

Rendición de cuentas y transparencia en las cooperativas: Un análisis comparativo entre Portugal y Alemania

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Resumen. Este estudio pretende evaluar si la legislación sobre mecanismos de supervisión interna y externa vigente para las cooperativas alemanas permite un nivel de rendición de cuentas y transparencia más adecuados en términos de información financiera en comparación con el modelo adoptado en Portugal. Para ello, y a través de una metodología cualitativa, utilizando la técnica de análisis de contenido y el modelo de estudio de casos múltiples, se construyeron índices de cumplimiento total y parcial por país para evaluar la transparencia y la rendición de cuentas de las cooperativas en la muestra seleccionada. Los resultados obtenidos muestran que las cooperativas analizadas presentan un índice de cumplimiento superior al 50% en todas las categorías seleccionadas. Sin embargo, en todas las categorías, las cooperativas alemanas presentan un porcentaje mayor que las portuguesas, lo cual nos permite concluir que el modelo alemán de supervisión interna y externa proporciona un mayor nivel de rendición de cuentas y transparencia.

Palabras clave: Cooperativa; Información financiera; Consejo de Supervisión; Federación de Auditores.

Claves Econlit: M41; M42; K30; P13.

[en] Accountability and Transparency in Cooperatives: A Comparative Analysis between Portugal and Germany

Abstract. This study aims to assess whether the legislation on internal and external supervisory mechanisms in force for German cooperatives allows for a more adequate accountability and transparency in terms of financial reporting compared to the model adopted in Portugal. For this purpose, and through a qualitative methodology, using the content analysis technique and the multiple case study model, total and partial compliance indexes were constructed by country to assess the cooperatives' transparency and accountability in the selected sample. The results show that the analysed cooperatives present a compliance index higher than 50% in all the selected categories. However, in all categories, German cooperatives present a higher percentage than Portuguese cooperatives, thus leading to the main conclusion that the German model of internal and external supervision provides a higher level of accountability and transparency.

Keywords: Cooperative; Financial Reporting; Supervisory board; Auditing federation.

Summary. 1. The problem. 2. A brief reference to the regulatory framework of cooperatives in Portugal and in Germany. 3. Internal supervision mechanisms of cooperatives in Portugal and Germany. 4. Mechanisms of external supervision of the cooperatives in Portugal and Germany. 5. The external control upon registration of the incorporation of the cooperative. 6. Methodology: Multiple case study based on Portuguese and German cooperatives. 7. Results. 8. Conclusions. 9. References.

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1. The problem

The concept of "accountability" is a broad concept, referring, namely, to the assumption of responsibility by an entity for decisions taken, explaining and justifying them (Ferreira, Santos & Curi, 2019).

This concept, initially linked to accounting, has evolved to a very different reality. The "accountability" does not only refer to the accounting information required for disclosure, but to the accountability of the

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agent for all decisions taken before its stakeholders, who may demand explanations and justifications (Bovens, 2006). Very often, accountability is associated with good governance or social responsible behaviour, an association which is extremely relevant in what concerns cooperatives. Given the cooperative identity, in particular the fact that their governance organs must take into account the principle of concern for community, it is argued that there is a legal obligation for the governance organs of the cooperative to incorporate the core values of Corporate Social Responsibility (CSR) into their activity, which should be subject to control, both internally (by the general assembly and the supervisory board) and externally (audit) (Meira, 2012).

Cooperatives are best described as organisations of an atypical entrepreneurial nature. This atypicality is evidenced by: the primacy of social objectives over a return on capital; the importance of democratic governance; the combination of the interests of the members and the general interest; the defence and implementation of solidarity and responsibility values; the reinvestment of surplus funds in long-term development objectives or in providing important services to members or in the general interest; voluntary and free membership; and autonomous and independent management. These atypical features are reflected in the “Statement of Cooperative Identity” defined by the International Cooperative Alliance (ICA) in Manchester in 1995, based on a set of seven principles (Cooperative Principles)⁴, on a set of values (Cooperative Values)⁵ that shape those principles, and on a definition of a cooperative⁶ (Namorado, 1995; Fici, 2013).

According to Bovens (2006), accountability often serves as a conceptual umbrella, which covers a diversity of concepts, such as transparency, equity, democracy, efficiency, responsibility and integrity. In the specific case of transparency, its instrumental nature for accountability is evident. Transparency refers to the process of disclosure, by the entities, of relevant information for their evaluation. The information should be of an economic, financial, social and political nature and includes a set of relevant characteristics, namely: timely, reliable and accessible to all stakeholders (Ortega-Rodríguez, Licerán-Gutiérrez, & Moreno-Albarracín, 2020).

