Cooperatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership. In primary cooperatives members have equal voting rights (one member, one vote) and cooperatives at other levels are also organized in a democratic manner.

3. MEMBER ECONOMIC PARTICIPATION

Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing their cooperative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.

4. AUTONOMY AND INDEPENDENCE

Cooperatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.

5. EDUCATION, TRAINING AND INFORMATION

Cooperatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their cooperatives. They inform the general public - particularly young people and opinion leaders - about the nature and benefits of cooperation.

6. COOPERATION AMONG COOPERATIVES

Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures.

7. CONCERN FOR COMMUNITY

Cooperatives work for the sustainable development of their communities through policies approved by their members.

Source: ICA (2015)

enterprise inspired by the modernized Rochdale Principles: voluntary and open membership, democratic member control, member economic participation, and autonomy and independence from governments and other institutions. It is not expected from cooperatives to follow all these principles to a letter but cooperatives should rely on their respect “in their combination, spirit and totality” (Henrý, 2012, p. 67). Thus they cannot compose criteria for a statistical definition: membership can be compulsory as for centrally-planned economies; it can be restricted to women (SEWA cooperatives in India), the degree of autonomy from the public sector may vary...

The cooperative principles are based on the cooperative “values of self-help, self-responsibility, democracy, equality, equity and solidarity; as well as ethical values of honesty, openness, social responsibility and caring for others” (ICA, 2015).

System of National Accounts

Another definition is provided by the System of National Accounts (2008 SNA), a system of international accounting techniques for preparing national accounts (European Commission et al., 2009). The system of National Accounts (SNA) consists of an integrated, compatible and consistent set of accounts, balance sheets and tables based on definitions and concepts, classifications and accounting rules agreed at international level. The system comprises a comprehensive accounting framework in such a way that the resulting data give a snapshot of the economic performance of a nation that can be used in economic planning, policy making, analysis and decision making. In the SNA, cooperatives are identified as legal entities within the financial and non-financial corporations sectors.

The SNA provides the following definition of a cooperative for statistical purposes (2008 SNA, art. 4.41, p. 61):

Cooperatives are set up by producers for purposes of marketing their collective output. The profits of such cooperatives are distributed in accordance with their agreed rules and not necessarily in proportion to shares held, but effectively they operate like corporations.³

A financial cooperative is defined as a deposit-taking corporation of financial intermediaries: “cooperative credit banks, credit unions” (2008 SNA, art. 4.106, p. 76).

Recognizing that certain types of organizations like cooperatives or mutuals “are likely to occupy a gray area between the non-profit sector and either the corporate or government sectors” (UN, 2003, art. 2.22), these entities are often considered as borderline cases between For Profit and Non-Profit Institutions (NPI) that some call “Not-For Profit entities” (Monzón, 2006; Henrý, 2012, p. 35). Indeed cooperatives can distribute their surplus among their members in proportion to their transactions with the cooperative, but many choose to allocate surplus to the development of the cooperative, and can therefore be considered as non-profit organizations. According to the SNA, the only case when a cooperative can be treated as an NPI is “if the articles of association of a cooperative prevent it from distributing its profit” (2008 SNA, art. 23.21, p. 457). The recommendation states that “although some cooperatives function more as grass-roots community development organizations than commercial enterprises, the NPI satellite

³ The definition of cooperative is presented alongside that of the limited liability partnership: “Similarly, partnerships whose members enjoy limited liability are separate legal entities that behave like corporations. In effect, the partners are at the same time both shareholders and managers” (2008 SNA, art. 4.41, p. 67).

account will generally follow SNA usage and will not treat cooperatives as NPIs” (UN, 2003, art. 2.22, p. 22).

Besides, three additional criteria are provided. We notice that the article states that cooperatives are formed to pursue “the economic interests of their members” exclusively. From that perspective, the definition of the ICA seems less restrictive and probably more appropriate, as cooperatives are supposed to meet “social and cultural needs and aspirations” as well. The last two complete the three criteria contained by the ICA definition (jointly-owned and democratically-controlled by persons voluntarily associated):

Cooperatives are organizations formed freely by individuals to pursue the economic interests of their members. The basic principles of cooperatives include:

- a. Democratic control,
- b. Cooperatives are enterprises whose members are both owners and customers,
- c. They provide services to members ‘at cost’ (SNA, 2008, para. 23.21, p. 457).

However difficult to apply objectively, the last criterion excludes the case of enterprises set up by partners for the maximization of profits. The second criterion seems to limit the cooperative definition to consumer cooperatives, leaving out others such as worker cooperatives or labour cooperatives. The criterion of registration seems to be also mandatory for distinguishing cooperatives from similar types or organizations such as self-help groups, but given that the definition is intended to be used as a benchmark to decide whether an enterprise is a cooperative or not, it cannot be a definitive definition criterion.

Due to its international reach, the definition of the cooperative reported by the United States Department of Agriculture (USDA) deserves being examined. Described as “a user-owned and [user-]controlled business from which benefits are derived and distributed equitably on the basis of use or as a business owned and controlled by the people who use its services” (USDA, 2011, p. 1), the USDA definition of the cooperative refers to the ICA’s principles and is very close to the previous definitions. The distinctive characteristics of such entities from other businesses, following three main principles, are composed of three components. Cooperatives are first user-owned, which means the people who own and finance the cooperative are those who use it (buying supplies, marketing products, using services...). Cooperatives are also user-benefitted: the cooperative’s sole purpose is to provide and distribute benefits to members on the basis of their use. Members unite in a cooperative to receive services otherwise not available, to purchase quality supplies, to increase market access, or for other mutually beneficial reasons. Members also benefit from distribution of net earnings or profits according to their transactions. Cooperatives are finally user-controlled: this well-known characteristic refers to democratic control. The USDA points out that “this is generally done on a one-member, one-vote basis, although some cooperatives use proportional voting based on use of the cooperative (hence, a member who markets 10,000 bushels of a crop through the cooperative would have a greater vote than one who markets 1,000 bushels)” (USDA, 2015, p. 2). Indeed, cooperative laws in a number of States of the United States or in other countries permit proportional voting, sometimes matched to a maximum number of vote a member may cast to prevent control by a minority of member (Cropp & Zeuli, 2004). This paves the way for a broad definition including entities not entirely complying with each principle.

1.2. Definitions from CIRIEC and country-case studies approaches

Besides international and national frameworks, academic researchers have tackled the issue of the need of a statistical definition of the cooperative. We here review three studies of central importance to assess the question: the Manual for Drawing up the Satellite Accounts of Companies in the Social Economy (CIRIEC, 2006) and two reports commissioned by the ILO: the work of Eum (2016) based on the ILO mapping exercise of Galhardi (2016); and the case studies of Carini et al. (2017).

The work from Carini et al. (2017) presents a set of country-case studies including Brazil, Canada, Colombia, the Philippines, the Russian Federation and the United Kingdom. It distinguishes countries where statistics are compiled based on the national law defining cooperatives and where statistical definitions of cooperative enterprises exist. In this case, the statistical definition often makes reference to elements of the legal structure, the function and the organizational structure of the cooperative “translating into statistical terms the criteria regulating cooperatives set out in national legislation” (Carini et al., 2017, p. 53), which is also the basis of argument in the report of Eum (2016).

Four common traits of cooperative definitions are drawn from this work, which cover four out of the seven principles of the structure and the fundamental characteristics of a cooperative:

1. Private and legal entities (“Autonomy and Independence”):

A cooperative must be private in nature and have legal recognition (e.g for taxation purpose) with management legally distinct from the persons (natural or legal) who set up the organization.

2. Carrying out an economic activity aimed at satisfying the needs of members (“Member economic participation”)

Cooperatives engaged 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” (2008 SNA, p. 630) so they can be considered as market producers. But cooperatives enter markets in a way organised by members for their individual and mutual benefit, suggesting there are no limitations to the types of activities a cooperative may carry out, as the main goal is the satisfaction of the members’ needs. So the definition of the System of National Accounts stating that “cooperatives are set up by producers for purposes of marketing their collective output” is a bit restrictive.

3. Voluntary membership (“Voluntary and open membership”)

Membership cannot be compulsory for any reason, nor can it be restricted, as long as the members are willing to accept the responsibilities of membership.

4. Democratic governance (“Democratic member control”)

Control is distributed among members on a democratic basis. The most common form consists of voting rights allocated either according to the volume of transactions or simply based on ‘one member, one vote’ principle.

The three unquoted principles (“Education, training and information”, “Cooperation among cooperatives”, and “Concern for community”), on the contrary, refer primarily to

management objectives to which the cooperative should aspire but whose absence does not affect the cooperative nature of the organisation.

Barea and Monzón (CIRIEC/Barea & Monzón, 2006, p. 33) provide a working definition of cooperatives, mutual societies and other similar companies belonging to the “social economy” as:

The set of private, formally-organised enterprises with autonomy of decision and freedom of membership, created to meet their members’ needs through the market by producing goods and services, insurance or finance, where decision-making and any distribution of profits or surpluses among the members are not directly linked to the capital or fees contributed by each member, each of whom has one vote.⁴

More details are provided on cooperatives by Barea and Monzón (2006):

“A cooperative is a legal entity in which the principal object is to satisfy its members’ needs and/or advance their economic and social activities, in accordance with the following principles:

- a. Its activities should be conducted for the mutual benefit of the members so that each member benefits from the activities of the cooperative in proportion to his/her participation.
- b. Members must also be customers, employees or suppliers or be otherwise involved in the activities of the cooperative.
- c. Control should be vested equally in members, in accordance with the principle of ‘one person, one vote’.
- d. Interest on loan and share capital should be limited.
- e. The voting rights of investor members, if allowed, must be limited so that control remains vested in the user members.
- f. Profits must be distributed in proportion to the transactions with the cooperative, or retained to meet the members’ needs.
- g. There should be no artificial restrictions on membership.
- h. In the event of winding-up, net assets and reserves must be distributed according to the principle of disinterested distribution, in other words, they must be assigned to another cooperative pursuing similar aims or general interest purposes.”

The work of Eum (2016) is based on case studies on France, Spain, Italy, Costa Rica and the Republic of Korea and follows a two-fold approach. It first identifies criteria commonly found in country-case studies to define cooperatives. Cooperatives may be described as self-governing institutional units with legal status and autonomy of decision, set up freely by persons who have common socio-economic interest or needs to be met by members’ common effort in certain economic areas/activities defined by

⁴ The difference between surplus and profit is explained by Henry (2012, p. 38): “The positive result of cooperatives splits, as said, into two distinct parts: profit on transactions with non-members, if any, generated according to commercial terms; and surplus on transactions with members, generated according to cooperative terms (...). The difference between “profit” and “surplus” not only relates to the way they are generated, but also, as said, to the way they are distributed. Stock companies distribute profit to the shareholders in proportion to their investment. Cooperatives do not distribute profit and at least part of their surplus is to be distributed to the members and this in proportion to the transactions of the individual members had with the cooperative during a specified period of time”.

the International Standard Industrial Classification (ISIC) and /or national or regional equivalents, with limited interest on capital and distribution of surplus in proportion to the members' transaction based on the principle of one person one vote.

Second, the study indicates four main criteria to be used for constructing statistical definition on cooperatives:

1. Remuneration on capital should be strictly limited and significant part of surplus should be distributed in proportion to members' transaction with their cooperatives
This criterion may be extended until prevention of distributing surplus in case of social cooperatives.
2. Application of the democratic-governance principle of one member, one vote
The voting rights of investor-members should be limited. It should be noted that the "democratic-governance principle" may be better to use than "one-member, one vote" as a federation may not follow the principle of one person one vote but be democratically controlled.
3. Freedom of membership and
4. Self-governing entity with autonomy of decision.

When there is any specific legislation or public registration system on cooperatives and if the legislation has contents which would meet these four criteria, "organisations established according to the legislation could be recognized as cooperatives in statistical terms. When there is neither legislation nor public registration system for cooperatives, these four items could be used in establishment census or survey in order to detect organisations which could be recognized as cooperative in statistical terms" (Eum, 2016).

1.3. Common core and differences

Table 1 sums up the different common-core criteria proposed or commonly found in the previous international definitions, the Manual of CIRIEC (2006) and both country-case studies developed to the ILO by Carini et al. (2017) and Eum (2016):

Table 1:

Common-core criteria proposed or found in international definitions of the cooperative

	ICA	SNA	CIRIEC (2006)	Eum (2016)	Carini et al. (2017)
Private and legal/formally-organized entity/institutional unit with legal status	X	X	X	X	X
Created to meet members' needs through the market	X	X	X	X	X
Distribution of surplus according to the members' transactions		X	X	X	X
Members must also be customers, employees or suppliers or be otherwise involved in the activities of the cooperative.		X	X		

Table 1 continued on page 10

Table 1 continued from page 9

	ICA	SNA	CIRIEC (2006)	Eum (2016)	Carini et al. (2017)
Democratic-governance principle, one member-one vote	X	X	X	X	X
Voluntary/Freedom of membership	X		X	X	X
Self-governing entity with autonomy of decision	X		X	X	
Limited interest on share and loan capital			X	X	
Voting rights of investor members, if allowed, must be limited so that control remains vested in the user members			X	X	
In the event of winding-up, net assets and reserves must be distributed according to the principle of disinterested distribution			X		

Three criteria seem to be consensual: a cooperative has to be private and legal (or a formally-organized entity with legal status), created to meet members' needs through the market and following the democratic governance principle. An entity which complies with the minimum baseline criteria can be considered as a cooperative. If it complies with more characteristics, the cooperative becomes closer and closer to the cooperative ideal. If the entity does not comply with one common-core characteristic, it may not be considered as a cooperative at all. Two criteria appear to be borderline-cases and might be included in the common-core, as they are nearly consensual: the freedom of membership and the distribution of surplus according to the members' transactions. It may be objected that the ICA guidance notes on the cooperative principles do provide more information, mentioning the allocation of surplus according to members' transactions or limited compensation in capital, but these characteristics are provided separately and cannot be found as it stands in the definition previously considered (ICA, 2015). The reason why such characteristics are not integral part of the ICA definition should be further investigated, but it seems that leaving the definition as open as possible might be a way to reach wide consensus among very heterogeneous cooperative stakeholders across the globe.

2. Overview of the classifications of cooperatives

As regards the different types of classification of cooperatives, two major classification criteria are identified. The first criterion is the most common and wide-spread, classifying cooperatives according to the economic sectors in which they operate. The second classification criterion is based on the members' linkages to the cooperative. Other classification typologies may be found through country-case studies, according to purpose or social mission, but they are either more appropriate for NPIs or marginal as regards the first two classifications (Eum, 2016, p. 9). The proposition of keeping and developing both classifications seems to be consensual and accepted in the literature.

2.1. By the main activity of the cooperative / the economic sector

Given that all cooperatives which register have to declare their main economic activity, industrial classification could be a general criterion which allows classifying cooperatives and comparing them with other economic organizations. This approach is already used in most of statistical works on cooperatives, using International Standard Industrial Classification of All Economic Activities (ISIC) or North American Industry Classification System (NAICS) norms. A problem may occur if some cooperative-specific activities which need more specifications are carried out, but as economic actors functioning in the marketplace, cooperatives seem not to need specific additional classification system.

2.2. By the members' function in relation to the cooperative

Members' function classification has been frequently used as a typology to regroup cooperatives, and used to distinguish and separate the different forms of employment as proposed in the Global report on employment and cooperatives (Roelants et al., 2014). This typology is composed of four categories (consumer/user cooperatives, producer cooperatives, worker cooperatives, multi-stakeholder cooperatives) updated to six in the revised version of the report (Eum, 2017), including secondary cooperatives and enterprise cooperatives.

Different types of members' linkages can be considered:

- Users' cooperatives, where the members are users.
- Worker cooperatives and social cooperatives mainly composed of worker-members who are both owners and staff members. The central mission of worker cooperatives is to create and maintain sustainable jobs. One part of the social cooperatives focuses on community while another part concentrates on work integration of disabled or disadvantaged people.
- Producers' cooperatives, through which individual producers of goods or services organize themselves entrepreneurially together in terms of inputs, processing and commercialization.
- Secondary cooperatives are composed of unions, groups and consortia.
- Enterprise cooperatives are cooperatives whose members are not physical persons but legal persons (SMEs or retail stores).
- Multi-stakeholder cooperatives, made up of various types of members who take part in the governance of the cooperative. They formally allow for governance by representatives of at least two "stakeholder" groups within the same organization, including consumers, producers, workers, volunteers or general community supporters. A comprehensive typology is provided by Lund (2011), recalling that "rather than being organized around a single class of members the way that most cooperatives are, multi-stakeholder cooperatives enjoy a heterogeneous membership base". Issues related to with this typology are discussed later in the membership part.

Many variations of this typology on members' function or members' linkages can be found in the literature, but both this classification and according to the main sector of activity of the cooperative predominate.

3. Overview of screening methods

3.1. Actual modes of identification/collecting data on cooperatives

Despite the wide application of the ILO Recommendation No. 193, the definition of a cooperative still varies from country to country. As a specific business type with particular characteristics, cooperatives do not always have the possibility of being legally registered as cooperatives or are simply not registered. Thus, collecting statistics on cooperatives follows a two-fold approach: by checking for legal registration and/or for entities which comply to the definition of cooperatives according to the Statement of the Cooperative Identity. We therefore identified different methods used to determine whether a given entity is a cooperative.

3.1.1. Statistical and administrative registers

In many countries, statistics on cooperatives are obtained from registers, which constitute the basis for further studies on cooperatives. For the creation of the register and the registration of cooperatives, a cooperative law may be a useful tool to provide guidelines on characteristics an enterprise needs to have to qualify as a cooperative. The quality and coverage of these registers will typically depend on the level of statistical development in the country. We make a distinction between company/business registers, which are the administrative registers for registering enterprises (e.g. for fiscal matters), and statistical registers that are made from different sources for being used as population framework for other statistical works.

Company registers and registers of cooperatives

Registers kept by government agencies are the main source of regular statistics on cooperatives in countries where enterprises in general tend to be registered and registers regularly kept up to date: these registers are “adequately complete for the industries they cover (which may not be all industries in economy)” (ILO, 2013b, p. 4). Statistics obtained from registers can typically be produced on the number of cooperatives, but also on jobs and disaggregated data on employees, members, contributing family workers, as well as production, expenditures and assets. Still, as we will explain with more detail in section 3 of this report, national registers “cannot reliably estimate the number of persons who are members of cooperatives or the number of workers engaged in cooperatives because of double-counting”(ILO, 2013b, p. 4).

However, in most countries, these government registers may not be reliable enough to produce accurate statistics. Not every country has a cooperative law and even those that do not all clearly stipulate the requirements and benefits of being registered. Furthermore, registrations status may vary a lot:

- In terms of countries: cooperatives may be considered as “commercial corporations” or a specific type of company or civil associations. In the absence of a legal framework as is the case in many countries, they might register as companies or commercial corporations in general.
- In terms of sector or industry: some US States typically restrict the cooperative status to agricultural producer enterprises for instance. In many countries, cooperative registration is not centralized but maintained at the local or sectorial level.

- In terms of orientation: as cooperatives benefit their members, they can be considered as a type of non-profit organization and the statutory classifications and requirements for cooperatives vary. For example in the Civil Code rules of the Russian Federation, producer cooperatives must be regarded as commercial organizations, whereas consumer cooperatives are considered non-profit organizations (Carini et al., 2017).

Hence, the extent of non-registration or bad registration may be large; not all cooperatives may send their reports to the agency on a regular basis; inactive cooperatives may not be removed from registers; and entities following cooperative principles without being registered as cooperatives are still under the scope of cooperative statistics. In contrast, they may include false cooperatives (entities registered as cooperatives not led by any cooperative ideal). Due to the risk of double-counting, the number of members in particular cannot be computed as a person may be a member of two or more cooperatives. This risk seems minimal for worker-members: if they work for more than one cooperative, it seems relevant to compute full time equivalent jobs.

Eventually, in case of multiple registers on cooperatives, the aggregation of the resulting statistics to produce national figures may prove to be difficult.

Registers from cooperative second tier organizations

Registers kept by cooperative federations will only cover member cooperatives by definition. The proportion of uncovered entities is unknown. Here as well, as a cooperative may belong to more than one federation of cooperatives, the risk of double-counting prevents the aggregation of figures from various federations to get national figures. This issue is particularly true for the number of members or jobs held since a person might belong to several cooperatives and the risk of over-estimation is real.

Statistical registers

Statistical registers play a central role in the production of economic statistics, both in terms of the way the statistics are produced and in terms of their content and quality. Their traditional functions are to provide a population of statistical units from which frames and samples for economic surveys can be drawn. They also allow the integration and use of data from administrative and other sources. New statistics can be produced by combining information from a statistical register with information from other statistical registers and administrative sources. As the methodological bases for statistical registers and administrative registers are different, the limits that can be encountered with administrative registers, such as data not updated or inactive cooperatives, may not constrain the statistical registers.

3.1.2. Surveys: Cooperative surveys, establishment-based surveys and household surveys

Household surveys

The major strength of household surveys is that it is the unique source that can provide complete statistics on the number of members in cooperatives, either registered or not. This approach is the only one that may bring to light the extent of the risk of double-counting, identifying persons who are members of more than one cooperative.

Currently just a few surveys ask questions about collective actions, volunteering and membership in associations, sometimes including cooperatives, such as the Living

Conditions Surveys of the European Union, or the World Bank Living Standard Surveys which requests information on membership in agricultural cooperatives. However, it is noted that “no household-based survey that includes an employment component, not even those that aim to measure employment in the informal sector, requests information on membership to cooperatives or other associations” (ILO, 2013b).

At the national level, labour-force surveys usually do not ask questions about cooperatives; when they allow the identification of cooperatives, it requires a cross-checking with administrative data. In household surveys, general questions on membership in citizens’ movement may be asked, as for membership in consumers’ cooperative groups or in cooperative societies in the Japanese General Social Survey⁵ for instance. However, it seems that the extent of missing data (50 per cent in the 2012 survey) and the way membership is addressed do not provide valuable information on membership in a specific or all forms of cooperatives. In addition, the quality of the responses is partly determined by the level of knowledge of the cooperative world: on the one hand, people may answer positively as regards membership because they have a membership card issued by an enterprise which is not a cooperative and might not make the distinction. On the other hand, people may not realize they belong to a cooperative until they think about it and answer negatively. Household surveys are certainly a unique source of data, but data should be used with precaution.