Board members and managers shall ensure that the cooperative operates with a high level of transparency and shall give members sufficiently clear information to enable them to control the cooperative. In particular, they shall ensure that full annual accounts and, if appropriate, consolidated accounts are drawn up, audited, and published to members by means of an annual report and cooperative and financial audit reports as required by law (Snaith, 2017).

The requirement of accountability and transparency in cooperatives pursues several objectives: defence of the interests of the cooperative, ensuring the pursuit of the mutual purpose; organisation and functioning in accordance with the law and the statutes; protection of the interests of those who contract with cooperatives, namely the creditors; protection of the general interest of the community, ensuring the proper functioning of the cooperative as an economic entity with a relevant social function; maintaining public bodies’ and economic agents’ confidence in the suitability of the cooperative (Münkner, 1982).

As a response to this demand for accountability and transparency in cooperatives, adequate models of internal and external supervision/audit of cooperatives are required.

At the international level, the German model of supervision/auditing of cooperatives has been pointed out as a reference model and served as inspiration for the development of the “PECOL Principles” on audit, an academic initiative project known as the “Principles of European Cooperative Law”. These principles were developed by a group of professors and researchers specialised in cooperative law (SGECOL- Study Group on European Cooperative Law) after comparative research of cooperative law and best practices in seven European jurisdictions (Germany, Spain, Finland, France, Italy, Portugal and the United Kingdom) (Fajardo et al., 2017).

In this context, the present study aims to assess whether the legislation on internal and external supervisory mechanisms in force for German cooperatives allows for a more adequate accountability and transparency in terms of financial reporting in comparison to the model adopted in Portugal.

In response to this objective, three research questions were defined: (i) What is the level of transparency of cooperatives in the disclosure of information in financial reporting documents? (ii) What is the level of transparency of cooperatives regarding their governance structure? (iii) What is the level of transparency of cooperatives regarding their supervision?

⁴ These Principles are as follows: Voluntary and Open Membership, Democratic Member Control, Member Economic Participation, Autonomy and Independence, Education, Training, and Information, Cooperation among Cooperatives, Concern for Community.

⁵ Cooperatives are based on the values of **self-help, self-responsibility, democracy, equality, equity, and solidarity**. In the tradition of their founders, cooperative members believe in the ethical values of honesty, openness, social responsibility and caring for others.

⁶ ICA has established that “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”.

2. A brief reference to the regulatory framework of cooperatives in Portugal and in Germany

In Portugal, cooperatives of all types and business branches are regulated by the Portuguese Cooperative Code (PCC), approved by Law No. 119/2015, published on 31 August 2015 and entered into force on 30 September 2015.

However, it should be noted that in Portuguese Law cooperatives are granted a separate legal status by the Portuguese Constitution (PC), which devotes over a dozen articles to them, scattered throughout the constitutional text but nevertheless properly articulated by a set of structuring principles, such as the principle of co-existence of the three sectors (public sector; private sector; and cooperative and social sector) as set out in art. 82; the principle of freedom of cooperative initiative (art. 61); the principle of protection of the social and cooperative sector (art. 80); the principle of the obligation of the State to encourage and support the creation of cooperatives (art. 85); and the principle of compliance with the ICA cooperative principles (art. 61(2)) (Namorado, 2017).

Company Law must also be considered, in particular the provisions regarding public limited companies, considering that art. 9 of the PCC on the subsidiary law applicable to situations not foreseen in the PCC directs “to the Commercial Companies Code (Código das Sociedades Comerciais – CSC), as long as cooperative principles are respected, particularly those sections that regulate public limited companies”. This subsidiary resource to the CSC, however, depends on two conditions: (1) compliance with the cooperative principles for all reached solutions; (2) within the scope of the CSC, priority should be given to the precepts applicable to public limited companies.

In Germany, cooperatives of all types and business branches are regulated by the Cooperative Societies Act.- *Genossenschaftsgesetz* (GenG); and the German Commercial Code - *Handelsgesetzbuch* (HGB).

In terms of the accounting framework, in Portugal, the cooperatives prepare the financial reporting documents in accordance with the accounting standards contained in the Accounting Normalisation System (SNC), approved by Decree-Law 158/2009 of July 13. The SNC is composed of several instruments, namely: bases for the presentation of Financial Statements, Accounting Code, Conceptual Framework, Models of Financial Statements, Accounting and Financial Reporting Standard for small entities, Accounting and Financial Reporting Standards, and Interpretative Standards (Rodrigues, 2010, Bandeira & Meira, 2015). In Germany, cooperatives prepare financial reporting following the provisions of the HGB, which contains a section devoted to cooperative accounting (HGB, §§336 - 339) and the Principles of Appropriate Accounting - *Grundsätze Ordnungsmäßiger Buchführung* (GoB). Similarly to the SNC, the GoB accounting principles must be applied when preparing the Financial Statements (Münckner, 2017).