Establishment-based surveys

Conducting establishment-based surveys may be a way to produce complete figures at a reduced cost on the number of enterprises which operate like a cooperative, regardless of whether they are registered as a cooperative or not. Indeed, conventional establishment-based surveys of production cover cooperatives, so it could be possible to obtain information about the number of cooperatives, their production, their expenditures, assets and the number of jobs and wages. Employment and wages surveys can offer the opportunity to get more in-depth information about the jobs, the wages and the hours worked in cooperatives. Using existing establishment-based surveys, this method offers the advantage of providing information for little cost, even if it suffers from the same drawbacks of the previous one, like being unable to compute the number of memberships without over-estimation bias.

A few countries currently use this approach, creating an additional category for cooperatives about the legal form of organization of the establishment, but these countries do not seem to produce statistics on cooperatives separately from other entities. Three reasons may be given:

1. the number of cooperatives identified is too low to compute robust statistics;
2. there is a lack of demand for this information, so no statistics are done on the topic;
3. the quality of the response is considered insufficient.

An alternative method is to obtain information about the organization of the enterprise, which supposes to include questions on ownership, voting arrangements, types of services provided, etc. and to compare them to cooperative principles. What Deller et al. (2009, p. 4) call “the application of a statement of principles” means assessing the

⁵ Data is available at <https://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/36577>

accordance of the organization with the ICA principles, through a close reading of its bylaws and articles of incorporation.

The major weakness of establishment-based surveys lies in the fact that this approach may only cover registered establishments above a given size and many unregistered or small cooperatives could be excluded. A solution worth exploring would be to conduct area-based sampling to cover such excluded establishments, as it is done in several countries such as Colombia or Japan to ensure full coverage of their national economy.

Cooperative surveys

Cooperative surveys are establishment-based surveys that target only cooperatives identified in the registers of the country. The Nigerian Cooperative Baseline Survey (2007) is a good example, aiming at providing information on the number of cooperative societies in different sectors, members and employees, to assess whether cooperatives are active or dormant, their activities and other variables.

This type of survey can typically produce statistics on a wide range of subjects including:

- the value of production, expenditures, assets, inventories (by type of activity carried out by the cooperative);
- the number of jobs in the cooperative, distinguishing members from employees and other types of workers.

However, although they may be useful to better understand the world of cooperatives, as cooperative surveys draw their samples from government or federation registers, these surveys suffer from the same drawbacks as registers, such as incomplete coverage and double-counting.

3.1.3. Censuses

Censuses are similar to surveys, as official periodic enumeration of the cooperative population that may include various variables. National censuses can be produced by national statistical organizations or quasi-governmental institutions assisted by NSO or the cooperative movement (Guatemala), but sectorial censuses may be implemented as well, as the Census of Agriculture and Forestry in 2010 and a Census of Fishery in 2008 in Japan. In Costa Rica, Paraguay and Uruguay where agencies or institutions conduct censuses in collaboration with the national statistical offices, more consistent and up-to-date data is produced. Moreover, as these censuses use similar criteria to define cooperatives and apply similar questionnaires, comparisons across countries may be possible.

3.1.4. Other methods

Registers, surveys and their combinations are general approaches for collecting data on cooperatives, but other methods may be used for a more detailed strategy. In their research of economic impact of cooperatives in the United States, Deller et al. (2009) propose to include organizations which have a reasonable probability to be cooperatives. Self-identification refers to the use of the term “cooperative” or “co-op” in the organization name. Organizations operating on a cooperative basis often include these terms in their names, but some do not, and some others include the word without relying

Table 2: Strengths and weaknesses of the various screening methods

Methods	Strengths	Weaknesses
Registers:		
Administrative registers (cooperative and company registers)	<ul style="list-style-type: none"> - Data are easy to access if the register is public, - Often main source of information. 	<ul style="list-style-type: none"> - Small range of variables covered, - Double-counting and non-registration issues, - May include false and inactive cooperatives.
Statistical registers	<ul style="list-style-type: none"> - Data are more likely to be up-to-date as statistical registers combine multiple sources, including administrative registers, - Good coverage of the population, - Allow comparison with other enterprises, - Statistical procedures for cleaning and variables integration are done according to standards of quality, - Metadata are available. 	<ul style="list-style-type: none"> - Variables limited to those available in administrative registers, - Main purpose is to serve as population framework, not as statistical information.
Surveys:	<ul style="list-style-type: none"> - Lower cost than a census, - Allow comparison with other enterprises. 	<ul style="list-style-type: none"> - Sampling error can affect the results, - Incomplete coverage, - Double-counting issue.
Establishment-based surveys	<ul style="list-style-type: none"> - Provide wide range of variables at low cost, whether the cooperative is registered or not. 	<ul style="list-style-type: none"> - Unable to compute the true number of members or workers without overestimation.
Household surveys	<ul style="list-style-type: none"> - Provide data on the number of members, - Allow comparison between other types of enterprises within the country. 	<ul style="list-style-type: none"> - The quality of the replies may vary greatly.
Cooperative surveys	<ul style="list-style-type: none"> - Wide range of variables covered. 	<ul style="list-style-type: none"> - Same drawbacks as registers, with incomplete coverage, risk of double-counting
Censuses:	<ul style="list-style-type: none"> - Good coverage of the population and accurate measurement, - Wide range of variables controlled, - Allow comparison between countries and with other enterprises. 	<ul style="list-style-type: none"> - High costs in terms of time, economic and human resources.

on the cooperative principles.⁶ If many organizations may use the term “cooperative” descriptively to indicate a functional approach that includes collaboration or coordination, but not following the cooperative ideal, the use of the term is limited in some countries (e.g France, Canada) to organizations registered as cooperatives. As the ICA blueprint estimates that “the cooperative sector has a legitimate interest in seeking to protect the integrity of the ‘cooperative’ word so it is not misused” (ICA, 2013, p. 21), self-identification may or not be a reliable indicator of the cooperative nature of an organization.

Another approach is to compute data into a satellite account. In the 1993 and 2008 SNA, the economy falls into five institutional sectors: financial corporations, non-financial corporations, government, households and NPIs serving households (NPISH). Each cooperative is classified in either the financial or non-financial corporations sectors based on its principal field of activity. Therefore, the cooperative data do not appear in a disaggregated way in the system of central accounts and to access detailed information, cooperative satellite account must be developed. One of the objectives of cooperative satellite accounts in terms of economic activities is to determine cooperative share in all economic areas at national level. Satellite accounts may combine various sources (official records, cooperatives annual reports, surveys, etc.) and allow the incorporation of non-monetary data in addition to the indicators of monetary activity, such as employment and its characteristics, number of members, corporations and kinds of corporations, etc. The satellite account approach has been recognized as a relevant way to collect and analyze data on cooperatives (Archambault, 2006; EESC, 2004) and this approach has been used in some countries like Spain, Belgium, Iran, Serbia, Portugal or the Former Yugoslav Republic of Macedonia.

Table 2 sums up the different options to collect data on cooperatives, but it is essential to keep in mind that combining the different approach may be the only manner to get reliable statistics on the different variables.

3.2. Providers of data at the national level

As both the cause and result of regional and national variation in the prevalence of cooperatives, laws and regulations pertaining to cooperatives differ across countries and even areas within countries (Nelson et al., 2016).

According to the mapping-exercise produced by the ILO (Galhardi, 2016) on the availability of cooperatives statistics consisting of a global inventory, we have a robust overview on sources, providers/producers and variables related to employment, membership, and other economic and financial issues of 69 countries. Country-case studies led by Carini et al. (2017) and Eum (2016), respectively focusing on Brazil, Canada, Colombia, the Philippines, the Russian Federation and the United Kingdom and France, Spain, Italy, Costa Rica and the Republic of Korea enable us to draw conclusions on who may provide what type of data.

⁶ The controversial case of the Cooperative Bank in the United Kingdom is a good example of tensions on the use of the “cooperative” word in the name of non-cooperative entities. While the remaining 20% stake of the Cooperative Group were sold on to private investors in April 2017, some voices have raised against the use of the word “cooperative” as a brand or a trademark, arguing that it describes a specific form of enterprise which should not been used anymore unless the bank returns to a form of cooperative ownership.

Table 3: Strengths and weaknesses of the main producers of statistics on cooperatives, methodologies applied and examples of countries

Main producer	Sources / Methodology	Example of countries	Strengths of the data provider	Weaknesses
National Statistical Offices	<ul style="list-style-type: none"> – Satellite accounts – Business surveys – State registration office – Official databases on social and financial issues 	Belgium, Iran Slovakia, Lao PDR, Chile Mongolia France, Italy	<ul style="list-style-type: none"> – Independent institution which produces official data, – Professional and rigorous in producing and analyzing data, – Acting in accordance with quality standards. 	<ul style="list-style-type: none"> – May lack knowledge of specific characteristics and peculiarities of the cooperative sector.
Other government institution in charge of cooperatives	<ul style="list-style-type: none"> – Annual updated database/reports – National survey – Sectorial censuses 	Malaysia, Canada Brazil, Japan, Viet Nam	<ul style="list-style-type: none"> – Good knowledge of the cooperative sector and independence from the sector. 	<ul style="list-style-type: none"> – No guaranty of the rigor in collecting, analyzing data and maintenance of quality standards.
Quasi-governmental institution – Assisted by NSO – Based on the cooperative movement organizations	<ul style="list-style-type: none"> – National census of cooperatives – National census – Evaluation reports of members 	Costa-Rica, Paraguay Guatemala Panama	<ul style="list-style-type: none"> – Help the generation of harmonized and comparable data throughout the country and between countries in a certain region. 	<ul style="list-style-type: none"> – May lack knowledge of specific characteristics and peculiarities of the cooperative sector.
			<ul style="list-style-type: none"> – Good knowledge of the cooperative sector, – Direct contact with cooperatives. 	<ul style="list-style-type: none"> – Tendency to interpret the data with a positive bias.
Cooperative movement	<ul style="list-style-type: none"> – Members and public financial and accounts reports – National census – Statistical profile 	Colombia, UK Dominican Republic India, Ireland	<ul style="list-style-type: none"> – Good knowledge of the cooperative sector, – Direct contact with cooperatives. 	<ul style="list-style-type: none"> – No guaranty of the rigor in collecting, analyzing data and maintenance of quality standards, – Tendency to interpret the data with a positive bias.
Research centers	<ul style="list-style-type: none"> – Surveys of cooperatives 	US, Australia, Italy	<ul style="list-style-type: none"> – Independent from the sector and scientifically rigorous, – Can use data to produce more in-depth research on the cooperative sector. 	<ul style="list-style-type: none"> – Lack of human and financial resources to support consistent data collection over time.

Sources: Based on: Galhardi 2016 ; Carini et al. 2017

Five data providers may be identified:

- Regional advisory or consultative bodies,
- Cooperative movement's organizations,
- National statistical offices,
- Quasi-governmental organizations, and
- Other government agencies in charge of promoting, registering and supporting cooperative development.

It is important to note two points. First, National Statistical Offices (NSO) are one of the main producers of statistics on cooperatives in some countries, using official statistics based on business registers, businesses surveys, or financial balances/accounts for example. In other countries, the NSO plays a central role “by assisting and supporting quasi-governmental institutions in charge of cooperatives in developing methodologies and tools for generating reliable and consistent statistics on cooperatives” (Galhardi, 2016, p. 2). Second, the methodology applied by producers may vary, even for the same institutional category. That is the reason why in some countries, different data can be identified for the same year depending on the source or data collection methodology applied. Table 3 offers an overview of methodologies used, according to main producers with some examples of countries.

4. Boundaries and operationalization issues

This part contains complex questions and issues for which there is a diversity of views and opinions. Two major categories of issues are: discussions on characteristics which may belong either to the common-core or the peripheral criteria of the cooperative (as the limitation of transaction with non-members), and issues related to the boundaries of the cooperative world, such as the inclusion of hybrid entities.

4.1. Hybrid entities and isomorphization

Hybrid cooperatives are defined by the ICA as “a cooperative that has issued equity shares to non-member investors” (ICA, 2015, p. 100). We here consider a broader approach, as a substantial challenge for cooperatives is the discussions around “hybridized forms of governance, where there may seem to be an appearance of autonomy, whilst control is continually conferred to the same actors” (Wilson, 2009, p. 73).

4.1.1. Parent organizations

The treatment of subsidiaries is considered as one of the major boundary issues (Giraud-Dumaire & Frey 2016). Recognizing that the cooperative sector is generally characterized by a high prevalence of alliances and vertical and horizontal collaborations, the World Cooperative Monitor project, an ICA initiative with the scientific support of the European Research Institute on Cooperative and Social Enterprises (Euricse), defines and considers the inclusion of the following hybrid forms (WCM, 2016, p. 2):

- Cooperative of cooperatives/mutual: cooperatives composed mainly of cooperatives/mutuals that carry out an economic activity for the production of goods or the provi-

sion of services of common interest for their members. It periodically publishes its own financial statements.

- A cooperative group is: 1) composed of organisations that operate as a single economic entity, 2) regularly publishes a consolidated financial statement, 3) includes mainly cooperatives, 4) acts according to cooperative principles and values and 5) is controlled by cooperatives.
- A cooperative network [is] 1) composed of organisations that operate as a single economic entity, 2) does not publish a consolidated financial statement, 3) includes mainly cooperatives, 4) acts according cooperative principles and values and 5) is controlled by cooperatives.
- Non cooperative enterprises [are enterprises] in which cooperatives have a controlling interest.

Including non-cooperative enterprises is relevant to evaluate their indirect impact and the role and importance of the cooperative movement within the global economy.

Considerations on subsidiaries actually reflect different interpretations of the cooperative concept. This has a substantial impact on how the weight of the cooperative world is perceived, and on the design, the implementation and evaluation of policies concerning cooperatives. France is a good example of the different approach on this boundary issue, where two different statistics based on different criteria are produced. On the one hand, the National Observatory of Social Economy (ONESS), based on the data collected by the French National Institute of Statistics and Economic Studies (INSEE), estimated that the cooperative sector was providing 300,000 jobs. On the other hand, CoopFR, the apex organization that consists of sectorial organizations and represents the entire French cooperative movement claimed 900,000 jobs at the same time. The methodology used by the cooperative movement is based on the data reported by sectorial federations and banking cooperative groups. According to the movement, this difference originates from the choice of INSEE to ignore major cooperative sectors, such as the agriculture, fishing and transportation sectors. Moreover, it is considered that subsidiaries benefit from the governance model and the long-term objectives of the cooperative: for this reason, CoopFR calls for a social cooperative perimeter (CoopFR, 2016) including entities registered as cooperatives, cooperative groups (considered as one cooperative) and non-cooperative enterprises over which one or more cooperative entities exercise a majority control (more than 50 per cent of capital and voting rights). The dialogue has been initiated over the last couple of years on the boundaries of the cooperative sector, but this is an instructive example of the challenges at stake on parent organizations.

4.1.2. Isomorphization

Isomorphization has two distinctive features: the alignment of cooperatives on capitalist enterprises and the process which concerns enterprises formally constituted and incorporated in a legal form different from cooperative status that tend to operate according to some cooperative principles.

According to the ICA, it is important for cooperatives themselves to resist any tendency to mimic investor-owned enterprises in operational, management and governance practices which do not reflect the distinctiveness of cooperatives” unless “they risk losing

their distinctiveness and commercial advantages through isomorphic behaviour” (ICA 2013, p. 26). A similar idea was pointed out as the “degeneration thesis”: market pressures tend, over the course of time, to lead to cooperatives becoming similar to other kinds of enterprise, particularly capitalist enterprise (Vienney, 1980b; Cornforth et al., 1988; Sommerville, 2007).

As it has been noticed by Henry (2012, p. 15), the hybridation and isomorphization processes lead to positive and negative effects, which mitigate each other:

By its very nature, the alignment of cooperative law with stock company law has more complex effects than the two other processes. On the one hand, it helps cooperatives to become more competitive in the narrow econometric, financial sense of the term, i.e. to grow economically, to increase their capital through mergers, to lower their costs, to create economies of scale, to increase their reserves and to increase their profit, at times also their surplus. However, by impacting on, at times by changing the cooperative specific capital structure, management and/or control mechanisms, the differentiation between cooperatives and stock companies fades and lawmakers violate their obligation under public international cooperative law to (re-) establish and maintain the identity of cooperatives.

The isomorphization process also concerns enterprises formally constituted and incorporated in a legal form different from cooperative status (commercial corporations, NPIs...) but which operate according to some cooperative principles.

In some countries, such as Spain, labour companies (*sociedades laborales*) (CIRIEC-Spain, 2013, p. 9) are worker-owned companies registered as commercial corporations operating in order to create or maintain stable employment for their members. The majority of shares are owned by the workers. The CIRIEC Manual for the European Commission notices:

While these companies often take the form of public limited companies or limited companies, the workers' equity is equally divided among them, so these companies are, in fact, characterised by democratic decision-making processes and equitable distribution of profits (CIRIEC, 2006, p. 186).

The Manual states that non-financial corporations with majority control vested in the workers, democratic decision-making processes and equitable distribution of profits should be included within the market sub-sector of the Social Economy.

From an ownership perspective, many patron-controlled organizations in the United States economy are sometimes considered as cooperatives under any other criteria mentioned before (namely application of principles or self-identification, and tax or incorporation status). Partnerships and employee stock ownership plans (ESOPs) are good examples (Deller et al., 2009). Professional partnerships are “labor-managed firms” much like worker cooperatives. ESOPs provide residual returns to workers (based on the seniority in the organization for instance, which can be considered a form of patronage), but only limited control rights when employees are minority owners. If they may use democratic governance procedures among controlling members, the control is exercised by a restricted set of workers, unlike most worker cooperatives.

In the United States, the limited cooperative association (LCA) is a business entity that has characteristics of both the traditional cooperative and the limited liability company (LLC) (Deller et al., 2009, p. 9). The statutes of such organization permit distribution

of net earnings on the basis of investment contributions as well as on patronage, and do not set limits on investor returns. Investor voting rights and election to the board of directors are allowed. This hybrid form poses a unique set of cooperative boundary questions around issues of investor control as it encompasses patron member ownership and control requirements. “New Generation Cooperatives” (NGC) are also a new form of hybrid entities. The main focal point of NGCs is value added processing whereas previous cooperatives centered on commodity marketing.

If they follow a democratic form of organization with one vote per member policies and a board of directors elected by the members from the members, they differ from traditional cooperatives in that (i) they have a restricted or closed membership; and (ii) members have specified delivery rights based upon the number of shares held, as for the distribution of earnings among members (Waner, 2007).

Such organisations may have to be identified in each country by examining the range of characteristics present within existing legal forms in order to examine on a case-by-case basis if they should be counted as cooperatives.

4.1.3. Other similar types of enterprises not registered as cooperatives

Other types of enterprises are organised in a similar way to cooperatives and satisfy most of its criteria, without being registered as cooperatives. A proposition has been made to identify both types of enterprises together in a “cooperatives and similar enterprises” category (ILO, 2013b) but there is no agreement on it. As the following entities do not belong to the cooperative movement, it might be relevant as well to include them in a separate “similar enterprises” category, because of their lack of recognition of cooperative principles and values in their operations and a lack of membership in cooperative federations.

Preventing them from being considered as cooperatives, the SNA identifies in particular mutual societies, self-help groups and social ventures as similar types of enterprises.

Mutual societies

Mutual societies include entities such as “mutual savings banks, savings and loan associations, mutual insurance companies, sickness and burial funds” (2008 SNA, 23.22 and 23.23). If mutual societies are organized by individuals seeking to improve their economic situation through collective activity as for cooperatives, they differ in that way they are “mechanisms for sharing risk, either personal or property, through periodic contributions to a common fund”. Because they operate in the commercial sphere, “they fall in the financial corporations sector”. They may be treated as NPIs (but still within the financial corporations sector) if “their articles of association prevent them from distributing profits to their owners”. The World Cooperative Monitor project defines mutual as “private cooperative-type organisation providing insurance or other welfare related services” (WCM, 2016, p. 2) and takes them into account in its studies.

Self-help groups

Self-help groups are defined in the SNA (2008, 23.24) as “similar to both cooperatives and mutual societies in that individuals join to accomplish goals of mutual support that would be unattainable on an individual level”. But they differ in that “they are not principally engaged in commercial activities” so the recommendation is to include self-help groups with-in the Non-Profit sector as membership organizations.

Social ventures

Social ventures are “enterprises organized for the purpose of employing and training disadvantaged individuals (handicapped, long-term unemployed, etc.) who would otherwise not find employment. The enterprise is considered an NPI unless it generates and distributes its surplus to owners or stockholders” (2008 SNA, 23.25).

4.2. False cooperatives

As they do not voluntarily comply with the cooperative principles or do not follow the principles at all, false cooperatives are entities which try to elude more restrictive rules without necessarily being moved by any cooperative ideal.

The issue of what is also called “pseudo cooperatives” (Roelants et al., 2014, p. 111) is closely related to labour, in particular the compliance with labour standards. The ILO Recommendation No. 193 emphasises the need to “ensure that cooperatives are not set up for, or used for, non-compliance with labour law, or used to establish disguised labour relationships”. Hence, national policies are invited to ensure that labour legislation is applied in all cooperatives and combat pseudo cooperatives that violate workers’ rights.

Reviewing the experience of the Recommendation since its adoption in 2002, the Committee of Experts on the Application of Conventions and Recommendations (CEACR) notices “the importance of ensuring the application of labour laws so as to avoid the emergence of “pseudo [labour] cooperatives”, which are only intended to gain access to the benefits related to the status of cooperatives, such as tax advantages or social security benefits, while avoiding the application of labour legislation” (ILO, 2010, p. 113).