3. Internal supervision mechanisms of cooperatives in Portugal and Germany

The PCC attributed to the co-operator’s a very important role in the control of their cooperative: (I) through their participation at the general meetings (exercising their voting right); (ii) giving them a broad right to information; (iii) and establishing the obligation for the members of the bodies to be cooperators.

Consequently, members of the board of directors and supervisory board are elected by the general assembly from among cooperators (article 40, PCC), and it is also up to the general assembly to dismiss members of those governing body [article 49(a), PCC].

It is the sole responsibility of the General Assembly (composed of all the cooperators): to consider and vote the management report and accounts for the financial year, as well as the opinion of the supervisory board; to assess the legal certification of accounts, if any; to appreciate and vote the budget and activity plan for the following year; to establish the rates of interest payable to members of the cooperative; and to approve the form of distribution of surplus (article 49, PCC).

The General Assembly defines itself as the supreme organ of the cooperative, whose decisions are mandatory for the remaining bodies (article 44(1), PCC). From the prevalence of the General Assembly derives the possibility of, at any time and in addition to its exclusive powers set out in article 49, arrogating to itself powers of other organs, particularly the Board of Directors.

The scrutiny of the performance of the Board of Directors and supervisory board by the members of the cooperative is undertaken particularly when assessing the management report and accounts for the financial year, [article 49(b), PCC]. Indeed, it may happen that the management report and accounts for the financial year denounce or indicate the practice of unlawful, wrongful and harmful acts to the cooperative, which may serve as the basis for a liability action against the members of the Board of Directors and of the Supervisory Board (article 65, PCC).

In addition to the annual control that the General Meeting exerts on the Board of Directors, the cooperators may also, individually or collectively, exercise their right to information. Article 33(1)(a) of the PCC states that cooperative members have the right to request information to the competent bodies of the cooperative and examine the records and accounts of the cooperative.

Another body of internal control and supervision of the cooperative is the Supervisory Board.

The powers of the Supervisory Board are set out in article 61 of the PCC, where the compliance with the law and the statutes, the formal audit (verification of correctness of entries and accounting procedures) and the material audit (assessing the quality of management in relation to business objectives) of the cooperative stand out.

Pursuant to article 60 of the PCC, the composition of the Supervisory Board varies depending on the number of cooperative members: (i) in cooperatives with more than 20 members, the Supervisory Board consists of a chairman and two members, (ii) in cooperatives with up to 20 members, the Supervisory Board comprises a single holder.

The Supervisory Board may be assisted by an auditor or an Audit Company (article 60, no. 3, PCC).

Just like the members of the Board of Directors, the members of the Supervisory Board are elected from among the cooperative members (article 40(1), PCC), thus removing the possibility for non-members to integrate this body, which can prove to be an obstacle. It is therefore understandable that the legislator foresees the possibility for the Supervisory Board to be advised by an auditor or an audit company (article 60, no. 3, PCC).

The election and removal of members of the Supervisory Board are of the exclusive competence of the General Assembly (art. 49(a), PCC).

Convened by the Chairman, the Supervisory Board meets ordinarily at least once every three months, but it may meet extraordinarily at the chairman's summon or at the request of the majority of its full members (article 62(1) and (2), PCC).

The Supervisory Board members, in their own right, may attend to the meetings of the Board of Directors (article 62(3), PCC).

The quorum required for the Supervisory Board to take decisions shall be the presence of more than half of the full members (article 63 of the PCC). Substitute members may attend and participate in the meetings of the Supervisory Board without voting rights (article 62(4), PCC). The Chairman of the Supervisory Board has a casting vote (article 43(1), PCC) (Meira, 2017).

In Germany, the control powers that cooperators may exercise in the context of the General Meeting are lesser than those provided for in Portuguese law. As a rule, members in general meeting or meeting of delegates have the right to elect and remove their directors and members of the supervisory board. However, according to the statutes, members are entitled to delegate the right to elect directors to the supervisory board and may be made subject to recommendations by the cooperative federation to which the cooperative is affiliated (§ 24 (2) GenG). The members still retain the right to suspend or remove directors if this is not delegated, under the statutes, to the supervisory board (§ 24 (2), (3) GenG). They have the right to see the summary of the audit report of the external cooperative auditor (§ 59 (1) GenG) (Beuthien, 2011).

There is a clear division of powers between the general meeting, the board of directors and the supervisory board. The offices of board members and supervisory board members are incompatible (§ 37 GenG). According to § 9 (2) GenG all board members have to be members of the cooperative.