Treatment of false cooperatives in existing data

False cooperatives are a threat for cooperative statistics. It may be considered as the opposite side of “invisible” cooperatives, which are active entities moved by a cooperative ideal without formally registering as cooperatives. The ICA Blueprint reminds the necessity “to establish an ‘irreducible core’ of what it means to be a cooperative. (...) [T]his will be essential where, for example, different fiscal or regulatory treatment is afforded to cooperatives, because otherwise there will be false claims to entitlement”. (ICA, 2013, p. 30)

The Belgian experience is enlightening as regards the treatment of false cooperatives. Belgium was one of the first countries to establish a satellite account of social economy, according to the recommendations of the EU Handbook elaborated by the CIRIEC. Cooperatives in Belgium are defined as “made up of members the number of which and contributions from may vary” and are incorporated under the statuses of Limited Liability/Unlimited Liability Cooperative Companies. These statuses represented flexible and cheaper alternatives and have attracted entities not moved by any cooperative ideal. Recognizing the emergence of such entities having chosen this status for no reason other than legal convenience, the legislator reacted by creating the National Cooperation Council (Conseil National de Coopération – CNC), providing the possibility for cooperatives complying with the principles of the social economy to get the accreditation from the CNC along with some tax incentives. The criteria associated to the accreditation were supposed to reflect the cooperative principles, specifying the governance has to be democratic, the membership voluntary, etc.

Besides, a “social purpose” status (SPS) has been created, aiming at combining social purpose and commercial activity in a context of redeployment of the social economy. It is not a new form of company but a “variant that may be adopted by different commercial companies already in existence” (Fecher & Lejeune, 2013, p. 11). The Articles of Association of a company must embody the nine additional points (corresponding to the four main principles of the social economy) to get the SPS. Seventy per cent of SPS companies are cooperatives.

Accreditation by the NCC does not, however, allow a line of demarcation to be drawn between “true” and “false” cooperatives. In fact, while accreditation allows attestation of the fact that the cooperatives concerned fully adhere to the principles of the social economy, it does not allow the coverage of all the cooperative societies operating in that same spirit since,

- i) many true cooperative societies have preferred the transversal status of “social purpose” to the NCC accreditation;
- ii) it is not possible to exclude the existence of cooperative societies not having chosen NCC accreditation (or even the social purpose status) but still working in the spirit of the social economy by respecting the principles and ideal of cooperation.

4.3. Inactive cooperatives

The risk of inclusion of inactive entities in administrative registers is a recognized issue that could lead to an overestimate of the number of cooperatives in a country. Active cooperatives may be defined as cooperatives which carried out an economic activity – have employees or turnover – during the period analyzed. There are few statistical agreements on the point from which we may consider that a cooperative ceased its activities, but case studies may be useful to draw recommendations on this. Generally, detecting inactive cooperatives may involve three methods: reporting to government, conducting business and releasing of publication of financial statements.

The Cooperative census in Costa Rica aims to include the information of all active cooperatives. A cooperative is therefore considered as active if it complies with some requirements such as having a productive project underway, having elected its governing bodies and the financial (accounting) books updated.

In Colombia, the Federation of the Colombian Cooperatives and its research institute, Confecoop-Cenicoop, is responsible for statistics on cooperatives and combines various sources to compute and release statistics. Administrative registers managed by the government agencies in charge of monitoring cooperatives are the main sources of data and cooperatives submit their financial reports to these agencies. But in the case of unavailable data, it is difficult to know whether the lack of an annual report is due simply to delay in filing it or whether the cooperative has ceased to exist or is in liquidation.

Therefore, two strategies are used: they may try to collect missing data directly from the organisations or use records for the previous three years to impute missing data.

Confecoop-Cenicoop considers a cooperative as “no longer active” in the case that the financial statements for the last three years are not available in the register. A similar approach is followed by the Chambers of Commerce in the Italian company register,

which contains information (incorporation, amendments, cessation of trading) for all companies with all legal statuses including cooperatives: the Chambers of Commerce may proceed with the cancellation of registration for the enterprises which have not run business at least for three years. Even if the solution adopted does not identify inactive cooperatives with certainty, this threshold may be considered as an acceptable benchmark.

Another strategy is conducted by the Philippines, issuing both data concerning all registered cooperatives and data restricted to cooperatives that have submitted the required documents annually. Cross-checking the data may give an estimation of the number of inactive cooperatives during the period considered. Eventually, for the census in the framework of second edition of “Cooperative baseline study” in the Republic of Korea (2015), all cooperatives registered were contacted via telephone with short questionnaires aiming to check whether these cooperatives are active or not.

The matter of inactive cooperatives removal in statistics is tightly linked to timing of data collections, which considerably vary from country to country, according to data collection methods. A recommendation has been made stating that “releasing data annually or every two years would be optimal” but given the difficulties and costs of data collection, however, “producing data at least every five years could be acceptable” (Carini et al., 2017, p. 61).

4.4. Unregistered cooperatives

Addressing the question of cooperatives identification asks also the matter of the inclusion of the various cooperative forms. There is a large debate in the literature and the cooperative world on how far cooperative entities should be included in a continuum starting from informal agreements between persons to legal and registered entities, and whether a separate category should be created.

Alternatively, it may be valuable to get some statistics on cooperative-like organizations not registered as such, in a separate category. Based on ILO (2013b) suggestions, a proposal can be made to include formally-organized but not registered cooperatives if they are enterprises that comply with the following requirements:

- They are formed freely by individuals to meet their common economic, social, and cultural needs and aspirations,
- They are owned by three or more individuals or enterprises,
- They are democratically controlled,
- They have shared identity, that is, members are both owners and users,
- They provide services to members “at cost”.

The second point is problematic because this threshold is somehow arbitrary. The number of individuals or enterprises required could be decided according to the respective cooperative law of the country: if a cooperative requires ten members to start, it may seem relevant to consider this is the minimum to be considered as informal cooperative, even for informal entities. In case no cooperative law exists in the country, it might be useful to look at a neighbouring-country cooperative law with a similar institutional history to fix a more relevant threshold.

4.5. Other non-consensual issues in discussion

Limitation of transactions with non-members

According to ICA Cooperative Principles, a cooperative is an organization that basically aims to act with its members as users, providers or workers. This makes the cooperative different from companies, since in companies users do not necessarily correspond to shareholders. In certain countries, the cooperative profile is protected by denying or limiting the possibility for the cooperative to conduct transactions with non-members such as providing to, acquiring from, and employing nonmembers. Conducting transactions with non-members on a permanent basis is inconsistent with the “open membership” principle, as the cooperative should integrate each member with whom the cooperative works and who is asking for it. In other words, the issue occurs if a cooperative has the capacity to include new members but prefers the statu quo, that is keeping conducting transactions with the same persons as non-members. It might be the case for a housing cooperative for example, which decides to provide houses to non-members with a higher price than members. No indication related to this point stands in the ICA principles (Fici, 2012) even if temporary non-member trade is acceptable “while improving the cooperative economy” (ICA, 2015, p. 13). Indeed, a cooperative may temporarily face a need to enlarge the area of its purchasers, sellers or workers. The situation is very different according to the cooperative law of each country.

Autonomy of governance (from the public sector)

In some types of cooperative, admission into corporate membership of national, regional, and local public authorities may be permitted. Some community cooperatives in Italy already have public body among the members of the multi-stakeholder cooperative. “The contribution made by these authorities should come from purchasing specific shares of amounts higher than those of individual cooperative members [and] where this is permitted; the creation of a specific category of membership for public authorities will be advisable”(ICA, 2015, p. 42). The challenge is to keep the independence and autonomy of the cooperative, as this category of membership should not hold a blocking minority of voting rights.

Cooperatives and equity capital investors

Some large well-established cooperatives have raised additional capital by issuing equity shares to external non-member investors, which are listed and traded on stock markets. Financial cooperatives as well may also need to seek equity capital investment as part of resolution plans to meet regulatory requirements to increase their capital adequacy ratio to total risk-weighted assets. These arrangements create hybrid cooperatives that merge the cooperative model and the investor ownership model. Consideration needs to be given to the voting rights of non-member equity shareholders, if any, and what controls are to be placed on them to prevent the threat of equity investors taking the democratic control of cooperative members.

Limitation or prevention of distribution of reserves

The global accounting treatment of members’ share capital and indivisible reserves should be treated as part of a cooperative’s equity capital, not as a liability because this capital can absorb a cooperative’s losses. Cooperatives must ensure that members’ share capital and indivisible reserves cannot be subject to any risk of distribution to

current cooperative members. Indivisibility must remain the rule to prevent any appropriation or drift in the task of achieving this global accounting treatment. It may not seem very relevant to include this criterion as a mandatory one for the common-core definition of the cooperative as many of them do not have indivisible reserves.

Proposed conceptual framework for defining and classifying cooperatives for statistical purposes

1. Introduction

Part 1 of this report offered an overview of the reasons why, however consensual the definition of cooperatives may be among stakeholders, its operationalization for measurement purposes poses some difficulties. The degree of formal inclusion of cooperative principles in legal frameworks as well as the quality and availability of data vary from one country to another, making it difficult to establish a global systematic picture of the cooperative population, not to mention the evolution of the cooperative form itself and the existence of “hybrids”, i.e. organizations similar in many ways to cooperatives. However, an operational definition of a cooperative can be developed to help national statistical agencies provide harmonized measurement of the size and scope of cooperatives in the economy.

This part of the report proposes an operational definition of a cooperative. It takes from the common core of knowledge already produced and analysed here above. In order to structure the discussion, it first refers to an analytical framework.

2. Analytical framework

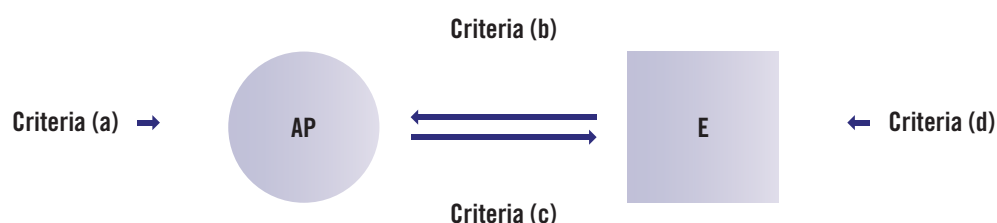
Taking from SNA, ICA, CIRIEC and current measurement practices of cooperatives as seen in Part 1, the definition of a cooperative appears to be based on three general premises. The first is that a cooperative is an organization with a legal identity that functions according to specific principles. The second is that a cooperative is a member-based organization, which implies the shared identity of members-users. The third is that a cooperative has specific economic objectives and functions. These premises will be reviewed below.

This framework will be outlined in this section. We first present a conceptual representation of a cooperative and of its qualification criteria. This representation also points to the identification of hybrids. As will be seen, it also helps understand that the definition of cooperative is intrinsically linked to the classification of cooperatives. It will in the end provide grounds for the operationalization of the definition of a cooperative for statistical measurement purposes. We conclude with considerations for future work.

2.1. Formal organization with a specific set of principles

A cooperative can be schematically represented as the combination of an association of persons (AP) and of an enterprise (E) (Fauquet, 1935, Vienney, 1980), reciprocally linked to each other by a set of principles. It is this set of principles that characterizes the cooperative and distinguishes it from other entities. A structural analysis of the cooperative leads to identify the need for a minimum of four characteristics that distinguish the cooperative from other entities: one for each of the components of the combination AP and E, and one for each of the two relations linking AP to E and E to AP. A socioeconomic analysis of cooperative organisations and their evolution in various types of economies (Vienney, 1980, 1981) indicates that these common characteristics of a cooperative are what keep the cooperative from losing its distinctiveness from other forms of associations and of enterprises when pressures from social, political or economic environment are exerted on the cooperatives.

Figure 1: Conceptual definition of cooperative



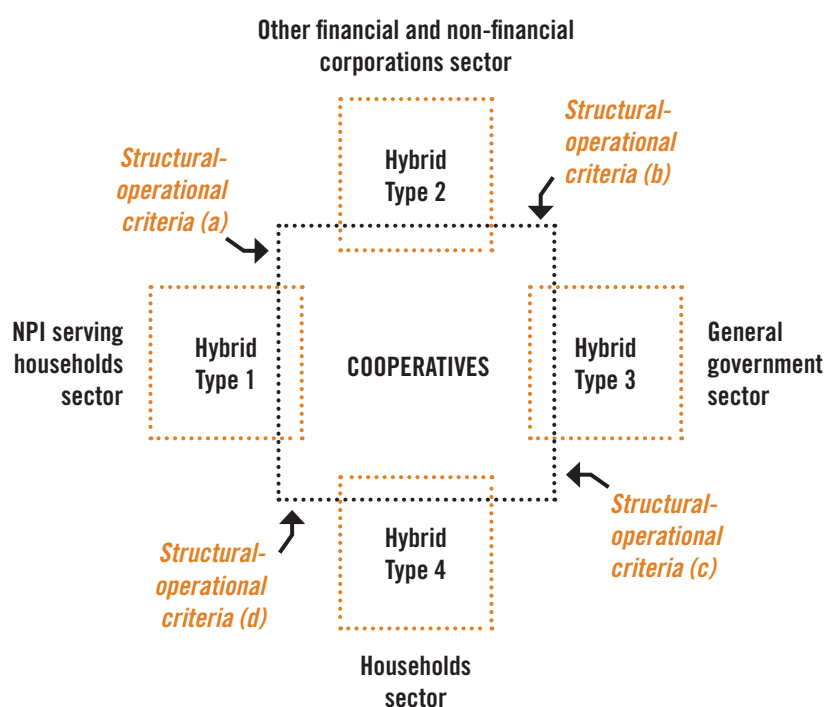
Sources: from Fauquet, 1935 and Vienney, 1980

This schematic conceptualization of a cooperative helps represent the cooperative and hybrid forms as ideal-types. Some organizations are similar to cooperatives as they share some of these features but not all of them. Figure 2 illustrates the core of the cooperative identity and examples of the hybrid forms – or “uncertain” forms, to follow H. Desroche’s (1983) reasoning – that share some of the cooperative characteristics without meeting all of them. This figure also points the institutional sector of the SNA to which these organisations might be associated.

The degree to which an organization meets the criteria defining cooperatives may vary. Another way of representing this is to identify continuums of correspondence to the criteria, as shown in Figure 3.

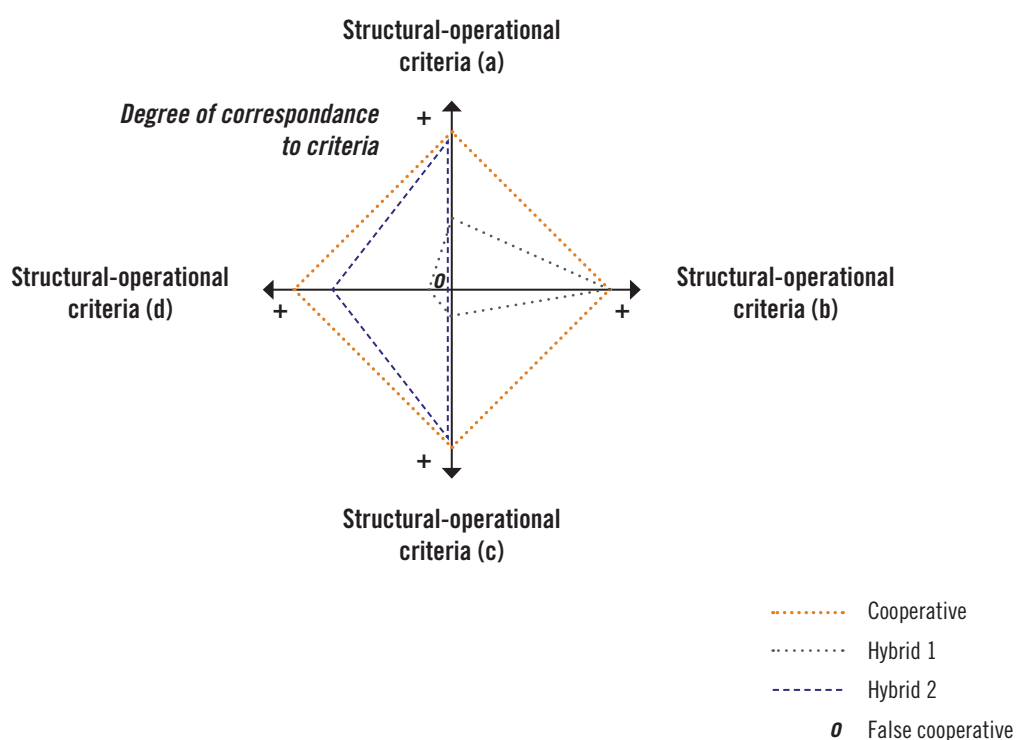
It will be noted that current practice excludes informal organizations (i.e. with no legal recognition) from measurement, even though they might be cooperatives on all other aspects.

Figure 2: Qualifying cooperatives and hybrids



Sources: Inspired by Desroche, 1983 and Bouchard et al., 2008

Figure 3: Continuum of correspondence to cooperative core criteria

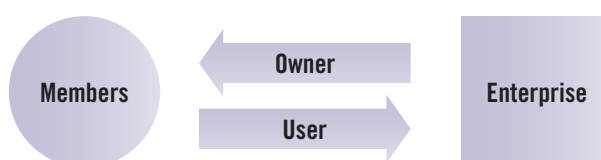


Sources: Taken from Bouchard et al., 2008

2.2. Shared identity of members-users

The dual nature of the cooperative is reflected in the shared identity of members as both owners and users of the cooperative. Through the ownership linkage (economic participation and voting rights), the members jointly (through their association) own the cooperative. The usership linkage means that the cooperatives' activities serve members' needs and aspirations, and that members are able to make use of these activities. There can be a minimum threshold for number of members in order for an enterprise to be counted as a cooperative.

Figure 4: Shared identity of cooperative members

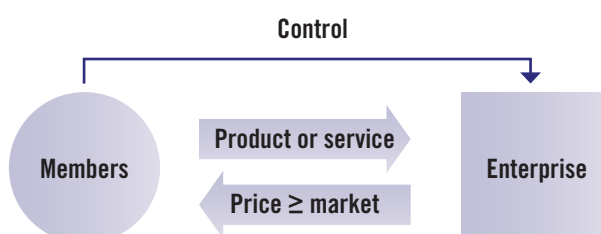


Sources: from Vienney 1980a and 1980b.

Malo (1980) identifies three general types of member-relations to their cooperative. Other types of member-relations to their cooperative exist, as we will see further on. We present those identified by Malo to illustrate how membership and usership define the economic objective function of the cooperative:

- 1) The provider cooperative marketizes its members' production (e.g. farmers products) or input (e.g. savings). Members expect to receive through their cooperative a price that will be higher if not equal to the market price. A representation of a providers' relation to the cooperative is shown in Figure 5:

Figure 5: Member-providers' relation to the cooperative

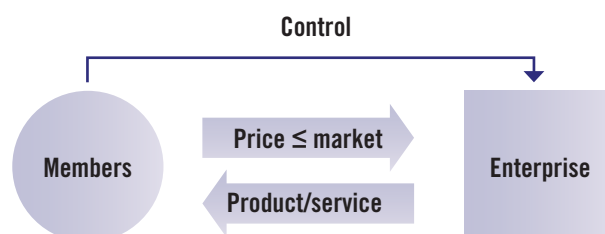


Source: Adapted from Malo, 1980.

- 2) The consumer (or client) cooperative offers to its members' products (e.g. food) or services (e.g. homecare) for their own usage or that of their production unit (e.g. farm). Members expect to access those products and services through their coopera-

tive at a price that will be lower if not equal to the market price. A representation of a consumer (or client) cooperative is shown in Figure 6.

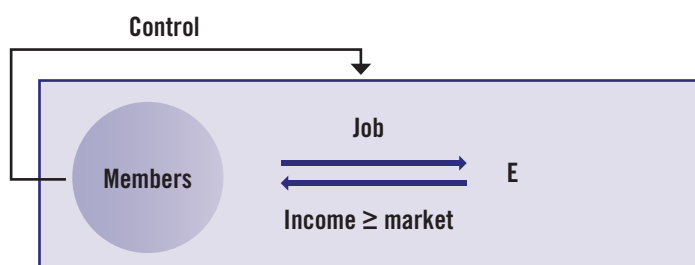
Figure 6: Member-clients' relation to the cooperative



Source: adapted from Malo, 1980.

- 3) The worker cooperative provides jobs to its members as well as control over the cooperative's activities and what results from it. A representation of a workers' cooperative is shown in Figure 7.

Figure 7: Member-workers' relation to the cooperative



Source: adapted from Malo, 1980.

2.3. Organization with specific economic objective functions

The status of an organization cannot always be inferred from its name, and it is necessary to examine its objectives and functions. As explained by Barea and Monzón (CIRIEC 2006), cooperatives have different objective functions than other types of corporations. The objective function of a corporation is determined by the character and behaviour of those within it who control the decision-making process and appropriate the surplus.

In traditional companies, the dominant and beneficiary categories are made up of capitalist investors, for whom the value generated by the group stands for capital gains and who attempt to achieve the greatest possible returns on their investment. In the case of social economy companies [including cooperatives], if there is any distribution of surpluses it is not directly linked to the capital subscribed by each member and neither is decision-making, which takes place democratically, so the dominant and beneficiary categories are not made up of capitalist investors. [...] [T]he objective function of these companies is geared to increasing the value of other types of assets. (CIRIEC, 2006, p. 21)

In this perspective, members join a cooperative to benefit from the usage or transactions they have with it. For example, this benefit comes from: maximizing the value of members' products, services, or savings (suppliers of the cooperative's inputs); maximizing employment and working conditions of members (workers of the cooperative); minimizing the intermediation costs for members' purchases of products, services or loans (consumers or clients of the cooperative's outputs) and; ensuring the availability and reducing the risk to members-users of managed resources or held assets such as equipment, machinery, real estate properties or network platforms (users of the cooperative's assets). Community members can also join a multi-stakeholder cooperative to contribute their expertise or funding (supporters of the cooperative's activities).

As we will see, the different usages members have with their cooperative, taken into consideration alongside with the different economic objectives and functions of the cooperative, help complement the understanding of the existing classifications of cooperatives that combine these dimensions in various combinations (as seen in Part 1).

3. Operational definition of the cooperative

An operational definition for statistical purpose should follow precepts similar to these:

A definition should rest on a fundamental logic that will withstand challenges, yet still to have a long 'shelf-life', through a flexibility that will encompass changes in the policy environment or respond to technical improvements in data collection and analysis. The definition [...] must also meet the needs of users. Clearly, if it is to inform only economic activity, public funding, or participation, then the definition might be quite different. The definition must serve several purposes and accord with generally accepted wisdom. (Statistics Canada, 2011).

The development of a statistical definition of the cooperative that is reliable and relevant to policy makers and to the cooperative movement should ideally be based on the definition that is currently in usage and that is institutionalized (in the sense of being generalized) in society. Such a definition has been proposed by Barea and Monzón (2006), in the CIRIEC Manual for drawing up the satellite accounts of companies in the social economy, which are cooperatives and mutual societies:

The set of private, formally-organised enterprises with autonomy of decision and freedom of membership, created to meet their members' needs through the market by producing goods and services, insurance or finance, where decision-making and any distribution of profits or surpluses among the members are not directly linked to the capital or fees contributed by each member, each of whom has one vote. (CIRIEC, 2006, p. 33).

4. Structural-operational qualification criteria

The common core characteristics of the cooperative definition described in Section 1 can be associated with each component of the schematic representation of the cooperative as seen above (Figure 3). As shown in Table 4, a set of four operational criteria, each related to a structural component of the cooperative, is needed to qualify an entity as a cooperative.

Table 4: Structural-operational qualification criteria of the cooperative

Component of the cooperative structure	Structural-operational qualification criteria	ICA Cooperative principles covered by criteria
Association of persons (AP)	1. Non compulsory and non restrictive membership	Voluntary and open membership
Enterprise (E)	2. Private, formally-organized and autonomous entity	Autonomy and independence
Relationship AP → E	3. Democratic member control	Democratic member control
Relationship E → AP	4. Economic activity of the cooperative is primarily to satisfy the needs and aspirations of members and community and surplus may be distributed to members in proportion to usage	Member economic participation and care for community

5. Classification of cooperatives

The schematic representation of a shared identity of members helps identify principles for classifying cooperatives. These are also useful, as will be discussed below, to understand value added measurement issues.

5.1. Basis for classification

A classification system seeks to cover and organize a population in a way that respects certain methodological principles, such as the structure of the information, which should enable aggregation, the uniqueness of the dimension used to classify, the capacity of the classification to cover the entities exhaustively, the mutual exclusion of categories to avoid double counting, the comparability with other classification systems, and the granularity (level of detail) required for analytical purposes.

5.2. Double classification of cooperatives

Cooperatives are generally classified by economic activity (“main activity”) as well as by a cooperative characteristic, most often the membership relation to the cooperative or the nature of the member’s activity.⁷ Some cooperatives have more than one economic activity. Some cooperatives provide more than one usership linkage to their members and some cooperatives have more than one type of members.

5.2.1. Classification by economic sectors

There is a general consensus among stakeholders about the need to classify cooperatives according to international classifications of economic activities and industries. This enables measuring the contribution of cooperatives to the whole of the economy

⁷ See Part III of the report, Chapter 1. Membership.

and comparing it to that of other types of entities (other corporations, government, NPI, households).

5.2.2 Classification by cooperative characteristics

In addition, cooperatives are classified according to other dimensions that help differentiate types of cooperatives. A parallel classification is useful for at least three reasons: it corresponds to types that are recognized in legislation and in institutions, at national and international levels; it enables differentiating types of cooperatives according to their member relationship, their specific economic goals and consequent behaviour and governance; and it allows the identification of cooperatives that undertake more than one economic activity or that serve more than one economic purpose.

In such classifications, the number of types vary greatly, some having up to 26, such as in Turkey, others 5, as in Canada, or 8, such as in the World Cooperative Monitor. “Given the large range of types of cooperatives, it is essential for statistical purposes to group them into homogenous groups in a well-structured classification that needs to be coherent with the existing framework for producing labour statistics” (ILO, 2013b, p. 9).

In view of previous work by ILO (2013b), ICA (WCM, 2016), UN (2014) and others (Lund, 2011, Pascucci and Gardebroek, 2010), typologies of cooperatives are organized according to various parameters, generally a mix of two to three of the following:

- Member relation to the cooperative: consumer, user, worker
- Nature of member’s activity: e.g. producer, retailer
- Nature of cooperative’s function in relation to the member’s production: e.g. purchasing, marketing
- Number and atypical categories of members: multi-stakeholder, volunteer-members, community-members, investor-members

In order to facilitate comparison between classifications, an analytical framework of cooperatives’ classifications is proposed in the following section. It is not meant to serve as a replacement of existing typologies but to help clarify what types of categories are used in the various existing typologies.

5.3. Analytical framework of cooperatives’ classifications

As mentioned above, cooperatives are generally classified by their main economic activity, enabling to compare them to the rest of the economy, and by a second classification, used to differentiate types of cooperatives. The proposed analytical framework of cooperatives’ classification summarizes different types of categories that can be used to classify cooperatives, other than their economic activity.

This framework takes from three sources. One concerns the classifications of cooperatives that are currently in use. The second is the view of the cooperative as a member-based organization. The third is the identification of different objective functions of cooperatives. Taking from these three sources, a framework can be developed that combines and organizes a number of dimensions and groups them into categories or types that are compatible with existing frameworks for producing labour statistics:

main objective of the cooperative (ILO, 2013b); members' interest (Lund, 2011); members' usership linkage to the cooperative (Vienney, 1980a, Malo, 1980); economic objective function of the cooperative; and types of cooperatives. Is it to be noted that the later presents examples coming from various classifications and is not intended to be exhaustive.

Table 5: Analytical framework of cooperatives' classifications

Main objective	Members interest	Members usership linkage	Economic objective function of the cooperative	Type of cooperative (example)
Service the production of goods and services, or workers	Short term: production costs covered. Long term: reduced risk, sustainable source of income; market development	Providers of the cooperative's inputs	Assist members in bringing their products to the market Maximize the value of inputs (products, savings) members provide to the cooperative	Producer marketing cooperative Producer processing cooperative Savings cooperative
		Users of a cooperative that manages assets or resources for the use of producers or of consumers	Insure the availability to members-users of managed resources of held assets (equipment, real estate properties, manpower)	Shared equipment cooperative Shared manpower cooperative Shareholding worker cooperative Building or construction (housing) cooperative
		Intermediate consumers of products and services	Minimize the intermediation costs for members-producers of the cooperative's outputs (products, services, loans)	Producer bargaining cooperative Retailer cooperative Credit cooperative
	Short term: reliable work; fair wage. Long term: safe, respectful, gainful employment	Workers self-employed and self-managed in the cooperative	Create and maintain sustainable jobs Maximize jobs creation and good work conditions to its members-workers	Worker cooperative Social cooperative
		Work placement of members	Increase the capacity of members to negotiate for decent work Exerting pressure on labour market	Labour cooperative
		Workers offered a double status of entrepreneur and employee	Minimize risk and test of an entrepreneurial project	Employment and activity cooperative

Table 5 continued on page 38

Table 5 continued from page 37

Main objective	Members interest	Members usership linkage	Economic objective function of the cooperative	Type of cooperative (example)
Service persons as consumers	Short term: Accessible location and price. Long term: Access to specialized goods or services; predictable pricing, supply	Final consumers of the products and services of the cooperative	Minimize the inter-mediation costs for members-consumers of the cooperative's outputs (products, services, savings, loans) Mutualize risk Provide service to members Ethical supply-chain	Consumer cooperative Mutual insurance cooperative Utility cooperative Rental (housing) cooperative Organic or fair-trade
	Short term : Existence of resource in community. Long term: healthy and vibrant local economy	Multiple member usership linkages (including volunteers and supporting community members)	Arbitrate two or more of the above mentioned objective functions.	Social cooperative
				Cooperatives not classified in the previous types

One should note that, even though most types are mutually exclusive, some are not, such as cooperatives with more than one objective function (e.g. financial cooperatives and producers cooperatives), or more than one member usage linkage (e.g. multistakeholder cooperatives). The similar issue is met in any other classification of organizations, hence the simple, yet somehow reductionist identification of the “main activity” of a business facility, in order to classify it in one – and only one – industry sector.

6. Screening approach

Screening and filtering methods make it possible to identify the core population of cooperatives as well as hybrid entities that are sometimes associated to it.

6.1. Basis for screening

Screening refers to the method by which the indicators arising from qualification criteria are applied. The selected screening method “in the different studies results from a trade-off between the quality of the qualification and the costs of obtaining information” (Bouchard et al., 2015, p. 76). Indeed, the quality of a statistical scope “can be measured and controlled by means of degree of adherence to specifications and requirements” (Lyberg, 2012, p. 114).

The quality of the qualification can be therefore divided into five different issues:

The coverage of the study

The coverage of the study refers to the degree to which the qualified organizations match or reflect the initial definition. It identifies whether the screening method can handle exceptions and exclusions that are specific to the chosen definition. Moreover, it questions the treatment of borderline cases (entities with some but not all of the qualifying criteria) and helps to put qualification issues into perspective with the law of large numbers. Eventually, it addresses the question of informal organizations and recognizes cooperatives as a group of families of organizations on which there is not always consensus.

The integrity (vitality) of the qualified organizations

The integrity or vitality of the screening frame allows setting the statistical portrait in time. Integrity, as a characteristic of a database, or of the statistics developed therefrom, pertains to the quality of maintaining information that is up to date and accurate when being used or accessed. The integrity is affected when the statistics include a large number of organizations that have closed down or that have not provided information for a long time; as data that are outdated reflect a picture of the past. It may also involve the omission of new organizations. Also, the retention of organizations that have ceased their activities swells the population artificially, calling for a validation of the data integrity. The inclusion of emerging organizations is also problematic.

Data availability

The availability of data concerns the limitations of a screening method. How much information might a screening method allow us to obtain? Which qualification criteria might we fulfill?

Comparability of the study

Comparability indicates, among other aspects, whether regional results are comparable with national results and allows contextualizing a study in relation to other statistical realities.

The screening method also determines the comparability of studies and the comparability of results.

Sustainability (continuity) of the study

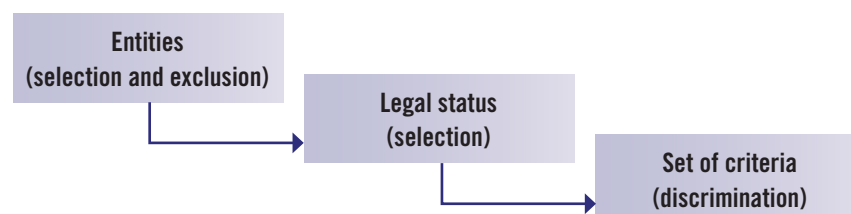
This refers to its potential for replication and indicates whether the screening method allows for a longitudinal tracking of the qualified population. A study's sustainability is shaped by several factors, among them the inter-temporal comparability of the qualification. This factor also concerns stability and changes in scope due to the inclusion or exclusion of borderline cases.

6.2. Successive filters

Qualification criteria are applied for screening entities. Because cooperatives are not (yet) identified as a specific institutional entity, identifying cooperatives requires a

sequence of screening operations that enable the selection of entities, the identification of their legal status, and filter according to a set of criteria.

Figure 8: Successive filters



Source: Bouchard et al., 2011, p. 26.

6.2.1. Entities and legal status

a) *Cooperatives as institutional entities of the SNA*

In the System of National Accounts (2008 SNA), cooperatives are identified as legal entities of the financial and non-financial corporations sectors. Non-financial cooperatives are part of the Non-financial corporation sector (S-11), and financial cooperatives are part of the Financial-corporation sector (S-12).

The SNA considers cooperatives only as market producers and therefore excludes existing cooperatives that function as non-profit institutions. Those are as well excluded from the United Nations Handbook of Non-Profit Institutions (UN, 2003).⁸ However,

[i]t is possible for cooperatives to be set up as the result of altruistic, volunteer initiatives to supply goods or services to other, non-member persons free of charge or at prices that are not economically significant. In this case, the cooperative would be a non-market producer institutional unit [...] (CIRIEC, 2006, p. 42.)

According to the SNA, the only case when a cooperative can be treated as an NPI is “if the articles of association of a cooperative prevent it from distributing its profit” (2008 SNA, art. 23.21, European Commission et al., 2009, p. 457). The recent evolution of the cooperative form to new legal types of social cooperatives that may not distribute benefits to members (Henrÿ, 2012) and their rapid growth in areas where such a legislation exists (e.g. Québec, 2012), leads us to suggest the inclusion of such cooperatives as part of the Non-profit institutions serving households sector (S-15).

b) *The need to include cooperatives in three (rather than two) institutional sectors*

Hence, the qualification criteria of a cooperative stemming from the SNA, is the belonging of the institutional unit to one of the institutional sectors.

⁸ “Although some cooperatives function more as grass-roots community development organizations than commercial enterprises, the NPI satellite account will generally follow SNA usage and will not treat cooperatives as NPIs.” (UN, 2003, p22).

Table 6: Cooperatives in the system of National Accounts

Institutional unit classification	Institutional sectors					
	Non-financial corporations (S-11)	Financial-corporations (S-12)	General government sector (S-13)	Households sector (S-14)	Non-profit institutions serving households sector (S-15)	Cooperative sector
Cooperatives	K_1	K_2			K_3	$K=K_1+K_2+K_3$

6.2.2. Legal status

Entities will be selected within the institutional sectors S-11, S-12 and S-15 by their legal status, being that of a cooperative or the legal status that corresponds to a cooperative in national legislation.

6.2.3. Set of qualifying criteria

This selection is however insufficient as some entities may function as cooperatives without having the legal status of a cooperative, on the one hand, and some organizations carrying the cooperative “label” within their official name may in fact not have the core characteristics of cooperatives.

Entities will be screened according to their correspondence to the structural-operational qualifying criteria of the cooperative. These criteria can be fully met, partially met, or unmet at all by entities. Screening will help identify the core population of cooperatives (in scope entities), of entities that partially meet the criteria (hybrids), and entities that meet none of them (out of scope entities).

6.3. Screening decisions

Examples of screens:

“In scope” entities:

- Are legally formed as a cooperative.
- Are formed under another juridical statute but meet the structural-operational criteria of the cooperative definition.

Hybrid entities:

- Are legally formed under another juridical statute and only partly meet the structural-operational criteria of the cooperative definition.

“Out of scope” entities:

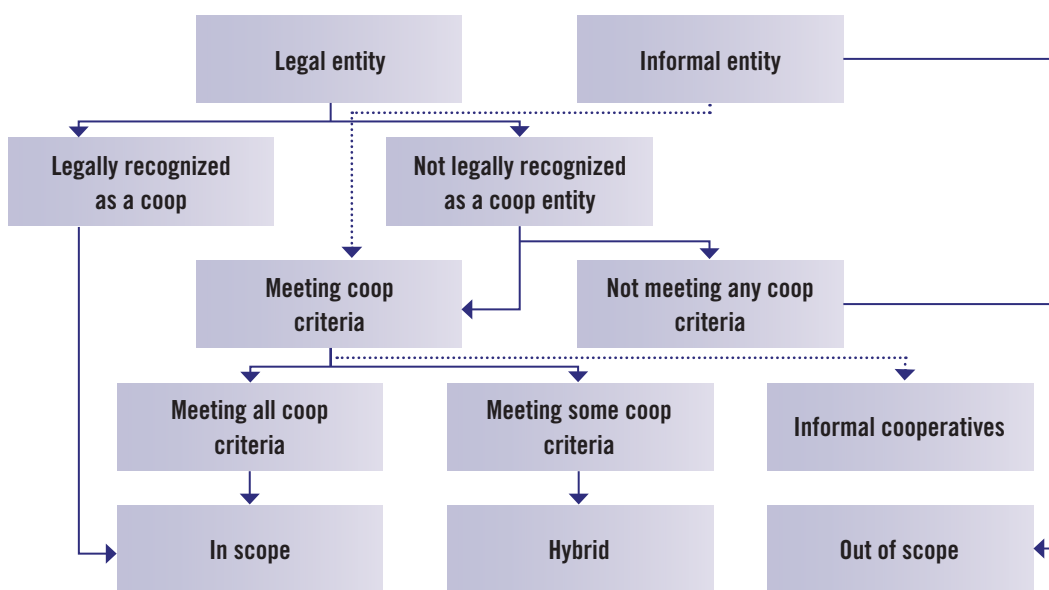
- Are informal (i.e. not registered, no tax registration, no bylaws...).
- Are legally formed under another juridical statute but meet none of the structural-operational criteria of the cooperative definition.

Informal cooperatives

- Are informal entities that meet cooperative criteria.
- If considered, informal cooperatives should be counted separately from in-scope cooperatives.

A representation of how the screening decisions are applied is presented in Figure 9.

Figure 9: Screening decision criteria



6.4. Various peripheries

Such an ideal-type (in the sociological sense) of a cooperative serves to draw the core perimeter of cooperatives. However, some organizations that are not registered cooperatives but that comply with these criteria could be included in this perimeter, and others that are formally recognized as cooperatives that don't comply could be excluded.

The framework could also allow more or less 'close' peripheries around the hard-core definition.

"Close"-periphery hybrids can be entities that correspond to the core criteria but are not incorporated or registered as cooperatives. For example, the CIRIEC definition, which includes insurance and finance, would cover some mutual societies that are not legally incorporated as cooperatives. Another sort of 'close' hybrid would be an entity that corresponds to an adapted yet not denatured version of some criterion. An example of this is a registered cooperative using proportional voting based on members' use of the cooperative. Subsidiaries of cooperatives might also be considered as hybrids in the close-perimeter of cooperatives.

"Far"-periphery hybrids can be identified as entities recognized as cooperatives by stakeholders and that correspond to some but not all core criteria, or that correspond to them incompletely. An example could be that of an entity using OMV voting but

distributing surplus based on members' held shares. Criteria may also be met inconsistently, for example in environments that provide feeble enforcement of legal frameworks or in entities whose bylaws do not include cooperative criteria.

Out-of scope entities are those that never correspond to any of the criteria.

6.5. Data collection

As seen in Part 1 of this report, the quality of data sources varies from one country to another. An analysis of advantages and drawbacks of each type of source and screening approaches can also be found in Bouchard et al. (2015).

Mata-Greenwood (ILO, 2013b, p. 23) recommends to use a variety of methodologies "based on existing establishment and household surveys, to produce more complete and reliable information on the subject, with the potential of greater international comparability".

7. Conclusive remarks about defining and classifying cooperatives

No single criterion is available to determine which entities are in scope of cooperatives. A set of criteria is necessary to pin down those that meet the definition. A minimum of four, not hierarchized, structural operational qualification criteria, are required. These cover some of the ICA cooperative principles but not all. Cooperatives that follow those or more of the cooperative principles are in scope. Entities that do not meet the four criteria, whether following or not other cooperatives principles, are either out of scope or they are hybrids.

Filtering entities by these criteria will establish entities of the cooperative core-perimeter and those that are at the boundaries. Entities that comply with some but not all of these criteria will be considered as hybrids. Some hybrids might be included in the "close" periphery if they comply with all core criteria but are not incorporated or registered as cooperatives. Others will be included in the "far" periphery, if they comply with some but not all core criteria or if they comply to those inconsistently.

Because cooperatives are member-based entities with particular economic objective functions in relation to meeting their members' needs and interests, classification issues are closely related to definitional issues of the cooperative. For classifying, a single classifying system does not suffice. Cooperatives need to be classified by two systems, one referring to its main economic activity, and the second one to the members' relation to the cooperative. This second classification should be based on the actual nomenclatures used by cooperative stakeholders, which could be harmonized by the ICA. However, a clarification regarding the nature of the relation should be made in order to better understand the cooperatives' strategies and economic performance.

Registers, surveys and their combinations are general approaches for collecting data on cooperatives. Other methods may be used such as satellite accounts, establishment-based surveys and household surveys, which help produce more complete and reliable information on the subject, with the potential of greater international comparability.

Key characteristics of cooperatives: An overview of some issues

1. Membership

This section offers an overview of how membership is conceived in extant work and studies about cooperatives. It presents how members are defined and classified and who data may be collected to measure cooperative membership.

1.1. Definition

A cooperative member is a person who initially signed the application for registration and those admitted in accordance with the cooperative's bylaws. A person usually pays

Table 7: Types of cooperatives according to their main activities:

Cooperative type	Definition
User cooperative	Cooperatives created and managed to minimize intermediation costs for the users of the products or services of the cooperative. (Carini et al., 2017).
Producer cooperative	A cooperative owned and democratically controlled by producers who band together to process or market their products (WCM, 2016).
Worker cooperative	A cooperative owned and democratically controlled by its worker-owners. Worker cooperatives aim at enabling members to obtain more favorable working conditions than those available on the market, both in terms of quality and economy (WCM, 2016).
Multi-stakeholder cooperative	A cooperative that formally allows for governance by representatives of two or more "stakeholder" groups within the same organization, including consumers, "producers", workers, volunteers or general community supporters (Lund, 2011).

a membership fee to become a member of a cooperative, but sometimes neither a membership fee nor purchase of stock is required for membership (Cropp & Zeuli, 2004). Members may be individual, joint or body corporate members. The rules may restrict or exclude body corporate and joint members. According to the ICA, a cooperative is an enterprise where ownership, control, and benefit are all held by the same group of people: the cooperative members. Members can be employees, producers, clients, supporter- or community- members, depending on the type of cooperative. Membership should be open to all persons able to use the cooperative services and willing to accept the responsibilities of membership, without discrimination. They collectively own the cooperative corporation and own social capital shares of the cooperative on an individual basis.

1.2. Classes of membership

1.2.1. Typology of membership in relation to the main activity of the cooperative

Multi-stakeholder cooperatives (MSCs) are cooperatives that formally allow for governance by representatives of two or more “stakeholder” groups within the same organization, including consumers, producers, workers, volunteers or general community supporters. Rather than being organized around a single class of members the way that most cooperatives are, multi-stakeholder cooperatives enjoy a heterogeneous membership base. Such cooperatives represent a diversity of interests, but a commonality of need or aspiration on the part of the stakeholders, capturing a range of types of interests and impacts that an organization has, while recognizing the interdependency between them.

Another way to understand the multi-stakeholder cooperative model is to consider the different time horizon inherent in the solidarity approach (Lund, 2011). While a traditional price-driven business model (whether cooperative or not) may be seen as primarily transactional, the multi-stakeholder cooperative enterprise is often focused on being more transformational. Multi-stakeholder members are not interested in single transaction or even season of transactions, but rather in building a long term relationship based upon on a stable foundation of fair pricing, fair wages and fair treatment for all parties. It requires all members to look beyond their immediate short-term interests and join with their business partners to envision a system where everyone’s interests will be met in different ways over the short-term and the long.