There are special provisions for small cooperatives (with not more than twenty members), which may opt for having only one director (§ 24 (2) GenG) and working without a supervisory board (§ 9 (1) GenG).

According to § 57 (5) GenG, small cooperatives operating without a supervisory board have to appoint one member to represent the cooperative vis-à-vis the auditing federation (§ 57 (5) GenG).

According to § 27 (1) GenG, 'The board of directors shall manage the cooperative on its responsibility with due consideration to the limitations imposed on it by the by-laws'.

Diligence and accountability are required from the members of the board of directors and supervisory board (§ 34 (2) and (§ 41 GenG).

The supervisory board shall supervise the board of directors in its management functions (§ 38 (1) GenG) and report its findings to the members in the general meeting. The supervisory board shall 'convene such meeting if and when this is in the interest of the cooperative' (§ 38 (2) GENG). 'The supervisory board may appoint an auditing committee to monitor the accounting process and the effectiveness of the system of controlling, risk management and internal auditing' (§ 38 (1) GenG).

One of the most important features of the German model is the special relationship between the supervisory board and the auditing federation. According to § 58 (3) GenG, the supervisory board in charge of internal audit has to collaborate with the cooperative auditor of the federation and is informed by the auditor of the audit results, as outlined below (Geschwandtner & Helios, 2006; Müncker, 2017).

4. Mechanisms of external supervision of the cooperatives in Portugal and Germany

In Portugal, the external supervision of cooperatives is carried out by the *António Sérgio Cooperative for the Social Economy* (CASES), created by Decree-Law 282/2009 of 7 October 2009, which is a public interest cooperative that brings together the State and various social economy organisations.

The legal regime for public interest cooperatives (or *régies* cooperatives) is set out in a specific statute, Decree-Law No. 31/84 of 21 January. Article 1(1) of this law defines public interest cooperatives as legal persons in which the State or other legal persons governed by public law and cooperatives, or users of the goods and services produced, or non-profit legal persons governed by private law associate to pursue their objectives.

CASES is a central part of a system of relations between the State and cooperatives and has an important supervisory role in the cooperative sector in Portugal. Therefore, considering the provisions of articles 115 to 118 of the PCC, CASES shall be responsible for supervising, following the law, the use of the cooperative form, respecting the cooperative principles and the rules regarding its constitution and operation.

For this purpose, cooperatives are required to send copies of the acts of constitution and amendment of the statutes, annual management reports, annual accounting documents and the social balance to CASES.

The technical and financial support to cooperatives by public entities, deriving from the principle of positive discrimination, depends on a credential proving the legal constitution and regular operation of the cooperatives issued by CASES.

In the exercise of its supervisory powers of the cooperative sector, CASES, through the Public Prosecutor's Office, may request before the competent court the dissolution of cooperatives that do not operate in line with the cooperative principles, that systematically use illicit means to accomplish their goals and use the cooperative form to unduly obtain tax benefits.

Let say that CASES finds cooperatives engaging in an activity that is not consistent with the object set out in the statutes. In that case, it would request the competent registration service to initiate the administrative procedure for the dissolution of the cooperatives (Meira, 2016).

In Germany, external supervision of cooperatives is more complex and stricter than in Portugal. That external supervision is carried out by the German National Cooperative Federation, called the *Deutscher Genossenschafts und Raiffeisenverband e. V.* (DGRV), which is responsible for all issues of cooperative auditing, particularly the development of guidelines, the training of auditors, and the exercise of auditing. Four federations operate under the umbrella of the DGRV, all of which specialise in cooperative auditing issues.

This external supervision by the cooperative audit federation, which uses specially trained cooperative auditors, is undertaken in close cooperation with the board of directors and the internal supervisory body (Beuthien, 2011); (Geschwandtner & Helios, 2006). According to § 57 GenG, the board of directors has to allow the auditor to inspect the following documents: books, accounts, cash in hand, securities portfolio, stock of goods, etc.

The audit federation shall advise the chairman of the supervisory board of the start of the audit. In turn, the supervisory board chairman will inform the other members of the supervisory board of the start of the audit. They shall participate in the audit procedure at the auditor's request. If the auditor finds any significant irregularities, he shall inform the supervisory board chairman to take prompt action. Upon completion of the audit, the auditor shall orally present the expected result of the audit at a joint meeting of the management board and the supervisory board of the cooperative. For this purpose, the auditor requires the chairman of the management board or the chairman of the supervisory board to convene a meeting. If the meeting is not promptly convened, it is the auditor's responsibility to call for a meeting of the management board or the supervisory board, stating the reason for the summon (§ 57 (1) - (4) GenG).