As regards the previous classification based on the relationship between members and the activity of the cooperative, this seems to be the most common in the literature (Carini et al., 2017; Eum, 2016 and others) but is not without weaknesses. For instance, the producer cooperative category does not define the type of relation between the member and its cooperative, just the status of the member. Indeed, producers may use different functions of the cooperative for a given entity: as a marketing channel, as an inputs provider, etc. If the distinction between users, producers and workers is useful in practice, it may not serve as a basis from a conceptual point of view.

1.2.2. Typology of members according to the interests of members

Initially made to describe the different categories of members that may be found in multi-stakeholder cooperatives, the typology developed by Lund (2011) serves as background for the question related to the types of members in the organization for the World

Coop Monitor annual survey. Membership classes can be grouped into three major categories: Cooperative User, Cooperative Worker and Cooperative Supporter. These categories group heterogeneous sub-categories of member's relations to the cooperative (e.g. "institutional purchaser"), member's status (e.g. "producer") and cooperative economic objective function (e.g. "intermediary").

User membership classes

Consumers

Consumer cooperatives are perhaps one of the most widespread types of cooperatives in the world in terms of members. They include grocery stores, credit unions, and healthcare and housing cooperatives, among others. Consumer-focused cooperatives have the advantage of a potentially very broad reach (everyone is a consumer to one degree or another). From a market perspective, since the role of consumer is inherent in any supply chain, consumers bring a vital piece of knowledge and commitment to the cooperative, that of the eventual purchaser of goods and services.

Clients and families of clients

Clients represent recipients of services such as daycare, home, health care or other services. Clients' relationship to the cooperative is generally much more intense than that of ordinary consumers and their reliance on its services more marked.

Institutional purchasers

Institutional purchasers are another important sub-set of users. In some cases, such as hospitals, nursing homes, or even restaurants, the purchaser of food products is different from the person who will be ultimately consuming it. In these instances, it may be important to craft a membership category to represent the interests and perspective of institutional buyers because of the profound effect they may have on the chain of supply and demand.

Producers or groups of producers

Another major class of traditional cooperative user-members is producers (agricultural producers, groups of artisans, or anyone else for a particular good or service to market).

Intermediaries (processors, distributors etc.)

Another group composed of individuals and businesses which help bring consumers and producers together by processing, distributing, or otherwise handling product in important intermediary stages.

Some cooperatives would simply hire such functions out, as they would many other tasks in their production process. In other cooperatives however, these intermediary functions are viewed as vital elements of local infrastructure necessary to build producer capacity and enhance the entire supply chain.

Worker membership classes

Workers

In areas where there is a specific legislation for multi-stakeholder cooperatives as in Québec, workers are singled out as a special class of stakeholder because of the cen-

tral role they play in the execution of the cooperative vision and implementation of its strategy.

Professional employees

Many conventional corporations have the CEO serve on the board of directors, and some companies, particularly smaller, privately held ones, might also have other executives serve as well. This arrangement is not generally practiced by cooperatives, however, which do not tend to favor such a concentration of power even if it were permissible in the bylaws. Some multi-stakeholder cooperatives, however, were founded by a class of professional employees such as doctors or social workers, and may well have representatives of that professional class of worker serve in a governance role in addition to other stakeholders.

Supporter member classes

Community members

Many multi-stakeholder cooperatives make a place in their structure for supportive community members to participate. They do not play a specific role in the day-to-day life of the cooperative the way that employees, consumers or producers do, but they are often willing and able to invest money, volunteer time and/or specific expertise to help the cooperative succeed. Supporter members, as the name implies, are involved in the cooperative in order to support the cooperative's purpose. Including supporter members may originate from various reasons: to offer a honorary and advisory role to a retired member of the cooperative, to attract additional resources, to strengthen the political capital of the cooperative while included a well-regarded person who will widen the network and the relationship, or even bringing expertise to cooperatives which have little governance or business experience.

Investor members

In some countries, the creation of an investor class of cooperative member in addition to the primary class of producers or consumers has occurred (LCA in the United-States for example). LCA statutes have a very different orientation from the European or Quebecois solidarity cooperative statutes in that the sole purpose for the addition of membership classes under LCAs is to attract investment capital. The purpose of this additional class of members in the LCA-type cooperative may be limited to a financial one: in that sense, the status of supporter member recalls the autonomy and independence issue previously mentioned, as well as the risk to bring the 3rd principle of the ICA statements on the Co-operative Identity on "limited compensation on capital subscribed" as a condition of membership down (ICA, 2015). Moreover, from a governance point of view, a cooperative that relies heavily on external sources for capital creates a risk of breaching the 4th principle of autonomy and independence. The balance between the relative weight of member capital and external capital should be carefully watched by members. Too much reliance on external capital can lead to loss of autonomy, independence and democratic control with investors gaining control of key business decisions as a condition of their investment. ICA (2015) also estimates that "investment rules should be set to ensure that any withdrawal of capital by investors does not destabilise or endanger the cooperative".

1.3. Data source and screening methods on membership

In practice, it is easier to count the number of employees than the number of members: a person may be a member of a cooperative without being active, or may belong to numerous cooperatives. Getting reliable and precise figures on membership may be difficult, but not impossible.

Household-surveys may be a good source for cooperative members under conditions. Some agricultural or fishermen censuses also include questions on cooperatives. This screening method is the only one allowing identifying persons who are members of more than one cooperative and therefore prevent the risk of double-counting. Few surveys are able to provide data on members of cooperatives. The World Bank Living Standards Surveys request information in agricultural cooperatives as said earlier. Surveys on social capital or collective actions may investigate this issue, as they integrate a “cooperative” choice (as in the Japanese Social Survey), but it is not sure that NSOs are aware of how data on cooperative membership may prove valuable for the cooperative movement.

The World Cooperative Monitor questionnaire includes questions on different variables such as the number of members, of female members, of youth members (aged between 15 and 24), the member’s types, according to Lund (2011) typology. The participation rate at general assemblies (over the last three years) is set to be one kind of proxy for active membership in the governance of the cooperative. The last data focuses members’ remuneration in terms of patronage refunds, profit share, discounts on price, goods and/or services or other types of remuneration.

Besides surveys, public authorities of the Republic of Korea and Costa Rica impose cooperatives to publish their information, carry out audit or regular monitoring, the information on members exists although it is not always accessible for external actors. The government may also collect data through audit or regular control (Sri Lanka). In the case of Quebec, the government carries out directly regular data collection, using mandatory annual reports of the cooperatives to public authorities to produce data. In Spain, Italy and France where the intervention from public sector is restricted, only information related to official systems (tax, social security, publication of company information etc.), is available for cooperatives, as well as all private enterprises.

To sidestep the issue of double-counting members, focusing on membership rather than on measuring individual members may be the best path, as each of these memberships is to be counted under a different sector, which is important for statistics pertaining to different sectors.

1.4. Central issues with membership measurements

1.4.1. Natural or legal person membership

The membership of a cooperative may be composed of natural persons or legal persons as well such as in federations or unions. In the first case, if cooperative members are exclusively natural persons, members are relatively homogeneous so the number of members is a relevant indicator to measure the size and magnitude of the cooperative. In the second case, two comments can be made. On the one hand, there is a strong heterogeneity among legal person members. On the other hand, the risk of double-counting within a given cooperative is important. Indeed in agriculture for example, there can be cases where a natural person owns several legal persons. This leads to a situation

where a unique member in practice is a multiple member of the cooperative through the different persons. Finally, a cooperative may mix natural and legal persons raising concerns on the relevance of a simple computation of the number of members.

1.4.2. Active membership

Getting statistics on the number of members seems to be difficult, but collecting data on active membership appears to be both more interesting than solely on registered members, but even more complex as well. Measuring active membership may prove to be difficult. For instance, the participation rate is expected to be measured in the World Cooperative Monitor questionnaire, but to our knowledge, no computed statistics are available on this topic. The matter of inactive membership may be approached by two types of proxies. The first type refers to the non-use of the services provided by the cooperative, which could be qualified as “the economic activity” approach. The second type refers to a democratic approach, using the participation on committees, mentorship or attendance rate to general meetings for example. However, it is useful to make a difference according to the type of cooperative considered. Consumer cooperatives may need different measures of active participation compared to the other types of cooperatives: from an economic activity approach for example, is it relevant to consider that being active in a consumer cooperative means a high level of consumption through the cooperative? It would mean that one objective of consumer cooperative is to encourage consumption, which is at the very least uncertain. This illustrates the thorny issue of active membership for consumer cooperatives.

“When a farmer joins an agricultural cooperative, he or she undertakes to participate in the cooperative economically, as a cooperator, and also in its administration, as an associate” (Barraud-Didier et al., 2014, p. 125). Indeed, what is true for agricultural cooperatives is also for the other types of cooperatives. A member has a dual commitment to his/her cooperative: first participating to the cooperative activities by using the services provided and second to actively take part into the governance of the cooperative. Indeed, as a cooperator, a member actively participates in the cooperative daily activity by using its services according to the cooperative bylaws. As a partner, the member should be involved in the decision-process of the cooperative. This participation is represented by the democratic-governance principle and may consist in becoming a board administrator, participating to the general meetings or non-statutory organs, according to the willingness of the member. It seems that farmers may privilege one or the other dimension, as you can actively conduct economic transactions with the cooperative with a high governance commitment, or the opposite, or even mix both of them (Barraud-Didier et al. 2014, p. 140). As the degree of economic and democratic commitment is central for the sustainability of the cooperative (Bhuyan, 2007, p. 294), it may be interesting to collect data on active membership to get both a quantitative and qualitative approaches on this issue.

1.5. Conclusive remarks about membership

This review of the membership characteristic of cooperatives points out that members include a variety of persons that can or cannot have an employment relationship with the cooperative such as employees, producers, clients, supporter or community members depending on the type of cooperative. To sidestep the issue of double-counting members, focusing on membership rather than on measuring individual members may be the best path, as each of these memberships is to be counted under a different sector,

which is important for statistics pertaining to different sectors. The typology of membership classes distinguishes three large types of members: users, workers and supporters of the cooperative. However, each of these classes is composed of heterogeneous sub-categories. For example, in the User membership class, one will find members' relation to the cooperative ("consumers", "clients", "institutional purchasers"), status of the members ("producers or groups of producers") and economic objective function of the cooperative ("intermediaries"). The discussion of the active membership issue is similar to the challenge of determining the baseline characteristics a cooperative should have to be defined as such: what may be the characteristics to define the "minimal" member? This review reminds the needs to find a common understanding between all stakeholders and an agreed typology to be followed for measurement purpose.

2. Value added

2.1. What does value added measure?

Value added is a measure of economic performance of an economic entity which has a fairly long history of application in economics. It has been regarded as an increase in wealth of an economic entity (Haller & Stolowy, 1998). As such it has been used as a performance index of enterprises, especially for comparison between cooperatives and non-cooperative enterprises (e.g. Doucouliagos, 1995; Fakhfakh et al., 2013). It is thus a particular concept of income measurement. Its traditional roots originate from macro-economics, especially regarding the calculation of national income which is measured by the productive performance of a national economy called National Product or Gross Domestic Product (GDP). GDP is therefore simply the sum of added value.

Value added also serves as tax-base, as for the Value Added Tax (VAT). As such, it is an interesting indicator for public finances (Haller & Stolowy, 1998). Value Added Tax is one of the most significant developments in tax policy of recent decades that had been adopted by more than 150 countries worldwide (Keen & Lockwood, 2010).

Three types of estimations referring to value added are found in the literature:

- At the firm level: the performance index (e.g. Worthington, 1999);
- At the sectorial level: it refers to the estimation of the weight of a given sector in the economy. The company is therefore classified according to its main activity:
The principal activity of a producer unit is the activity whose value added exceeds that of any other activity carried out within the same unit (UN, 2008, p. 88)
- At the macro-economic level: it refers to the redistribution of value added between labour and capital (Askenazy 2003).

2.2. How is value added usually measured?

2.2.1. General definition and conventions

Value added is generally calculated in two ways (OECD, 2008, p. 574):

- A subtractive or indirect method: the difference between the output and the intermediate consumption;
- An additive or direct method: the sum of the other components in the business income statement.

This is an important point as one can usually compile value added directly for the intermediate account from the income statement. But the intermediate account needs to be adjusted in order to be used at the end in SNA accounts (UN, 2000, pp. 30-33): inclusion of output for intermediate consumption and capitalized output for own final use (e.g. costs of R&D used internally, costs of developing software), adjustment of interest receivable and interest payable, adjustment for insurance premiums, adjustment for consumption of fixed capital, adjustment for property income attributed to insurance holders, and adjustment for taxes. In general, value added in the production account is “adjusted upward by the capitalized costs of developing software and entertainment, literary and artistic originals and downward by the service charges paid for insurance and financial intermediation”.

Net value added is the value of output minus the values of both intermediate consumption and consumption of fixed capital. For a given enterprise, we have:

Box 2: Net value added, by training and distribution

Net value added, by training and distribution

$$S - B - \text{Dep} = W + I + \text{Div} + T + R$$

where: S – Sales revenue; B – Total bought-in materials and services; Dep – Annual depreciation charge; W – Year’s wage cost; I – Interest payable for the year; Div – Dividends payable for the year; T – Corporate taxes; R – Retained Profit.

It is worth noting that in accounting terms for a non-financial corporation, the financial income (financial revenues minus financial costs) and extraordinary income are not part of the value added calculation, as they do not originate from usual activity. Moreover, some studies highlight the evolution of the cooperative form, from a production cooperative to a shareholder cooperative, owning shares in many subsidiaries and redistributing dividends to its members (Koulytchizky & Mauget, 2003). This transition tends to call into question what is part of value added calculation or not.

There are three different methods for the calculation of value added: at basic prices, at market prices and at cost prices. Box 3 (from UN, 2008, p. 103) describes the difference according to the definitions of prices:

Box 3: Basic prices, producers’ price and purchasers’ price

Basic prices

- + Taxes on products excluding invoiced VAT
- Subsidies on products
- = Producers’ prices
- + VAT not deductible by the purchaser
- + Separately invoiced transport charges
- + Wholesalers’ and retailers’ margins
- = Purchasers’ prices

Source: UN, 2008, p. 103

- Value added at basic prices is calculated from the production value plus subsidies on products minus the purchases of goods and services (others than those purchased for resale in the same condition) plus or minus the change in stocks of raw materials and consumables minus other taxes on products related to turnover but not deductible. It represents the value added by the various factor inputs in the operating activities of the unit concerned;
- Value added at market prices (or producers' prices) (UN, 2008, p. 104) is defined as output value at producers' prices minus intermediate consumption valued at purchasers prices;
- Value added at factor prices. It can be derived from gross value added at basic prices by subtracting other taxes on production, minus subsidies on production.

Lal (1999) reports that in each of OECD member countries, value added is measured according to one of these approaches. Canada, Denmark, Greece, Iceland, Ireland and the United Kingdom measure value added at factor cost; Finland, Hungary and Sweden measure it at basic prices, and the other 18 countries measure it at market prices. Xu (2008, p. 483) reports that China uses producers' prices approach disregard the SNA guidelines: "both producers' prices and purchasers' prices include deductible VAT".

2.2.2. Differences between market and non-market output

Non-market output consists of goods and individual or collective services that are supplied free, or at prices that are not economically significant, to other institutional units or the community as a whole (UN, 2008). Consistent with international guidance, Statistics New Zealand (2010) concludes that the costs of production are the most suitable way of establishing the relative value of those goods and services for which there are no prices.

In the system of National Accounts (2008 SNA, p. 457), cooperatives are treated as a borderline case for the measure of the output: "as with other institutional units, if the articles of association of a cooperative prevent it from distributing its profit, then it will be treated as an NPI (Nonprofit Institutions); if it can distribute its profit to its members, it is not an NPI".

UN (2008) proposes some guidelines for the case of a NPI combining market and non-market activities, suggesting that there are two possible scenarios: in the case of an organization undertaking different types of activities with predominant market activities, separate establishments for each can be distinguished with different calculus of production. In the case of a non-market activity with the sales covering a large part of costs with the balance being made up of donations, these donations are analogous to subsidies and the value of output has to be measured as the total sum of costs.

UN (2003) provides examples of imputed volunteer labor inputs for market and non-market non-profit institutions. In every case, value added and output are increased by the amount of imputed compensation (based either on opportunity costs or on costs of replacement).

2.2.3. Value added for financial activities

Value added is ambiguous for financial activities. Depending on the convention, it may lead to an underestimation or an overestimation of the importance of financial activities

in economy. Prior to 1995, the international statistical framework did not attribute any profits to banks, the rationale was that banks merely intermediated between lenders and borrowers, and their only value added was through wages (Everett et al., 2013).

Banks charge both explicitly and implicitly for their financial intermediation services. Explicit charges include account service fees, credit card fees, financial advice fees, asset management and brokerage fees. Difficulties lie in measuring the service not explicitly charged for. A measure called “Financial intermediation Services indirectly measured” (FISIM) was developed in order to take into account these implicit services.

The statistical framework measures these implicit services, for which banks do not charge directly, as the margin between a reference market rate (normally the interbank funding rate) and retail deposit and loan interest rates.

It is interesting to note that national practices can be slightly different. For example, in the USA, this reference-rate approach was implemented in the national income and production accounts but only the method for estimating the service of commercial banks was revised. The methods used for savings institutions and credit unions (non for profit cooperatives) continued to treat depositors as the consumers of all the implicit services, although this revision was not totally conform to the recommendations of the 2008 SNA (Hood 2013). The simulations (Hood, 2013) show that this leads to an overestimation of the credit union sector.

2.3. Methodological and conceptual issues for cooperatives

2.3.1. General methodological issues

Two different methodological issues lead to an overall misestimation of the value added generated by cooperatives.

How change in quality is reflected in change in value added?

As underlined by Stiglitz (2009), quality improvements account for much of the increase in GDP nowadays but assessing quality improvements is difficult. For example: “the United-States spend more on health-care than any country but get poorer outcomes. Part of the difference between GDP per capita in the US and some European Countries may be a result of the way we measure things”. A report from Statistics New Zealand (2010) concludes that estimates of change in the quality of services should not be combined with estimates of change in the quantity of services, until there is an international consensus on how this should be done.

Underestimation of quality improvement is equivalent to an overestimation of inflation rate and therefore an underestimation of real incomes. The effect is neutral only if the goods and services produced by cooperatives had the same quality than the ones produced by non-cooperative enterprises. Studies found that this may lead either to an overestimation (e.g. Austrian wine cooperatives that had been found to produced significantly lower quality wine (Pennerforster & Weiss, 2013) or an underestimation of value added generated by cooperatives (e.g. in the housing sector (Altus & Mathews, 2002), day care sector (Vamstad, 2012) or agricultural sector (Drivas & Giannakas, 2010).

How change in value chains is reflected in change in value added?

By ignoring the impact of globalization, official business and macroeconomic statistics may be measuring price, production, and GDP incorrectly (McFeely, 2016). An analysis

of Bureau of Labor Statistics price data in the USA concludes that indices were biased as “price declines associated with the shift to low cost foreign suppliers generally are not captured” (Houseman et al., 2011). This in turn may result in a miscalculation of Gross Value Added (GVA) or at least its attribution to the wrong country, region or industry.

The relocation of activities leading to imports at lower costs brings to an overestimation of value added, so its growth as well, because this change in prices is not directly taken into account by the GDP deflator.

If this may concern few cases, like French sugar cooperatives which relocated their supply chain to Brazil or world-wide seed cooperatives, turning a blind eye to this dimension lead to underestimate the cooperative part in the GDP.

2.3.2. Specific methodological issues: The mix of market and non-market activities

The problem may lie in cooperatives both combining market and non-market activities and being not recognized as non-profit institutions. That leads to two different issues that can be relevant for every cooperative.

Problem 1: (operating) subsidies and value added

The common practice consists to exclude operating subsidies from value added (see Fecher & Lejeune, 2015). The idea is to avoid double-counting issue. The question may address subsidies specifically, as they may be seen as a payment for a service provided by the cooperative. It is worth recalling that operating subsidies are included in the computation of value added for the agricultural sector (see European Union, 2016), in accordance to the fact it is the consideration of a service (provided under the 1st or 2nd pillars of the Common Agricultural Policy (CAP)).

Hence, calculations from the French NSO INSEE⁹ show that operating subsidies reflect 45 per cent of the value added of the agricultural sector in 2014.

Problem 2: donations/grants and value added

The common practice is to exclude received donations or grants from value added. For an enterprise, charitable contributions are part of current transfers and therefore may be classified in business accounts as operating expenses (UN, 2002). A similar question is addressed for revenues received for the consideration of services. This led some public authorities to encourage cooperatives to provide accounts reflecting a value added including donations and grants.

2.3.3. Conceptual issues: Value added and cooperatives

Generally speaking, we may discuss the use of value added as a relevant indicator of the economic activity of cooperatives. The purpose of a cooperative is a much-discussed subject. We therefore provide some examples depicting the use of value added for cooperatives.

⁹ See <https://www.insee.fr/fr/statistiques/1287840>

Workers cooperatives

Efficiency or performance is typically measured as value added, value added per worker... (Doucouliagos, 1995). Salary costs are a part of value added, so there should not be conceptual problems to use value added *a priori*.

The larger value added, the better the chance that the purpose of the cooperative (providing more and better-paid jobs) is realized.

Agricultural cooperatives, and more generally producer cooperatives

Farmers established cooperatives in order to have a countervailing power, gain access to industrially produced goods and services, realize economies of scale, manage their risk, and improve their own income. Cooperatives are successful if they provide services to their members in excess of what those members can achieve individually or outside of the cooperative (Soboh et al., 2012).

For Soboh et al. (2012) a marketing cooperative maximizes the sum of its own profit net of raw milk expenses (revenues minus costs of other inputs) and the milk revenues for the farmers. For Fulton & Giannakas (2001), a purchasing cooperative maximizes the welfare of its members that may lead to a downward biased value added.

In this type of cooperative, value added is not a relevant indicator to measure the economic activity of the cooperative (Deshayes, 1988). The cooperative differentiates itself from a for profit enterprise as the product under-risk ("produit risqué") is no longer the capital provided by the shareholders but the raw material purchased to the members. That leads Declerck (2013) to note that value added is relevant only in the case of a cooperative that faces economic difficulties. In that case the capital provided by the members can also be considered as a product under-risk.

Indeed, for a marketing cooperative, the farmers' income is on one hand a part of value added (patronage refunds or interests on social shares) and is a reduction of value added (payment of raw material) on the other hand. So a strong value added can be achieved at the expense of intermediate consumption (the raw material provided by the members), but it can indicate a strong market power as well allowing the cooperative to fix high prices.

In contrast, for a purchasing cooperative, a strong value added would reflect a situation where the prices set are too high for its members.

This conceptual issue is accompanied by a practical one: cooperatives often combine those two aspects. They develop partner's current accounts similar to bank accounts to facilitate their transactions with their members.

Services cooperatives

For a services cooperative (sharing of agricultural machinery, housing cooperative), value added is not a relevant indicator of activity either, because the activity is to manage collective assets. Differences in *time horizon* appear more clearly for this type of cooperative (Rey & Tirole, 2007), which corresponds to the tradeoff between higher investment (which preserves the economic value of the collective assets, allowed by a low price and so a low value added) and lower investment, because current members have no interest nor incentives to invest for future members, who would have benefited from the investment without costs (Hansmann, 1999; James & Sykuta, 2005). In practice, an agreement is found according to the commitment level of the cooperative members.

It is worth noting that the value added of a shareholding worker cooperative is, by definition, equal to zero.

Furthermore, the current situation for many producer cooperatives reflects a hybridization process (joint-purchase, joint-marketing...) hard to deal with for a comprehensive approach.

At last, as cooperatives are part of public policies, they carry out general interest activities not measured by value added (e.g. sustainable management of fisheries through producer cooperatives, Ovando et al., 2013)

2.3.4. Examples

The following examples illustrate how value added may or may not reflect:

- Change in the remuneration policy of the members (1)
- Change in the revenues mix of the cooperative (2)
- Change in the development strategy of the cooperative (3)
- Change in the legal status of the cooperative (4)

The presentation of the examples for a marketing cooperative is based on the User Guide of the Canadian System of Macroeconomic Accounts (Chapter 4 Supply and use accounts).¹⁰ In order to keep the examples as simple as possible, we simply made the following hypotheses: no taxes on patronage refunds and all intermediate consumption are considered as raw materials purchased from members. Generalized examples to other kind of cooperatives without theses hypotheses are straightforward.

Change in the remuneration policy of the members (1)

Table 8: Comparison of cooperatives with different remuneration policies

Agricultural coop with payment of members based on a high price for raw products and low patronage refunds		Agricultural coop with payment of members based on a low price for raw products and high patronage refunds	
Coop		Coop	
Concept	value \$	Concept	value \$
Output	260 000	Output	260 000
of which		of which	
Intermediate consumption	160 000	Intermediate Consumption	100 000
Gross value added	100 000	Gross value added	160 000
Gross value added	100 000	Gross value added	160 000
of which		of which	
compensation of employees	50 000	compensation of employees	50 000
Gross operating surplus	50 000	Gross operating surplus	110 000

Table 8 continued on page 58

¹⁰ <http://www.statcan.gc.ca/pub/13-606-g/2016001/article/14619-eng.htm>

Table 8 continued from page 57

Agricultural coop with payment of members based on a high price for raw products and low patronage refunds		Agricultural coop with payment of members based on a low price for raw products and high patronage refunds	
Gross operating surplus	50 000	Gross operating surplus	110 000
of which		of which	
consumption of fixed capital	20 000	consumption of fixed capital	20 000
Net operating surplus	30 000	Net operating surplus	90 000
Patronage refunds	10 000	Patronage refunds	70 000
Gross value added	100 000	Gross value added	160 000
of which		of which	
consumption of fixed capital	20 000	consumption of fixed capital	20 000
Net value added	80 000	Net value added	140 000
Members		Members	
Concept	value \$	Concept	value \$
Output	160 000	Output	100 000
of which		of which	
Intermediateconsumption	50 000	Intermediateconsumption	50 000
Gross value added	110 000	Gross value added	50 000
Gross value added	110 000	Gross value added	50 000
of which		of which	
compensation of employees	20 000	compensation ofemployees	20 000
Gross operating surplus	90 000	Gross operating surplus	30 000
Gross operating surplus	90 000	Gross operating surplus	30 000
of which		of which	
consumption of fixed capital	10 000	consumption of fixed capital	10 000
Net operating surplus	80 000	Net operating surplus	20 000
Patronage refunds	10 000	Patronage refunds	70 000
Gross value added	110 000	Gross value added	50 000
of which		of which	
consumption of fixed capital	10 000	consumption of fixed capital	10 000
Net value added	100 000	Net value added	40 000
Net revenues	90 000	Net revenues	90 000
of which		of which	
Net operating surplus	80 000	Net operating surplus	20 000
Patronage refunds	10 000	Patronage refunds	70 000

Table 8 continued on page 59

Table 8 continued from page 58

Agricultural coop with payment of members based on a high price for raw products and low patronage refunds		Agricultural coop with payment of members based on a low price for raw products and high patronage refunds	
Macroeconomic situation		Macroeconomic situation	
Net Value Added – Coop	80 000	Net Value Added – Coop	140 000
Net Value Added – Members	100 000	Net Value Added – Members	40 000
Net Value Added – Total	180 000	Net Value Added – Total	180 000
Members revenues	90 000	Members revenues	90 000
Share of the coop in the total of net value added	44 %	Share of the coop in the total of net value added	78%

If an agricultural cooperative chooses to base its remuneration policy on high patronage refunds, the share of the cooperative in the total of net value added increases, while the level of the members' revenues remains unchanged. Note that for a given level of patronage refunds, the value added increase if the cooperative chooses to pay less its members. Various papers (e.g. Boyle, 2004, Soboh et al., 2009, Soboh et al., 2011) show that remuneration policies are highly different across industries and countries. For example, dairy cooperatives in Ireland behave as if they are profit-maximizer and but give higher patronage refunds

This led Deshayes (1988) to state that value added and net surplus don't have any economic meaning in the case of the cooperative as it only reflect specific remuneration policies.

Change in the revenues mix of the cooperative (2)

Suppose that cooperatives produce a non-market good that it is financed by the government. We therefore have:

Table 9: Comparison of cooperatives with different revenues mixes

Coop with only market revenues		Coop with a mix of market and non-market revenues	
Coop		Coop	
Concept	value \$	Concept	value \$
Output	260 000	Output	260 000
		Subsidies on production	25 000
		Output at basic price	235 000
of which		of which	
intermediate consumption	160 000	intermediate consumption	160 000
Gross value added	100 000	Gross value added	75 000
Gross value added	100 000	Gross value added	75 000
of which		of which	
compensation of employees	50 000	compensation of employees	50 000

Table 9 continued on page 60

Table 9 continued from page 59

Coop with only market revenues		Coop with a mix of market and non-market revenues	
Gross operating surplus	50 000	Gross operating surplus	50 000
Gross operating surplus	50 000	Gross operating surplus	50 000
of which		of which	
consumption of fixed capital	20 000	consumption of fixed capital	20 000
Net operating surplus	30 000	Net operating surplus	30 000
Patronage refunds	10 000	Patronage refunds	10 000
Gross value added	100 000	Gross value added	75 000
of which		of which	
consumption of fixed capital	20 000	consumption of fixed capital	20 000
Net value added	80 000	Net value added	55 000
Members		Members	
Concept	value \$	Concept	value \$
Output	160 000	Output	160 000
of which		of which	
intermediate consumption	50 000	intermediate consumption	50 000
Gross value added	110 000	Gross value added	110 000
Gross value added	110 000	Gross value added	110 000
of which		of which	
compensation of employees	20 000	compensation of employees	20 000
Gross operating surplus	90 000	Gross operating surplus	90 000
Gross operating surplus	90 000	Gross operating surplus	90 000
of which		of which	
consumption of fixed capital	10 000	consumption of fixed capital	10 000
Net operating surplus	80 000	Net operating surplus	80 000
Patronage refunds	10 000	Patronage refunds	10 000
Gross value added	110 000	Gross value added	110 000
of which		of which	
consumption of fixed capital	10 000	consumption of fixed capital	10 000
Net value added	100 000	Net value added	100 000
Net revenues	90 000	Net revenues	90 000
of which		of which	
Net operating surplus	80 000	Net operating surplus	80 000
Patronage refunds	10 000	Patronage refunds	10 000

Table 9 continued on page 61

Table 9 continued from page 60

Coop with only market revenues		Coop with a mix of market and non-market revenues	
Macroeconomic situation		Macroeconomic situation	
Net Value Added – Coop	80 000	Net Value Added Coop	55 000
Net Value Added – Members	100 000	Net Value Added – Members	100 000
Net Value Added – Total	180 000	Net Value Added – Total	155 000
Members revenues	90 000	Members revenues	90 000
Total of consumer purchasing	260 000	Total of consumer purchasing	235 000
Share of the coop in the total of net value added	44 %	Share of the coop in the total of net value added	35 %

For a given level of output and a given remuneration policy, if government subsidizes the production, the share of the cooperative in the total of the net value added decreases. Hence, different public policies pose difficulties for international comparison of value added. This problem had already been underlined by Askenazy (2003).

Change in the development strategy of the cooperative (3)

Various authors have highlighted the problem of the “horizon problem”. According to Porter and Scully (1987): “a horizon problem arises when an owner’s claim on the net cash flow generated by an asset is shorter than the productive life of the asset”. The dilemma leads the cooperative to choose between a high price for the raw materials given to its members, and investment for its long-term development (that can nonetheless lead in the future to a high price given to the next generation of members).

Table 10: Comparison of cooperatives with different horizon problems

Coop with a low horizon problem		Coop with a high horizon problem	
Coop		Coop	
Concept	value \$	Concept	value \$
Output	260 000	Output	260 000
of which		of which	
Intermediate consumption	80 000	Intermediate consumption	190 000
Gross value added	180 000	Gross value added	70 000
Gross value added	180 000	Gross value added	70 000
of which		of which	
compensation of employees	50 000	compensation of employees	50 000
Gross operating surplus	130 000	Gross operating surplus	20 000
Gross operating surplus	130 000	Gross operating surplus	20 000
of which		of which	
consumption of fixed capital	20 000	consumption of fixed capital	20 000
Net operating surplus	110 000	Net operating surplus	0

Table 10 continued on page 62

Table 10 continued from page 61

Coop with a low horizon problem		Coop with a high horizon problem	
Patronage refunds	0	Patronage refunds	0
Gross value added	180 000	Gross value added	70 000
of which		of which	
consumption of fixed capital	20 000	consumption of fixed capital	20 000
Net value added	160 000	Net value added	50 000
Members		Members	
Concept	value \$	Concept	value \$
Output	80 000	Output	190 000
of which		of which	
intermediate consumption	50 000	intermediate consumption	50 000
Gross value added	30 000	Gross value added	140 000
Gross value added	30 000	Gross value added	140 000
of which		of which	
compensation of employees	20 000	compensation of employees	20 000
Gross operating surplus	10 000	Gross operating surplus	120 000
Gross operating surplus	10 000	Gross operating surplus	120 000
of which		of which	
consumption of fixed capital	10 000	consumption of fixed capital	10 000
Net operating surplus	0	Net operating surplus	110 000
Patronage refunds	0	Patronage refunds	0
Gross value added	30 000	Gross value added	140 000
of which		of which	
consumption of fixed capital	10 000	consumption of fixed capital	10 000
Net value added	20 000	Net value added	130 000
Net revenues	0	Net revenues	110 000
of which		of which	
Net operating surplus	0	Net operating surplus	110 000
Patronage refunds	0	Patronage refunds	0
Macroeconomic situation		Macroeconomic situation	
Net Value Added – Coop	160 000	Net Value Added – Coop	50 000
Net Value Added – Members	20 000	Net Value Added –Members	130 000
Net Value Added – Total	180 000	Net Value Added – Total	180 000
Members revenues	0	Members revenues	110 000
Share of the coop in the total of net value added	89%	Share of the coop in the total of net value added	28 %

For a given output, the share of the cooperative in the total of net value added increases if the cooperative faces a low horizon problem (given priorities to the next generation of members). Therefore comparison can simply reflect different internal organizational arrangements.¹¹

Change in the legal status of the cooperative (4)

Suppose finally that the legal status of the cooperative changes. In some countries (e.g. Israel in the case of the kibbutzim, or in the case of the “société coopérative agricole d’exploitation en commun”) farmers can be employees of the cooperative, which owns the land.

Table 11: Comparison of cooperatives with different legal status

Agricultural cooperative		Agricultural workers cooperative	
coop		coop	
Concept	value \$	Concept	value \$
Output	260 000	Output	260 000
of which		of which	
Intermediate consumption	160 000	Intermediate consumption	50 000
Gross value added	100 000	Gross value added	210 000
Gross value added	100 000	Gross value added	210 000
of which		of which	
compensation of employees	50 000	compensation of employees (included	150 000
Gross operating surplus	50 000	Gross operating surplus	60 000
Gross operating surplus	50 000	Gross operating surplus	60 000
of which		of which	
consumption of fixed capital	20 000	consumption of fixed capital	30 000
Net operating surplus	30 000	Net operating surplus	30 000
Patronage refunds	10 000	Patronage refunds	10 000
Gross value added	100 000	Gross value added	210 000
consumption of fixed capital	20 000	consumption of fixed capital	30 000
Net value added	80 000	Net value added	180 000
members		members	
Concept	value \$	Concept	value \$
Output	160 000	Output	160 000
of which		of which	
intermediate consumption	50 000	intermediate consumption	0

Table 11 continued on page 64

¹¹ This observation can be linked to the reflections of a former cooperative executive (quoted in Cross et al. 2009): “co-operatives are unique (...) because they can go bankrupt only on purpose”.

Table 11 continued from page 63

Agricultural cooperative		Agricultural workers cooperative	
Gross value added	110 000	Gross value added	0
Gross value added	110 000	Gross value added	0
of which		of which	
compensation employees	20 000	compensation employees	0
Gross operating surplus	90 000	Gross operating surplus	0
Gross operating surplus	90 000	Gross operating surplus	0
of which		of which	
consumption of fixed capital	10 000	consumption of fixed capital	0
Net operating surplus	80 000	Net operating surplus	0
Patronage refunds	10 000	Patronage refunds and employees	90 000
Gross value added	110 000	Gross value added	0
of which		of which	
consumption of fixed capital	10 000	consumption of fixed capital	0
Net value added	100 000	Net value added	0
Net revenues	90 000	Net revenues	90 000
of which		of which	
Net operating surplus	80 000	Net operating surplus	0
Patronage refunds	10 000	Patronage refunds	90 000
Macroeconomic situation		Macroeconomic situation	
Net Value Added – Coop	80 000	Net Value Added – Coop	180 000
Net Value Added – Members	100 000	Net Value Added – Members	0
Net Value Added – Total	180 000	Net Value Added – Total	180 000
Members revenues	90 000	Members revenues	90 000
Share of coop in the total of net value added	44%	Share of coop in the total of net value added	100%

For a given member revenue and a given output, the share of the cooperative in the total of the net value added simply increases if members become employees of the cooperative. The change of kibbutzim into moshavim (traditional agricultural cooperatives) that already occurs in some cases (Russel et al., 2013) simply leads to a decrease of the cooperative sector in the economy of Israel, with an unchanged output.

Therefore as value added can change for multiple reasons not related to the importance of cooperatives in the economy, it cannot reasonably be considered as a reliable indicator for an international comparison.

2.4. Various alternative measures of value added for cooperatives

Facing these challenges, recommendations have been done to better take into account the activity of cooperatives. They have in common to include an adapted measure of value added, or to need access to additional data (EVAS).

2.4.1. Cooperative value added

Measuring the value added of cooperatives requires consideration of their social and economic objectives. As Balaguer and Castellano (2012) noted, cooperative associations are a special kind of companies that combine economic and social objectives, trying to achieve their social aims while allowing the members to benefit from a positive financial profit, although not as a function of the contributed capital, but to the cooperative work they have served. By proposing an adjusted calculation of cooperative value added, they want to consider the non-monetized value of the service exchange between members of the same cooperative.

It is proposed to calculate this cooperative value added in the case of a marketing cooperative, but this could be extended to any purchasing cooperative as well. Box 4 presents this mode of calculation.

Box 4: Calculation of cooperative added value (C.A.V.)

Actual Sales
+ Sales associates Discounts
= Total Sales
+ Financial Income¹²
= Total Revenue
– Raw materials purchased from partners, valued at market prices
– Materials products purchased from unrelated third parties
– Production services purchased from non-members
± Increases / decreases in inventories
– Depreciation and amortization
= Cooperative Added Value

Source: Balaguer & Castellano, 2012.

However, no recommendations are made regarding the operating subsidies the cooperative can received. An original proposition is to include financial incomes into value added calculation, which are commonly not considered as a part of the cooperative purposes.

¹² “In cooperatives, the return on capital contributed also exists, whenever it is so established in the statutes, but it consists of financial income at a limited interest rate. There is a possibility of sharing among members part of the positive financial profit, although not according to the capital contributed, but to the cooperative work performed”. (Balaguer and Castellano 2012, p. 35)

2.4.2. Value received (“valeur obtenue”) and value shared (“valeur partagée”)

Deshayes (1988) introduced two financial concepts applied to cooperatives (cited in Chomel et al. 2013).

Value received (“valeur obtenue”):

- Cash-flow balance resulting from the sales of members’ agricultural products and the purchase of all necessary inputs (other than financial costs and interests on social shares);
- Ability of the cooperative to generate enough cash flows from its marketing activity and purchase of inputs to pay back the loans and the interests, to finance itself and to pay the members’ products;

Value shared (“valeur partagée”):

- Amount earned from the payment of agricultural products that is shared between members;
- Inclusion of advances, price complements and patronage refunds paid to members;
- Indicator of the ability of the cooperative to meet the members’ needs with agricultural products appropriately compensated.

Some comments:

- In this framework, operating subsidies are part of the value received;
- However, exceptional incomes and financial incomes are excluded;
- Value shared considers the renewal of assets;
- These concepts are relevant for services cooperatives and consumer cooperatives (Deshayes 1988);
- These concepts may be used at a macro-economic level but need different treatments between cooperatives serving households and serving companies.

Table 12: Value received and value shared

	Agricultural marketing cooperative
Value received	Sales
	– intermediate consumption (not including from the members)
	– employee compensation
	– taxes
	– accounting provisions
	+ operating subsidies
	+/- other operating expenses or revenues

Table 12 continued on page 67

Table 12 continued from page 66

	Agricultural marketing cooperative
Value shared	Value received
	– financial expenses
	– Interest on social capital share
	+ financial revenues
	– amortizations
	– reserves
	+/- exceptional losses or profits

2.4.3. Expanded Value Added Statement

Building on traditional accounting principles, the Expanded Value Added Statement (EVAS) is an innovative tool to account for economic, social, and environmental factors. It provides a way to account for traditionally non-monetized factors (such as volunteer hours) to provide a better picture of social value creation. Initially developed for non-profit organizations, it has been extended to cooperatives. Mook et al. (2002) provide an example of a student housing cooperative.

The EVAS is a method of social accounting which attempts to answer the following question: “what difference do our actions make in economic, social and environmental terms? In sharp contrast to the question addressed by traditional accounting, how can we maximize profit for our owners?”

Total outputs are subdivided into primary, secondary and tertiary, reflecting how directly the associated items are connected to fulfil the cooperative mission. Primary outputs are the direct services of the cooperative, secondary output are indirect outputs that accrue to the organization’s members or customers; tertiary outputs are indirect outputs that accrue to those other than the organization’s members or customers.

The EVAS attempts to quantify and place a value on goods and services that are usually viewed as “free”. It integrates financial and social information: financial information from audited financial statements, and social values from calculations of typically non-monetized factors, such as volunteer hours or other non-market outputs.

Applying the EVAS: Tracking volunteering hours

Volunteer contributions are often not assigned a monetary value. The EVAS provides one way to account for these contributions.

The main issues are: (a) attributing an appropriate market value to volunteer labour; (b) attributing a value to benefits received by the volunteers from their volunteering; and (c) attributing value to the social impacts.

While it is often difficult to quantify these kinds of values, as there may not be a direct market (price) comparison, proxy market values can be estimated as appropriate to the types of skills involved. The method uses conservative assessments to calculate the comparative market value of social contributions, and is transparent in articulating the assumptions behind the calculations.

Using average data from 43 countries, Salamon et al. (2016) finds that volunteer work represents 43 per cent of the total workforce for the non-profits institutions. He proposes 5 criteria to define and collect data on volunteer work: volunteer work is related to 1) activity primarily for benefit of others solely, 2) carried out for a meaningful period of time, 3) not-for-pay (reimbursement of expenses are acceptable), 4) only for persons outside one's household and 5) non-compulsory.

Box 5: Valuing volunteers

Valuing Volunteers: Items typically not monetized in financial statements

- Value of volunteer time contributed to non-profits (as a resource for non-profits)
- Unpaid or subsidized specialized or technical contributions (such as free consulting)
- Informal skill development received by volunteers (e.g. leadership and management)
- Personal development of volunteers
- Community networking and collaboration

More generally, the overall concept used to guide the EVAS is sustainability, and it can be used to account for various dimensions of environmental impact. The EVAS methodology has been used to illustrate the environmental impact of an organizational policy to encourage employees to use more environmentally friendly transportation to and from work. By synthesizing financial data with social and environmental data, the EVAS is one mechanism for understanding the dynamics of an organization and the inter-related economic-social environmental implications of various choices made in day-to-day operations. If EVAS is a relevant indicator at a micro-economic level (to measure the impact of a cooperative on its various stakeholders), it seems difficult to use it at a macro-economic one (due to double-counting issues).

2.5. Conclusive remarks about value added

This section highlighted the difficulties to measure value added for cooperatives. The major one is that this indicator is not suited to measure without ambiguity successful cooperatives, as it can be done to assess whether companies have the capacity to pay their employees, their managers, their shareholders and taxes. A strong value added is the sign of a strong economic activity in worker cooperatives, but not necessarily in other cases. Meanwhile this should not be a reason not to measure the economic activity of cooperatives. Access to a reliable (accounting) databases enables researchers to undergo analysis that can be of great interest. For example, numerous studies comparing the performance of cooperative and non-cooperative enterprises based on costs or quantities highlight the specificities of the growth of cooperatives (e.g. Mosheim, 2002, Fakhfakh et al., 2013).