According to § 58 GenG, the audit federation has to present the audit result in writing to the chairmen of the management board and supervisory board, and each supervisory board member must take note of the audit report. Subsequently, the audit report must be confirmed by the general meeting. Finally, the managing board must submit an audit certificate issued by the federation to the register of cooperatives (§ 59 GenG). Following § 60 GenG, if necessary, the audit federation is entitled to call an extraordinary general meeting chaired by a person appointed by the federation (Münkner, 2017).

5. The external control upon registration of the incorporation of the cooperative

In the Portuguese legal system, unlike German law, there is no previous control over the incorporation and registration of the cooperative. This means that public control of legality, under the responsibility of the commercial register and of CASES, occurs only upon registration of the incorporation of the cooperative in the commercial register and CASES.

The incorporation of the cooperative is subject to registration (article 16 of the PCC and article 4 of the Commercial Registration Code) and to the publication on a public access Internet site [article 70(1)(b) of the Commercial Registration Code].

In addition to the register referred to in article 16 of the PCC conferring legal personality, the cooperative is subject to other records.

So, cooperatives shall send CASES a copy of all documents referring to their incorporation (article 88(1), PCC).

In Germany, pre-registration audit by an audit federation with positive results is a legal requirement for registering a new cooperative by the competent court. In fact, the German cooperative law establishes pre-registration audit by a cooperative auditing federation, before a newly formed cooperative can be registered (§§ 11 (2) n° 3, 11a (2) GenG).

Thus, founding members must submit a certificate from the audit federation along with their application for registration, which serves as proof that the new cooperative will be admitted as a member of the federation (Beuthien, 2011). The new cooperative then has to mention on its website the name and the headquarters of the audit federation to which it belongs. In the absence of a website, the information must be included in all contracts, correspondence, publications, advertisements, and generally in all external activity (GenG, §54) (Bergmann, 2001).

6. Methodology: Multiple case study based on Portuguese and German cooperatives

This section refers to the research methodology used as well as the main arguments taken into consideration to achieve the main objective proposed, which is to assess whether the legislation on internal and external supervisory mechanisms in force for German cooperatives allows for a more adequate accountability and transparency in terms of financial reporting in comparison to the model adopted in Portugal. The choice of the countries under analysis was motivated by the importance of the cooperative sector in these countries, and by the demanding supervision that can be observed with regard to the financial reporting of German cooperatives. In addition, we analyse the level of disclosure of financial and non-financial information of Portuguese and German cooperatives, namely regarding the information in the financial reporting documents in accordance with the regulations in force, the governance structure, as well as the internal and external control structure.

The research methodology used to carry out the comparative analysis is qualitative in nature, using the content analysis technique, by consulting and analysing the accounting and legal regulations, the management reports, accounts and also the statutes of the cooperatives (Yin, 2001). We also used the multiple case study method, which seemed to us the most appropriate given that, complementarily, we intend to assess the level of transparency and accountability regarding the disclosure of financial and non-financial information of Portuguese and German cooperatives in the financial year of 2017. Having said this, the following research questions (RQ) were elaborated:

1st RQ: What is the level of transparency of cooperatives in the disclosure of information in financial reporting documents?

2nd RQ: How transparent are cooperatives in disclosing their governance structures?

3rd RQ: How transparent are cooperatives about their supervision?

First, we searched the websites of forty-two Portuguese cooperatives and analysed the financial information made available to the general public. For the cooperatives that did not make the financial documents available, a second approach was applied that involved a contact via email. A total of thirty-seven Portuguese cooperatives were contacted by email, of which four responded negatively to the request for collaboration and only two cooperatives provided their Management Report and statutes. From the seven Portuguese cooperatives initially included in the sample, five disclose their information on the website.

In order to assess the level of disclosure of financial and non-financial information, Carvalho et al (2010) study was followed. On the one hand, the financial information of cooperatives is analysed based on the specific items of the following financial statements: the Balance Sheet, the Statement of profit or loss nature and the Annex, as the main financial reporting documents for Portuguese and German cooperatives. On the other hand, in order to assess the level of voluntary disclosure, the management reports and the statutes of the Portuguese and German cooperatives were analysed.

The final sample was thus composed of fourteen cooperatives from different activity sectors, seven of which are Portuguese and seven German. The difficulty in obtaining the management reports and statutes of the Portuguese cooperatives in comparison to the German cooperatives is noteworthy, since the selected German cooperatives present their financial information on their website, which already shows greater transparency on their part.

Table 1 presents the target cooperatives of the multiple case study.

Table. 1. Sample - General data of the cooperatives

	Cooperatives' name	URL	Branch of activity	Country
1	Cooperativa Agrícola de Barcelos, CRL	http://www.agribar.pt/	Agricultural (with emphasis on milk production)	Portugal
2	Cooperativa Social e Agro-Florestal de Vila Nova de Ceira, CRL	http://www.coopvnc.pt/	Multisector (agriculture, social solidarity and services)	Portugal
3	Cooperativa de Habitação Económica Nova Morada, CRL	http://www.nova-morada.com/	Multisector (main activity of housing and construction)	Portugal
4	CERCIFAF - Cooperativa de Educação e Reabilitação de crianças inadaptadas de Fafe, CRL	http://www.cercifaf.pt/	Social Solidarity	Portugal
5	Coopérnico - Cooperativa de desenvolvimento sustentável, CRL	https://www.coopernico.org/	Services (renewable energy and energy efficiency)	Portugal
6	Cooperativa Agrícola de Alcobaça, CRL	http://www.coopalcobaca.pt	Agricultural	Portugal
7	Mútua dos pescadores - Mútua de Seguros, CRL	https://www.mutuapescadores.pt/	Services (insurance)	Portugal
8	Soennecken eG	https://www.soennecken.de	Trade - Wholesale of office material	Germany
9	Greenpeace Energy eG	https://www.greenpeace-energy.de/privatkunden.html	Energy cooperative	Germany
20	NOWEDA eG	https://www.noweda.de/startseite/	Energy cooperative	Germany
11	Mega eG	https://www.mega.de	Trade - Wholesale trade for painters, pavers and plasterers	Germany
12	Bäko eG	http://www.baeko-sued-west.de	Trade - Retail sale of bakery and confectionery products	Germany
13	EWS Elektrizitätswerke Schönau eG	https://www.ews-schoenau.de	Energy cooperative	Germany
14	BuergerEnergie eG	https://www.buerger-energie-berlin.de/informieren/	Energy cooperative	Germany

Source: Own preparation based on the financial statements and information available on the websites

Regarding the size of the seven Portuguese cooperatives, as presented in Table 2, six are small cooperatives. The small cooperatives follow the accounting model of NCRF-PE⁷ (SNC - Accounting Instruments, 2019) in the preparation of their Financial Statements while the large cooperative - Cooperativa Agrícola de Barcelos, CRL follows the general model of accounting and financial reporting standards (NCRF)⁸.

⁷ NCRF-PE set out the minimum requirements applicable to Small Entities (SE).

⁸ The NCRF are a set of financial reporting standards to be followed by Portuguese entities under the SNC.

Table. 2. Size of portuguese cooperatives

<i>Cooperatives' name</i>	Total Balance Sheet (2017)	Turnover (as of 31.12.2017)	No. of employees⁹	Dimension	Standards
<i>Cooperativa Agrícola de Barcelos, CRL</i>	57.652.369,59 €	73.203.751,00 €	97	Large entity	NCRF
<i>Cooperativa Social e Agro – Florestal de Vila Nova de Ceira, CRL;</i>	2.349.068,18 €	633.560,65 €	24	Small entity	NCRF-PE
<i>Cooperativa de Habitação Económica Nova Morada, CRL</i>	1.164.354,39 €	2.027,98 €	6	Small entity	NCRF-PE
<i>CERCIFAF - Cooperativa de Educação e Reabilitação de crianças inadaptadas de Fafe, CRL.</i>	3.770.806,51 €	154.447.47 €	73	Small entity	NCRF-PE
<i>Coopérnico – Cooperativa de desenvolvimento sustentável, CRL</i>	788.092,55 €	78.787,62 €	16	Small entity	NCRF-PE
<i>Cooperativa Agrícola de Alcobaça, CRL</i>	2.393.977,52 €	4.578.492,91 €	28	Small entity	NCRF-PE
<i>Mútua dos pescadores - Mútua de Seguros, CRL</i>	37.694.730,00 €	6.349.546,00 €	43	Small entity	NCRF-PE

Source: Own preparation based on the financial statements and information available on the websites

In contrast, as shown in Table 3, of the seven German cooperatives selected, five are large and only two are small. Both large and small German cooperatives follow the rules for the preparation of their financial statements imposed by the HGB. It should be noted that large cooperatives are obliged to follow the *Bilanzrichtlinie-Umsetzungsgesetz* (BilRUG), which transposes the European Directive 2013/34/EU.

The German cooperative, BürgerEnergie Berlin eG, being small in size, follows a reduced Financial Statement model which is characterised by the exemption from presenting a Management Report (HGB,§264(1)), a specific aggregation of certain Income statement items (HGB,§276) and a reduced scope of the required disclosures in the Annex to the Financial Statements (HGB,§288(1)).