EVAS is an interesting alternative at a micro-economic level, but its use at a higher level would be very data consuming to deal with the double-counting issue. However, it has shed light on the need to think about the best measurement to adopt if the goal is to measure the social and economic impact of cooperatives.¹³

¹³ See Bouchard, M.J., and Rousselière, D. (2015), *The Weight of the Social Economy: An International Perspective*, Brussels, CIRIEC and PIE Peter Lang.

Employment in cooperatives

1. Introduction

According to the 2014 CICOPA Global Report, employment, both full time and part time, in or within the scope of cooperatives concerned at least 250 million persons in the world (Roelants et al., 2014, p. 9). 26.4 million people work in cooperatives, as employees (15.6 million) or worker-members (10.8 million), while 223.6 million producers organize their production together within the scope of cooperatives. In 2016, this update brings the estimation to 272.3 million persons (Eum, 2017), that is 22 million more compared to 2014, due to an enlarged coverage of the population at stake.

As there is no internationally agreed definition and methodology, this number is not an absolute reality but reflects approximate information on cooperative employment and on its different forms. Some additional studies include “jobs created because of the very existence of cooperatives” (Schwettmann, 1997, p. 6) in two ways: jobs created in governmental cooperative departments or cooperative audit companies, and jobs resulting from spill-over effects, namely jobs created in other business with which cooperatives maintain commercial relation. These considerations are not discussed here.

We first recall the definition of job and employment, its characteristics and variables. Then, we focus on employment in cooperatives.

2. Definitions

2.1. Job and employment

The statistical unit of job was first defined in an international standard for labour statistics as part of the resolution adopting the 1988 version of the International Standard Classification of Occupations (ISCO-88). That resolution defined a job, or work activity, as “a set of tasks and duties performed, or meant to be performed, by one person, including for an employer or in self-employment”. It is often used in reference as employment (Hunter, 2015). This definition was also included in the international standards for

the measurement of working time adopted in 2008 by the 18th ICLS, which further specified that a job may be “formal or informal” and may “refer to unpaid household service and volunteer work performed by one person for a household outside the SNA production boundary but within the general production boundary” (ILO, 2013c, p. 23). In case of volunteer work, this statistical unit of job is referred to as work activity.

According to the ILO definition (ILO, 2004), “employment covers any work, be it for wage or salary, profit or family gain”, and includes both “paid employment” and “self-employment” (in SNA terms) although the distinction becomes more and more uncertain as regards new arrangements on the labour market. The “employed” comprise all persons above a specific age who during a specified brief period, either one week or one day, were in the following categories:

- (a) “paid employment”: (i) “at work”: persons who during the reference period performed some work for wage or salary, in cash or in kind; (ii) “with a job but not at work”: persons who, having already worked in their present job, were temporarily not at work during the reference period and had a formal attachment to their job.
- (b) “self-employment”: (i) “at work”: persons who during the reference period performed some work for profit or family gain, in cash or in kind; (ii) “with an enterprise but not at work”: persons with an enterprise, which may be a business enterprise, a farm or a service undertaking, who were temporarily not at work during the reference period for any specific reason.

2.2. Status of workers categories

Jobs are classified with respect to the type of contract of employment between the job holder and the economic unit in which he or she is employed.

Five categories are presented:

- Employees
- Employers
- Own-account workers
- Members of producers’ cooperatives
- Contributing family workers.

Employers, own-account workers and members of producer cooperatives should be viewed as self-employment. According to the International Classification of Status in Employment (ICSE) “members of producers’ cooperatives” is defined as:

(...) workers who hold a self-employment job in a cooperative producing goods and services, in which each member takes part on an equal footing with other members in determining the organization of production, sales and/or other work of the establishment, the investments and the distribution of the proceeds of the establishment amongst their members (ILO, 1993).

As this definition only includes workers who work in producers’ cooperatives of which they are members, it excludes workers who own a farm and are members of a cooperative that provides services to them, such as marketing or processing goods they produce. As data collected on this category, if any, represent a small share of employment, there is a misrepresentation of cooperatives’ employment on the basis of these surveys.

3. Sources of data on employment

As recalled by the ICLS Resolution concerning statistics of work, employment and labour underutilization, in general, household-based surveys might be one of the sources for collecting statistics of work and of the labour force covering the resident population, their participation in all jobs and in all forms of work (ILO, 2013c, p. 13). If available, business registers would be better still, as they offer more precise information on employment. Membership and employment characteristics such as sex, age and others may not be available from registers, but collected on ad hoc basis through surveys or specific censuses. The World Cooperative Monitor survey collects data on variables such as the number of employees (by gender and age), elected officers and volunteer work (WCM, 2016, p. 5).

In their study on global employment of cooperatives, Roelants et al. (2014) collected data from national statistical authorities, national public bodies in charge of cooperatives or national cooperative organizations, some existing regional surveys and data on the same topic. They recall that information on employment related to cooperatives is more difficult to find than general employment data, because the importance of cooperative employment in itself has generally not yet been fully recognized everywhere by statistical authorities as an added value of cooperatives. Moreover, the risk of inclusion of inactive or false cooperatives may have consequences on the measurement of employment and membership.

4. Employment in cooperatives

The term “cooperative employment” refers to employment performed both directly in and within the scope of cooperatives, namely comprising both employees and worker-members working in cooperatives, and self-employed producer-members producing within the scope of cooperatives (in terms of processing, commercialization and/or inputs), as well as the employees of these self-employed producer-members. The question of atypical types of work, such as volunteering, is also addressed as it falls into cooperative employment.

4.1. Owner and user: the Twin-track approach of members

Indeed, producer-members and their cooperatives are directly related to one another both in terms of the production process and of enterprise governance: the cooperative usually provides a fundamental contribution to the producer-member’s production process, while the producer-members together democratically control their cooperative. Thus, producer-members’ employment is not considered as being indirectly related to cooperatives.

4.2. Coverage of cooperative employment by statutes

All the previous workers’ categories can be used to estimate the workers employed by the cooperatives. Roelants et al. (2014) classify the number of jobs created or maintained in or within the scope of cooperatives into three different categories: employees working in all types of cooperatives, worker members who are found mainly in worker and social cooperatives and producer-members who work within the scope of producer cooperatives. Additional categories are provided in the 2017 version of the report, like autonomous worker-members or some atypical forms of work can be found in the context of cooperatives organization.

4.2.1. Employees working in all types of cooperatives

Most cooperatives have their own employees to achieve their objectives and economic activities defined by the members. In this case, cooperatives use the same type of work as other types of enterprise, based on the employer-employee relationship. This form of work is present in almost all types of cooperatives, even in worker cooperatives where members and non-members work together. Many types of cooperative forms rely on this form of work, such as cooperative groups or secondary cooperatives (cooperative formed of primary cooperatives). Whenever information was available, the study took into account the employees in the subsidiaries that are owned and controlled by cooperatives. In consumer/user cooperatives, this form of employment is the only employment provided by these cooperatives (Eum, 2016).

4.2.2. Worker-members found mainly in worker and social cooperatives

This category is made up by member workers, and constitutes a relatively small share of cooperative employment in the world, although this is not insignificant, particularly in view of the extreme diversity of the sectors in which this category is concerned, as well as the size of these cooperatives, the environment in which they are located (rural / urban) and countries. People have tried to create different forms of labor relations to avoid subordination in the workplace, to encourage self-reliance and economic prosperity. These innovative forms, although not new, have mainly developed through worker ownership, in which work and management are carried out jointly, without the typical limitations of individual work, nor exclusively under the rules of conventional wage based labour. Many of these forms of work are not officially recognized as such. However, they have increasingly enjoyed a national legal framework as a cooperative model, thus helping them to safeguard their specificities of employment while benefiting from labour regulations developed in other countries frameworks and forms of work to create and maintain decent working conditions.

4.2.3. Producer-members who work within the scope of the producers' cooperatives

Many cooperatives play an interface with people working as self-employed producers, such as farmers, fishermen, artisans, etc. who rely partly or totally on cooperatives to transform or market their products or services, or provide them with key inputs for their production. Although cooperatives do not directly employ these people, they provide them with key production tools enabling them to carry out their economic activities and increase their competitiveness, so that employment under these work forms can be maintained and strengthened, allowing them to compete on the market place. In official statistics on employment, information on this category is excluded from the calculation of cooperative employment and self-employed producer-members of cooperatives are considered as individual producers, would be counted as members, so that no relationship between their occupation and cooperatives can be found. It should be noted that in many cases the cooperative is not the only entity with which the member carries out transactions related to its production, but in most cases, it is the principal entity.

Secondary cooperatives are composed of primary cooperatives, groups, federations or unions, whereas enterprise cooperatives are cooperatives whose members are not but legal persons (SMEs, retail shops). In multi-stakeholder cooperatives, different forms of employment can be identified according to which kinds of different stakeholders are involved.

These results have been summed up in table 13 (Eum, 2017), which represent the employment forms that may be found according to the different types of cooperatives:

Table 13: Employment forms according to the type of cooperative

	Employee	Members		Employee in member enterprises
		Worker-member	Producer member	
Consumer / User cooperative	X			
Worker cooperative	X	X		
Producer cooperative	X		X	X
Multi-stakeholder cooperative	X	X	X	X
Enterprise cooperative	X			X
Secondary cooperative	X			

Source: Eum, 2017

4.3. Issues with employment in cooperatives

4.3.1. Empirical difficulties through data collection

Without surprise, a major limit of studies focusing on employment in cooperatives is the availability of data (UN, 2014). The CICOPA 2017 updated report on employment (Eum, 2017) highlights the empirical difficulties through the data collection process.

First of all, there are many countries where complete statistical data on cooperatives are not available. Some countries do not have any legal framework for cooperatives, or this system may not be used for statistical purposes. In the case a country produces statistics on cooperatives, important items, such as information on the number of employees in cooperatives, may not be collected or publicised. If no information is available about the number of members, information on the number of producer-members and worker-members cannot be disaggregated. Then, as there is no agreed methodology at this stage that would allow to distinguish between different forms of cooperative employment, the different types of cooperatives are used as a proxy from which information on different forms of cooperative employment could be extracted. However, the information cannot always be disaggregated by type of cooperative and, since in most countries the different types of cooperatives have been established in combining different classification criteria, information by type of cooperative is not sufficient to classify different forms of cooperative employment. For example, transport cooperatives might be cooperatives of independent drivers, namely a type of producers' cooperative, but can also be cooperatives employing worker-members as employees, namely worker cooperatives.

4.3.2. Subsidiaries controlled by cooperatives

Among other boundary issues, such as the inclusion in national data of cooperative institutions, apex organisations or even government organizations in charge of cooperatives, a central issue relates to subsidiaries owned by cooperatives. Whereas this type

of data should be reported separately from the information on cooperatives, they are often part of it. As said earlier, the World Cooperative Monitor project provides different categories which may be used to keep data on cooperative groups, cooperative network or non-cooperative enterprises separate from data on primary cooperatives. This is not an issue related directly to employment, but it puts stress on the need to provide agreed methodologies to compute clear and reliable statistics on cooperatives.

4.3.3. Atypical forms of work and volunteering

With the dynamism of the economy and the job market evolution, many of today's workers don't work for organizations or cooperatives on a permanent basis. On the one hand, the search for the flexibility of the workforce in the organizations has led to new atypical forms of work. These forms include temporary work, seasonal work, agency that provide workers to companies, subcontracted, fixed term, job sharing and tele-commuting among others. On the other hand, the responses of cooperatives to technological change, particularly in what is called “platform” or “collaborative economy”, may address the issue of growing unregulated marketplaces with non-standard forms of employment. Platform cooperatives for instance are digital platforms collectively owned and governed by the workers who depend on, participate in, and, derive livelihoods from them:

[Platform cooperatives] organize emerging technologies through online applications that support production, digital labour brokering, collectively-owned and democratically-controlled web-based marketplaces, and other activities that directly support this economic model. Worker-owners in platform cooperatives share risks and benefits and negotiate better contracts, while participating in decision-making on how the platform is organised and managed (ILO, 2016b, p.4).

If this may represent an additional challenge for measuring employment in cooperatives, the development of such types of cooperatives is one potential response to eroding employment relationships.

Concerning volunteering, volunteer work is a form of work that comprises “non-compulsory work performed for others without pay” (ILO, 2013c, p. 3). Therefore, “persons in volunteer work are defined as all those of working age who, during a short reference period, performed any unpaid, non-compulsory activity to produce goods or provide services for others”. As regards the SNA, volunteer work in market and non-market unit falls in activities within the SNA production boundaries. As many members participate in the cooperative activities without any compensation/remuneration, any study on employment and value added for cooperatives should also include volunteer work in the analysis to provide a full picture of the contribution of cooperatives to the economy.

As regards countries where cooperatives are considered as NPIs, the Handbook recalls that volunteer labour constitutes a significant input to many non-profit organizations.

In many such organizations, the voluntary contribution of time exceeds in value the voluntary contribution of money. Because volunteer labour is so critical to the output of the NPIs that employ it and to their ability to produce the level and quality of services that they provide, it is important to capture that activity in the NPI satellite account. Doing so will give a more complete picture of services actually produced and consumed in the economy and in particular fields. The inclusion of volunteer labour input also permits more accurate comparisons of input structure and cost structure between NPI producers and those in other sectors (UN, 2003, p. 49)

Including the imputed value of volunteer work would require additional information beyond that regularly collected and used for SNA purposes. Information is particularly needed first on the number of hours volunteered and second on the wage at which to value those hours. The second problem may be overcome by measuring in hours (such as full-time equivalent) rather than in monetary value. Information on the amount of volunteer time contributed to NPIs can be secured from household surveys or from surveys of NPIs themselves. The ILO Manual on measurement of volunteer work (ILO, 2011) may be used as a reference framework on this topic. Examples of screening questions to collect data on volunteering are provided in the Key population survey module on giving and volunteering of Johns Hopkins Project (UN, 2003, p. 200).

4.4. Full time/Part time

As regards the full time/part time distinction, in the case of cooperatives as in other economic organizations, there is a threshold in terms of the number of hours that allows workers to be classified into two groups: full-time or part-time. In Canada for example, full-time workers include employed persons who usually worked 30 hours or more per week, at their main or only job and part-time includes employed persons who usually worked less than 30 hours per week, at their main or only job (Statistics Canada, 2010). It is recommended to include both the full time and part time workers in the estimation of the value added for cooperatives.

4.5. Informal employment

In many countries the informal economy is the main source of employment: as much as half of the global labour force is estimated to be working and producing in the informal economy (ILO 2016a).

Cooperatives play an important role in local development, especially in rural areas. Paragraph 9 of the ILO Recommendation No. 193 recognises the role that cooperatives can play by “transforming what are often marginal survival activities (...) into legally protected work, fully integrated into mainstream economic life”. In this respect, the ILO has observed that: “organizing in cooperatives could also be seen as one step on the path towards formalization” (ILO, 2002b, p. 92). Cooperatives are being used by workers and enterprises in the informal economy, as means for formalization, by creating economies of scale and negotiation power with public and private sector actors.

As pointed out by SNA, “formal enterprises provide informal jobs only as employees or contributing family workers. Informal enterprises may offer any of the five types of informal jobs and also formal jobs.”(SNA, 25.58)

The concept of informal employment refers to “jobs” as observation units. The 17th ICLS defined informal employment as “the total number of informal jobs, whether carried out in formal sector enterprises, informal sector enterprises, or households, during a given reference period” (Husmanns, 2004, p. 5). The population employed in the informal sector refers to “all persons who, during a given reference period, were employed in at least one informal sector unit, irrespective of their status in employment and whether it was their main or a secondary job”(2008 SNA 25.59). Table 14 describes the different types of jobs:

Table 14: Type of jobs according to types of production units

Production units by type	Jobs by status in employment								
	Own-account workers		Employers		Contributing family workers	Employees		Members of producers' cooperatives	
	Informal	Formal	Informal	Formal	Informal	Informal	Formal	Informal	Formal
Formal sector enterprises					1	2			
Informal sector enterprises ^(a)	3		4		5	6	7	8	
Households ^(b)	9					10			

Source: ICLS, 2003.

Cells shaded in dark purple refer to jobs, which, by definition, do not exist in the type of production unit in question; cells shaded in light purple refer to formal jobs. Light orange cells represent the various types of informal jobs. Informal employment covers cells 1 to 6 and 8 to 10; employment in the informal sector cells 3 to 8 and informal employment outside the informal sector cells 1, 2, 9 and 10.

As regards cooperatives, the rules applied to separate formal and informal jobs are simple:

Producers' cooperatives, which are formally established as legal entities, are incorporated enterprises and, hence, part of the formal sector. Members of such formally established cooperatives are considered to have formal jobs. Producer cooperatives which are not formally established as legal entities are treated as private unincorporated enterprises owned by members of several households (Husmanns 2004, p. 6).

Producer cooperatives are therefore considered informal, if they are not formally established as legal entities and also meet the other criteria of informal sector enterprises specified in the Resolution concerning statistics of employment in the informal sector adopted by the 15th ICLS.

4.6. Identifying cooperative employment in NSO data

Table 15 offers a tentative framework for identifying cooperative employment as defined by CICOPA in National Statistics Organizations.

Table 15: Cooperative jobs by NSO status in employment and CICOPA employment category

Cooperative employment categories	Jobs by status in employment				
	Own account workers	Employers	Contributing family workers	Employees	Members of producers' cooperatives
Employee				X	
Worker-member	X			X	
Producer-member	X	X			
Employee in member enterprises				X	

4.7. Conclusive remarks about employment in cooperatives

It seems that no consensus exists on the different forms of work and employment in cooperatives. However, CICOPA has identified some categories of employment that may summarize the employment situation in these enterprises: employees, worker-members and producer-members. Yet, determining where the different types of jobs by types of cooperatives can be identified in the official data is difficult: for example, worker-members can have the status of employees or self-employed according to legal frameworks related to worker cooperatives. This calls for further work in order to provide clear indications where employment in cooperatives can be identified in official data. There is not a common understanding about the categories and their coverage so measurements are not free of methodological and conceptual problems and limitations. Further discussion on this topic will need to take into consideration the statistical definition of cooperative, but some challenges are very similar to other categories such as companies: data disaggregation, measurements of informal employment and volunteering, full time-part time issue, etc.

Conclusion

This report presented a general overview of how cooperatives and key concepts are measured for statistical purposes. It is based on extant work and literature. The first part of this report reviewed the most important statistical studies on cooperatives. Conceptual and methodological issues were identified concerning identification and classification of cooperatives, including a discussion about core components and particular boundary areas and their operationalization. The second part of the report proposed a conceptual framework for defining and classifying cooperatives for statistical purposes. The third part of this report explored how to measure membership and value added. Part four discussed the definition and measurement of employment in cooperatives.

Our conclusions are summarized in the following paragraphs.

For defining cooperatives, not one criterion suffices. A set of a minimum of four criteria is necessary. Filtering entities by these criteria will establish the perimeter and qualify in-scope entities and those that are at the boundaries of the cooperative core perimeter. Entities that comply with some but not all of these criteria will be considered as hybrids. Some hybrids might be included in the “close” periphery if they comply with all core criteria but are not incorporated or registered as cooperatives. Others will be included in the “far” periphery, if they comply with some but not all core criteria or if they comply to those inconsistently. Further work will be required to establish stakeholder consensus about the criteria and to develop screening questions and test those in different national contexts.

For classifying, a single classifying system does not suffice. Cooperatives need to be classified by two systems, one referring to its main economic activity, and the second one to another cooperative feature. Three cooperative features are generally used: the members’ relation to the cooperative (e.g. consumer, worker, supporter), the members’ status (e.g. producer, professional worker) and, more rarely, the cooperative’s function (e.g. intermediation). Classification should be based on nomenclatures that are presently applied for international measurement of cooperatives (e.g. World Cooperative Monitor) in order to reflect the terms that are of common usage by cooperative stakeholders. However, since these nomenclatures are usually based on heterogeneous classes, i.e.

mixing different cooperative features, a classification table could be harmonized in order to be able to “translate” or convert national data into different yet uniform sets of classes. The clarification regarding the nature of this cooperative feature in a classification system will help understand the cooperatives’ strategies and performance. A tentative proposal of such an analytical table is presented in this report. Further work will be required to validate and test such a classification table for international comparison.

For data collection on cooperatives, a single operation is not enough. Registers, surveys and their combinations are general approaches for collecting data on cooperatives. Other methods may be used such as satellite accounts, establishment-based surveys and household surveys, which help produce more complete and reliable information on the subject, with the potential of greater international comparability. Household surveys seem to be essential for the estimation of the number of members of cooperatives” (ILO, 2013b, p. 23).

Measuring membership of cooperatives poses the issue of double-counting. To sidestep this issue, focusing on membership rather than on measuring individual members may be the best path, as each of these memberships is to be counted under a different sector, which is important for statistics pertaining to different sectors. Membership of cooperatives includes a variety of persons that can or cannot have an employment relationship with the cooperative. The typology of membership classes distinguishes three large types of members: users, workers and supporters of the cooperative. However, each of these classes is composed of heterogeneous sub-categories. For example, in the User membership class, one will find members’ relation to the cooperative (e.g. “consumers”, “clients”), status of the members (e.g. “producers or groups of producers”) or a mix of those (e.g. “institutional purchasers”), and sometimes even economic objective function of the cooperative (“intermediaries”). As mentioned about classification issues, membership typology should be in line with the usual terms employed by cooperative stakeholders. But it should as well enable the identification of members in NSOs data. A conversion table between typologies would help compute national data into different yet uniform sets of classes. The discussion about the active membership issue is similar to the challenge of determining the baseline characteristics of a cooperative. These observations remind the needs to find a common understanding between stakeholders and an agreed typology to be followed for measurement purpose.

Measuring the performance of cooperatives referring to the concept of value added is not recommended. The major difficulty is that this indicator is not suited to measure without ambiguity successful cooperatives, as it can be done to assess whether companies have the capacity to pay their employees, their managers, their shareholders and taxes. A strong value added is the sign of a strong economic activity in worker cooperatives, but not necessarily in other cases. The Expanded Value added Statement (EVAS) is an interesting alternative at a micro-economic level, but its use at a higher level would be very data consuming to deal with the double-counting issue. However, it has shed light on the need to think about the best measurement to adopt if the goal is to measure the social and economic impact of cooperatives.