Table. 3. Size of german cooperatives

<i>Cooperatives' name</i>	Total Balance Sheet (2017)	Turnover (as of 31.12.2017)	No. of employees¹⁰	Dimension	Standards
<i>Soennecken eG</i>	92.195.000,00 €	168.971.000,00 €	734	Large Entity	HGB e BilRUG ¹¹
<i>Greenpeace Energy eG</i>	57.400.041,12 €	101.976.419,03 €	94	Large Entity	HGB e BilRUG
<i>NOWEDA eG</i>	1.291.823,00 €	314.929.000,00 €	94	Large Entity	HGB e BilRUG
<i>Mega eG</i>	107.669.000,00 €	279.361.000,00 €	2677	Large Entity	HGB e BilRUG
<i>Bäko eG</i>	23.409.255,98 €	96.309.210,58 €	181	Large Entity	HGB e BilRUG
<i>EWS Elektrizitätswerke Schönau eG</i>	56.699.451,79 €	4.519.910,24 €	168	Large Entity	HGB e BilRUG
<i>BuergerEnergie eG</i>	1.1049.049,46 €	82.206,38 €	20	Small Entity	HGB e BilRUG

Source: Own preparation based on the financial statements and information available on the websites

⁹ Due to the lack of information regarding the number of employees of the Social and Agroforestry Cooperative of Vila Nova de Ceira, CRL and Copérnico - Cooperative of Sustainable Development, CRL in the Management Report, only the number of members of the governing bodies of these cooperatives was considered, 24 and 16 members, respectively. This information is available on the internet site of the cooperatives.

¹⁰ Due to the lack of information regarding the number of employees of the cooperative BuergerEnergie eG in the Management Report, only the number of members of the governing bodies, which consists of 20 members, has been considered. This information is available on the internet site of the cooperative.

¹¹ The BilRUG transposes Directive no. 2013/34/EU of the European Parliament and of the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings. This directive is transposed into Portuguese law by Decree-Law no. 98/2015 of 2 June. Information consulted at <https://eur-lex.europa.eu/legal-content/PT/TXT/?uri=CELEX%3A32013L0034> on 17 March 2019.

It should also be noted that the size of the cooperatives represented an important factor in the selection of the sample.

The initial sample of the study contained only large German cooperatives with the legal form of a limited company. In order to balance the sample and allow for a more appropriate comparison, smaller German cooperatives have been selected.

In accordance with Carvalho et al (2010) we followed the methodology adopted in that study applied to the Portuguese Municipalities, with the necessary adaptations to the cooperatives. We proceeded to the selection of the categories (Information in the financial reporting documents; Governance Structure and Supervision), followed by the selection of the parameters and variables, as shown in the table below.

Table. 4. Information contained in financial reporting documents

Category	Category	Parameter	Parameter	Variable	Variable	
Information in financial reporting documents	1	Balance Sheet Requirements	1	Classification of assets	1	
				Description of specific asset items	2	
				Classification of liabilities	3	
				Description of specific items of liabilities	4	
		Income Statement Requirements	2		Classification of income according to activity	5
					Classification of costs	6
		Requirements of the Annex	3		Identification of the entity	7
					Accounting standards used in the preparation of the Financial Statements	8
					Accounting policies used and justification of any deviations from the accounting policies used	9
					Disaggregated information on items presented on the face of the balance sheet and statement of profit or loss	10
					Number of cooperating staff, number of volunteers and beneficiaries and governing bodies	11
					Number of members who joined, left or retired during the financial year	12
					The total amount by which the capital and obligations of members increased/decreased during the year and the number of obligations to which members have to contribute at the end of the year	13
					Information on the benefits/salaries/contributions of the governing bodies (Board of Directors and Supervisory Board)	14
Governance Structure	2	Designation and number of members	4	Designation and number of members of each corporate body	15	
		Period of validity	5	Presentation of the term of the governing bodies	16	
		Professional qualifications	6	Presentation of the qualifications of the members of the governing bodies	17	
Supervision	3	Internal Supervision	7	Report of the Supervisory Board	18	
				Report of the Board of Directors	19	
		External audit	8	Report on the Management Report and documents of legal certification of accounts when required / Opinion of the audit federation	20	

Source: Own preparation based on the financial statements and information available on the websites

It is important to mention that these variables result from a comparative analysis of the content of the main financial reporting documents imposed by the accounting standards applicable to cooperatives in Portugal and in Germany. Additionally, the variables included are representative of the specificities of the cooperatives' governance structure and financial reporting documents regarding their supervisory structure.

Then, and in line with Carvalho et al (2010), information was collected through content analysis of the management reports and the bylaws of the selected cooperatives to calculate the Total Compliance Index (TCI) for Portugal and Germany, respectively. This index will measure the degree of compliance of the information disclosed in the cooperatives' financial reporting documents through the analysis of the compliance with the variables of the categories previously defined (Table 4). This analysis was carried out using Microsoft Excel.