Information on employment related to cooperatives is more difficult to find than general employment data, because the importance of cooperative employment in itself has generally not yet been fully recognized everywhere by statistical authorities as an added value of cooperatives (Roelants et al., 2014). Moreover, the risk of inclusion of inactive or false cooperatives may have consequences on the measurement of employment

and membership. CICOPA has identified categories of employment that summarize the employment situation in cooperatives: employees, worker-members and producer-members. Yet, determining where the different types of jobs by types of cooperatives can be identified in the official data is difficult: for example, worker-members can have the status of employees or self-employed according to legal frameworks related to worker cooperatives. This calls for further work in order to provide clear indications where employment in cooperatives can be identified in official data. There is not a common understanding about the categories and their coverage, so measurements are not free of methodological and conceptual problems and limitations. Further discussion on this topic will need to take into consideration the statistical definition of the cooperative. Yet, it is important to note that some challenges are very similar to other categories such as companies: data disaggregation, measurements of informal employment and volunteering, full time-part time issue, etc.

In sum, many challenges need to be addressed and choices need to be made in order to move forward in the production of robust, relevant and harmonized statistical data about cooperatives in the world. The particular nature of the cooperative is the main reason explaining the measurement challenges this report has outlined. Many of these have to do with the variety of organizational forms, legal frameworks and cultural environments in which cooperatives develop. Of course, this can be also said of other types of entities, namely of non-profit institutions. But because cooperatives are vested by social values and aspirations, which are periodically re-affirmed by cooperators in their everyday life as well as by apex and international organizations representing them, and because cooperatives play very specific roles in the economy, it is important to represent them adequately in official statistics.

Aside from the usual arbitration between cost and quality of the collected information, measuring cooperatives also implies using the appropriate sources and the adequate measurement tools. These need to be sophisticated enough to capture the specific features of the cooperative, but also sufficiently standardized to make the work feasible at the national statistical organizations' level. This could seem like trying to square the circle. A solid understanding by NSOs of what a cooperative is, and better knowledge by cooperative stakeholders of how statistics are constructed, are the keys to overcoming such obstacles.

This report is meant to be a stepping stone on the path in this direction.

References

- Altus, D.E.; Mathews, R.M. 2002. "Comparing the satisfaction of rural seniors with housing co-ops and congregate apartments", in *Journal of Housing for the Elderly*, Vol. 16, No. 1-2, pp. 39-50.
- Archambault, E. 2006. "Le compte satellite de l'économie sociale: une mesure de l'économie sociale dans le cadre comparable internationalement", in CIRIEC International (ed.): *La réponse de l'économie publique, sociale et coopérative aux attentes de la société* (France, CIRIEC), pp. 57-62.
- Askenazy, P. 2003. "Partage de la valeur ajoutée et rentabilité du capital en France et aux États-Unis: une réévaluation", in *Économie et Statistique*, No. 363-365, pp. 167-189.
- Balaguer, J.I.G.; Castellano, C.J.P. 2012. "The different conception of economic profit in cooperatives", in *Journal of Co-operative Accounting and Reporting*, Vol. 1, No. 1, pp. 29-52.
- Barraud-Didier, V.; Henninger, M.C.; Triboulet, P. 2014. La participation des adhérents dans leurs coopératives agricoles: Une étude exploratoire du secteur céréalier français, in *Canadian Journal of Agricultural Economics*, Vol. 62, pp. 125-148.
- Bhuyan, S. 2007. "The people factor in cooperatives: An analysis of members' attitudes and behavior" in *Canadian Journal of Agricultural Economics*, Vol. 55, No. 3, pp. 275-98.
- Bouchard, M.J.; Cruz Filho, P.; St-Denis, M. 2011. *Cadre conceptuel pour définir la population statistique de l'économie sociale au Québec*, Rapport pour l'Institut de la statistique du Québec, Université du Québec à Montréal, (Québec, Centre de recherche sur les innovations sociales and Chaire de recherche du Canada en économie sociale) No. R-2011-02.
- . 2015. "Mapping the field of the social economy: Identifying social economy entities", in M.J. Bouchard and D.Rousselière (eds): *The weight of the social economy: An international perspective* (Brussels, Peter Lang).

- Bouchard, M.J.; Ferraton, C.; Michaud, V. 2008. "First steps of an information system on the social economy: Qualifying the organizations", in *Estudios de Economía Aplicada*, Vol. 26, No. 1, pp. 7-24. Available at: <http://www.revista-eea.net/volumen.php?Id=65&vol=26&ref=1> [30 Apr. 2017]
- Bouchard, M.J.; Rousselière, D. (eds). 2015. *The weight of the social economy: An international perspective* (Brussels, Peter Lang).
- Boyle, G.E. 2004. "The economic efficiency of Irish dairy marketing co-operatives", in *Agribusiness*, Vol. 20, No. 2, pp. 143-153.
- Carini, C.; Borzaga, C.; Carpita, M. 2017. *Case studies on Brazil, Canada, Colombia, the Philippines, the Russian Federation, the United Kingdom* (Geneva, ILO).
- Chomel, C.; Declerck, F.; Filippi, M.; Frey, O.; Mauget, R. 2013. *Les coopératives agricoles. Identité, gouvernance et stratégies* (Paris, Larcier).
- CIRIEC; Barea, J.; Monzón, J.L. 2006. *Manual for drawing up the satellite accounts of companies in the social economy: Co-operatives and mutual societies* (Liège, CIRIEC).
- CIRIEC-Spain; Instituto Nacional de Estadística. 2013. "Satellite accounts for cooperatives and mutuals in Spain (SACMS): Final report". Available at: http://www.ine.es/en/daco/daco42/daco4214/coop08_en.pdf [30 Apr. 2017]
- Coop FR. 2016. *Panorama sectoriel des entreprises coopératives* (Dijon, ICO Imprimerie).
- Cornforth, C.; Thomas, A.; Spear, R.; Lewis, J. 1988. *Developing Successful Worker Co-operatives* (London, Sage).
- Cropp, R.; Zeuli, K. A. 2004. *Co-operatives: principles and practices in the 21th century* (Madison, University of Wisconsin).
- Cross, R.M.; Buccola, S.T.; Thomann, E.A. 2009. "Cooperative liquidation under competitive stress", in *European Review of Agricultural Economics*, Vol. 36, No. 3, pp. 369-393.
- Declerck, F. 2013. "L'approche financière des coopératives agricoles" in C. Chomel, F. Declerck, M. Filippi, O. Frey and R. Mauget (eds): *Les coopératives agricoles, Identité, gouvernance et stratégies* (Paris, Larcier), pp. 263-340.
- Deller, S.; Hoyt, A.; Hueth, B.; Sundaram-Stukel, R. 2009. *Research on the Economic Impact of Cooperatives* (Madison, University of Wisconsin Center for Cooperatives).
- Deshayes, G. 1988. *Logique de la co-opération et gestion des coopératives* (Paris, Skippers).
- Desroche, H. 1983. *Pour un traité d'économie sociale* (Paris, CIEM).
- Doucoulagos, D. 1995. "Worker participation and productivity in labor-managed and participatory capitalist firms: A meta-analysis", in *Industrial and Labor Relations Review*, Vol. 49, No. 1, pp. 58-77.
- Drivas, K.; Giannakas K. 2010. "The effect of cooperatives on quality-enhancing innovation", in *Journal of Agricultural Economics*, Vol. 61, No. 2, pp. 295-317.
- Eum, H. 2017. Forthcoming. *Cooperatives and employment: Second global report* (Brussels, CICOPA).

- . 2016. *Lessons from country-case studies on cooperatives, Spain, France, Italy, South Korea and Costa Rica. Toward common definition, classification and methods at the international level*, report presented to the ILO at the COPAC Multi-stakeholder Workshop on Statistics on Cooperatives, Rome, Italy, FAO Headquarters, 5-6 April.
- European Commission; International Monetary Fund (IMF); Organisation for Economic Co-operation and Development (OECD); United Nations (UN); World Bank. 2009. *System of National Accounts 2008* (New York, UN).
- European Economic and Social Committee (EESC). 2004. "Opinion of the European Economic and Social Committee on the Communication from the Commission to the Council and the European Parliament, the European Economic and Social Committee and the Committee of the Regions on the promotion of cooperative societies in Europe", in *Official Journal of the European Union*, C234, Vol. 48, p.1-7. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52005AE0243> [30 Apr. 2017]
- European Union. 2016. *EU Farm Economics Overview based on 2013 FADN data*, (Brussels, European Commission, Agricultural and Rural Development). Available at: http://ec.europa.eu/agriculture/rica/pdf/EU_FEO_FADN_2013_final_web.pdf [30 Apr. 2017]
- Everett, M.; McNeill, J.; Phelan, G. 2013. "Measuring the value added of the financial sector in Ireland", in *Quarterly Bulletin*, Vol. 2, pp. 85-98.
- Fakhfakh, F.; Pérotin, V.; Gago, M. 2013. "Productivity, capital and labor in labor-managed and conventional firms: An investigation on French data", in *Industrial and Labor Relations Review*, Vol. 65, No. 4, pp. 847-879.
- Fauquet, G. 1935. *Le secteur coopératif. Essai sur la place de l'homme dans les institutions coopératives et de celles-ci dans l'économie* (Brussels, Les Propagateurs de la coopération).
- Fecher, F.; Ben-Sedrine-Lejeune, W. 2013. *Measuring the economic value of cooperatives, mutual societies and companies with social purposes in Belgium: A satellite account approach*, Working Paper CIRIEC No. 2013/11 (Liège, CIRIEC).
- . 2015. "The production of statistics for the social economy in Belgium. A focus on mutual and cooperatives", in M.J. Bouchard and D. Rousselière (eds): *The weight of the social economy: An international perspective* (Brussels, Peter Lang).
- Fici, A. 2012. *Cooperative Identity and the law*, Euricse Working Paper, No.023/12.
- Fulton, M. 1999. "Cooperatives and member commitment", in *Finnish Journal of Business Economics*, Vol. 4, pp. 418-437.
- Fulton, M.; Giannakas K. 2001. "Organizational commitment in a mixed oligopoly: agricultural cooperatives and investor-owned firms", in *American Journal of Agricultural Economics*, Vol. 83, pp. 1258-1265.
- Galhardi, R. 2016. *Methodology for country-case studies: Statistics on Cooperatives* (Geneva, ILO).

- Giraud-Dumaire, C.; Frey, O. 2016. “Les enjeux du périmètre des coopératives: histoire, réflexions et limites”, in *Revue internationale de l'économie sociale*, Vol. 342, pp. 102-117.
- Haller, A.; Stolowy, H. 1998. “Value added in financial accounting: A comparative study of Germany and France”, in *Advances in International Accounting*, Vol. 11, pp. 23-51.
- Hansmann, H. 1996. *The Ownership of Enterprise* (Cambridge, Harvard University Press).
- . 1999. “Cooperative Firms in Theory and Practice” in *Finnish Journal of Business Economics*, vol. 4, pp. 287-403.
- Henrÿ, H. 2012. *Guidelines for cooperative legislation third revised edition* (Geneva, ILO).
- Hood, K.K. 2013. “Alternative measures of implicitly priced financial services of savings institutions and credit unions”, in *Survey of Current Business*, November, pp. 27-35.
- Houseman, S.; Kurz, C.; Legermann, P.; Mandel, B. 2011. “Offshoring Bias in U.S. Manufacturing”, in *Journal of Economic Perspectives*, Vol. 25, No. 2, pp. 111-132.
- Hunter, D. 2015. “Review of the International Classification of Status in Employment (ICSE)”, paper presented at the Expert Group on International Statistical Classifications, New York, 19-22 May.
- Hussmanns, R. 2004. *Measuring the informal economy: From employment in the informal sector to informal employment*, Working Paper No. 53 (Geneva, ILO).
- International Conference of Labour Statisticians (ICLS). 2003. “Guidelines concerning a statistical definition of informal employment”, endorsed by the Seventeenth International Conference of Labour Statisticians.
- International Co-operative Alliance (ICA). 2015. *Guidance Notes to the Co-operative Principles*, available at: <http://ica.coop/sites/default/files/basic-page-attachments/guidance-notes-en-221700169.pdf> [30 Apr. 2017]
- . 2013. *ICA Blueprint for a cooperative decade*. International Labour Office (ILO). 1993. *International Classification of Status in Employment (ICSE-93)* (Geneva).
- . 2002a. *Promotion of Cooperatives Recommendation, 2002* (No. 193). Available at: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312531 [30 Apr. 2017]
- . 2002b. *Decent work and the informal economy*, Report VI, International Labour Conference, 90th Session, Geneva, 2002 (Geneva).
- . 2004. “ILO-Comparable annual employment and unemployment estimates”, prepared by F. Lepper. Available at: <http://laborsta.ilo.org/applv8/data/iioce.pdf> [30 Apr. 2017]
- . 2010. *General Survey concerning employment instruments in light of the 2008 Declaration on Social Justice for a Fair Globalization*, Report III (Part 1B), International Labour Conference, 99th Session, Geneva, 2010 (Geneva).
- . 2011. *Manual on the Measurement of Volunteer Work* (Geneva).

- . 2013a. "Resolution III concerning further work on statistics of cooperatives", 19th International Conference of Labour Statisticians, Geneva, 2-11 October 2013.
- . 2013b. "Statistics on cooperatives", prepared by A. Mata-Greenwood, 19th International Conference of Labour Statisticians, Geneva, 2-11 October 2013.
- . 2013c. *Statistics of work, employment and labour underutilization*, Report II, 19th International Conference of Labour Statisticians, Geneva, 2-11 October 2013.
- . 2014. *Promoting cooperatives: An information guide to ILO Recommendation No. 193* (Geneva). prepared by S. Smith
- . 2016a. "Cooperation in a changing world of work: Exploring the role of cooperatives in the future of work", Cooperatives and the World of Work Series No. 6 (Geneva).
- . 2016b. "Cooperation in a changing world of work: Towards a cooperative future", The Future of Work Century Initiative Issue Note Series No. 6 (Geneva).
- James, H.S.; Sykuta M.E. 2005. "Property right and organizational characteristics of producer owned firms and organizational trust", in *Annals of Public and Cooperative Economics*, Vol. 76, No. 4, pp. 545-580.
- Keen, M.; Lockwood, B. 2010. "The value added tax: its Causes and consequences", in *Journal of Development Economics*, Vol. 92, No. 2, pp. 138-151.
- Koulytchizky, S.; Mauget R. 2003. "Le développement des groupes coopératifs agricoles depuis un demi-siècle", in *Revue internationale de l'économie sociale*, Vol. 287, pp. 14-40.
- Lal, K. 1999. "Value added by industry - A problem of international comparison", System of National Account Branch, Statistics Canada.
- Lund, M. 2011. *Solidarity as a Business Model: A Multi-Stakeholder Cooperatives Manual* (Ohio, Cooperative Development Center).
- Lyberg, L. 2012. "Survey Quality", in *Survey Methodology*, Vol. 38, No. 2, Catalogue No. 12-001-X, Ottawa, Statistics Canada.
- Malo, M.C. 1980. Une typologie des coopératives: association et entreprises, Montréal, École des Hautes Études Commerciales, Centre de gestion des coopératives, No. T-79-1.
- McFeely, S. 2016. "The continuing evolution of official statistics: Some challenges and opportunities", in *Journal of Official Statistics*, Vol. 32, No. 4, pp. 789-810.
- Monzón, J. L. 2006. *Les coopératives et mutuelles dans les comptes nationaux*, paper presented at XX^e Colloque de l'ADDES, Paris, 7 Mar.
- Mook, L.; Richmond, B.J.; Quarter, J. 2002. "Using social accounting to show the value added of co-operatives: The expanded value added statement", in *Journal of co-operatives*, Vol. 35, No. 3, pp. 183-204.
- Mosheim, R. 2002. "Organizational Type and Efficiency in the Costa Rican Coffee Processing Sector", in *Journal of Comparative Economics*, Vol. 30, pp. 296-312.

- Nelson, T.; Nelson, D.; Huybrechts, B.; Dufays, F.; O'Shea, N.; Trasciani, G. 2016. "Emergent identity formation and the co-operative: Theory building in relation to alternative organizational forms" in *Entrepreneurship and Regional Development*, Vol. 28, Issue 3-4, pp. 286-309.
- Organisation for Economic Co-operation and Development (OECD). 2008. *OECD glossary of statistical terms* (Paris).
- Ovando, D.A.; Deacon, R.T.; Lester, S.E.; Costello, C.; Van Leuvan, T.; McIlwain, K.; Kent Strauss, C.; Arbuckle, M.; Fujita, R.; Gelcich, S.; Uchida, H. 2013. "Conservation incentives and collective choices in cooperative fisheries", in *Marine Policy*, Vol. 37, pp. 132-140.
- Pascucci, S.; Gardebreek, C. 2010. "Some like to join, others to deliver. An Econometric Analysis of Farmers' relationships with agricultural co-operatives", paper presented at the 114 the EAAE Seminar 'Structural Change in Agriculture', Berlin, Germany, 15-16 Apr.
- Pennerstorfer, D.; Weiss, C.R. 2013. "Product quality in the agri-food chain: do cooperatives offer high-quality wine?", in *European Review of Agricultural Economics*, Vol. 40, No. 1, pp. 143-162.
- Porter, P.K.; Scully, G.W. 1987. "Economic efficiency in cooperatives", in *Journal of Law and Economics*, Vol. 30, No. 2, pp. 489-512.
- Québec 2012. Faits saillants sur les coopératives non-financières au Québec, Québec, Ministère de l'économie et des finances. Available at: https://www.economie.gouv.qc.ca/fileadmin/contenu/publications/etudes_statistiques/secteur_cooperatif/coop_faits_saillants.pdf [30 Apr. 2017]
- Rey, P.; Tirole, J. 2007. "Financing and access in cooperatives", in *International Journal of Industrial Organization*, Vol. 25, No. 5, pp. 1061-1088.
- Roelants B.; Eum H.; Terrasi E. 2014. *Cooperatives and Employment: a Global Report* (Brussels and Québec, CICOPA and Desjardins Group).
- Russel, R.; Hanneman, R.; Getz S. 2013. *The renewal of the kibbutz: from reform to transformation* (New York, Rutgers University Press).
- Salamon, L.M.; Haddock, M.; Sokolowski, S.W. 2016. "Closing the Gap? New perspectives on volunteering North and South" in J. Butcher, C.J. Einolf (eds): *Perspectives on volunteering: Voices from the Global South* (Dordrecht, Springer), pp. 29-51.
- Schwettmann, J. 1997. *Cooperatives and employment in Africa*, Cooperative Development Occasional Discussion Paper 97 – 1 (Geneva, ILO).
- Soboh, R.; Lansink, A.O.; Giesen, G.; van Dijk, G. 2009. "Performance measurement of the agricultural marketing cooperatives: The gap between theory and practice", in *Review of Agricultural Economics*, Vol. 31, No. 3, pp. 446-469.
- Soboh, R.; Lansink, A.O.; van Dijk, G. 2011. "Distinguishing dairy cooperatives from investor-owned forms in Europe using financial indicators", in *Agribusiness*, Vol. 27, No. 1, pp. 34-46.
- . 2012. "Efficiency of Cooperatives and Investor Owned Firms Revisited", in *Journal of Agricultural Economics*, Vol. 63, No. 1, pp. 142-157.

- Sommerville, P. 2007. "Co-operative Identity", in *Journal of Co-operative Studies*, Vol. 40, No. 1, pp. 5-17.
- Statistics Canada. 2010. Classification of full-time and part-time work hours, Departmental Standard.
- . 2011. *Conceptual Framework for Culture Statistics*. Available at: <http://www.statcan.gc.ca/pub/87-542-x/2011001/section/s3-eng.htm> [30 Apr. 2017]
- Statistics New Zealand. 2010. Measuring government sector productivity in New Zealand: A feasibility study (Wellington).
- Stiglitz, J.E. 2009. "GDP Fetishism", in *The Economists' Voice*, Vol. 6, Issue 8, Article 5.
- United Nations (UN). 2000. *Links between business accounting and national accounting*, Studies in Methods, Handbook of National Accounting, Series F, No.76 (New York, Department of Economic and Social Affairs, Statistics Division).
- . 2003. *Handbook on Nonprofit Institutions in the System of National Accounts* (New York).
- . 2014. *Measuring the Size and Scope of the Cooperative Economy: Results of the 2014 Global Census on Co-operatives* (Madison, Dave Grace and Associates).
- United States Department of Agriculture (USDA). 2011. *Understanding cooperatives: Cooperative business principles*, Cooperative Information Report 45, Section 2 (Washington, DC).
- . 2015. *How to start a co-operative*, prepared by Wadsworth, J.J.; Bau, M., Cooperative Information Report 7 (Washington, DC, Rural Development Business and Cooperative Programs), revised March 2015.
- Vamstad, J. 2012. "Co-production and service quality: The case of cooperative child-care in Sweden", in *Voluntas*, Vol. 23, No. 4, pp. 1173-1188.
- Vienney, C. 1980a. "Rapport d'activités et rapport de sociétariat", in J. G. Desforges and C. Vienney (eds): *Stratégie et organisation de l'entreprise coopérative* (Paris, CIEM), pp. 251-283.
- . 1980b, *Socio-économie des organisations coopératives*, Tome 1 (Paris, CIEM).
- . 1981. *Socio-économie des organisations coopératives*, Tome 2 (Paris, CIEM).
- Waner, J. 2007. *New generation cooperatives and the future of agriculture: An introduction* (Macomb, Illinois Institute for Rural Affairs).
- Wilson, M. 2009. "Conclusions of the seminar" in B. Roelants (ed.): *Cooperatives and social enterprises: Governance and normative frameworks* (Brussels, CECOP Publications), pp.73-74.
- World Cooperative Monitor (WCM). 2016. Aim and methodology, ICA – EURICSE
- Worthington, A.C. 1999. "Measuring Technical Efficiency in Australian Credit Unions", in *Manchester School*, Vol. 67, No. 2, pp. 231-248.
- Xu, X. 2008. "Some differences in GDP measurements between China's practice and 1993 SNA guideline", in *China Economic Review*, Vol. 19, pp. 480-488.