The information and practices presented by each of the cooperatives are scored for the 20 variables mentioned above (Table 4). Specifically, they are marked with 1 when they are fulfilled and 0 when they are not fulfilled. Thus, a maximum of 20 points can be granted per cooperative. In order to safeguard the objectivity of the analysis process, all variables were considered as having the same importance, and hence an equal weighting in the index.

According to Carvalho et al (2010), the expression of the Total Compliance Index (TCI) used is the following:

$$TCI = \sum_{i=1}^n (p_i)$$

In which:

- p_i = number of occurrences of the variables;
- $p = 1$, if the parameter is fulfilled;
- $p = 0$, if the parameter is not fulfilled;
- n = number of variables with ≤ 20 variables.

Based on the previous TCI expression, we constructed a country TCI for Portugal and Germany, respectively:

$$TCI_{PT} = \sum_{i=1}^n (p_i) = \sum_{i=1}^{20} \left(\frac{(\text{number of variable met} \times \text{variable frequency})}{\text{total number of Portuguese cooperatives}} \right)$$

$$TCI_{DE} = \sum_{i=1}^n (p_i) = \sum_{i=1}^{20} \left(\frac{(\text{number of variable met} \times \text{variable frequency})}{\text{total number of German cooperatives}} \right)$$

We obtain a TCI per country that will correspond to the weighted average of the Partial Compliance Indices (PCI). The PCI will show the level of disclosure of practices and information, in relation to which there is a higher degree of compliance.

In accordance with the objective of the present study, TCI is also intended to compare the values of the PCI by country in order to provide a comparative analysis.

Through the TCI, it is possible to obtain three PCIs per cooperative, according to the categories analysed:

Category 1 - Information in the financial reporting documents:

- Parameter 1 - Balance Sheet Requirements: 4 variables (maximum of 4 points);
- Parameter 2 - Requirements of the Statement of profit or loss: 2 variables (maximum of 2 points);
- Parameter 3 - Annex requirements: 8 variables (maximum 8 points);

Category 2 - Governance structure:

- Parameter 4 - Appointment and number of members of the governing bodies: 1 variable (maximum 1 point);

- Parameter 5 - Period of validity of the governing bodies: 1 variable (maximum of 1 point);
- Parameter 6 - Professional qualifications of the members of the governing bodies: 1 variable (maximum 1 point);

Category 3 - Supervision:

- Parameter 7 - Internal supervision: 2 variables (maximum of 2 points);
- Parameter 8 - External audit: 1 variable (maximum 1 point).

It should also be noted that the TCI resulted from the weighted average of the PCIs for each cooperative, by category, and was calculated with a view to determine in which of the parameter categories the analysed cooperatives show greater compliance.

To help analyse the study results outlined in the following section in terms of transparency, based on Carvalho et al (2010), percentage values indicating a low, medium and high level of transparency were defined and summarised in the table below (Table 5),

Table. 5. Level of transparency

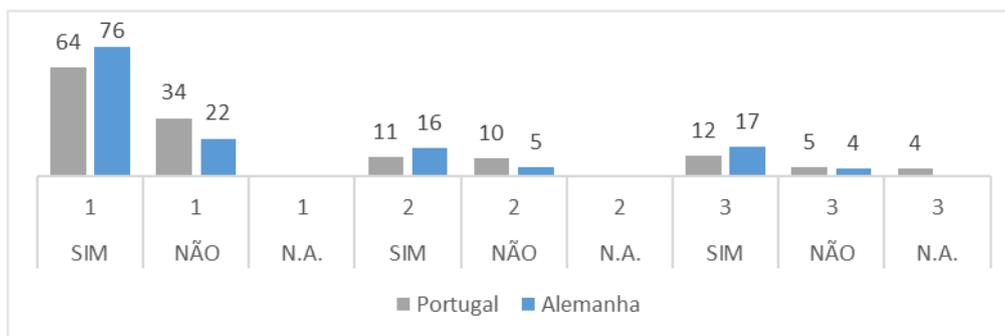
<i>ICP range</i>	Level of transparency
<i>0% to 50%</i>	Reduced level of transparency
<i>50% to 70%</i>	Medium level of transparency
<i>70% to 100%</i>	High level of transparency

Source: Elaborated by the authors

7. Results

Based on the data collected and subsequent processing in Microsoft Excel, the distribution of variables was analysed in general terms and by category (Graph 1).

Graph. 1. Distribution of variables by category



Source: Elaborated by the authors

Regarding Category 1 - Information in the financial reporting documents - the graph shows that out of a total of 196 variables (98 variables for Portuguese cooperatives and 98 variables for German cooperatives), German cooperatives comply with 12 more variables than Portuguese cooperatives.

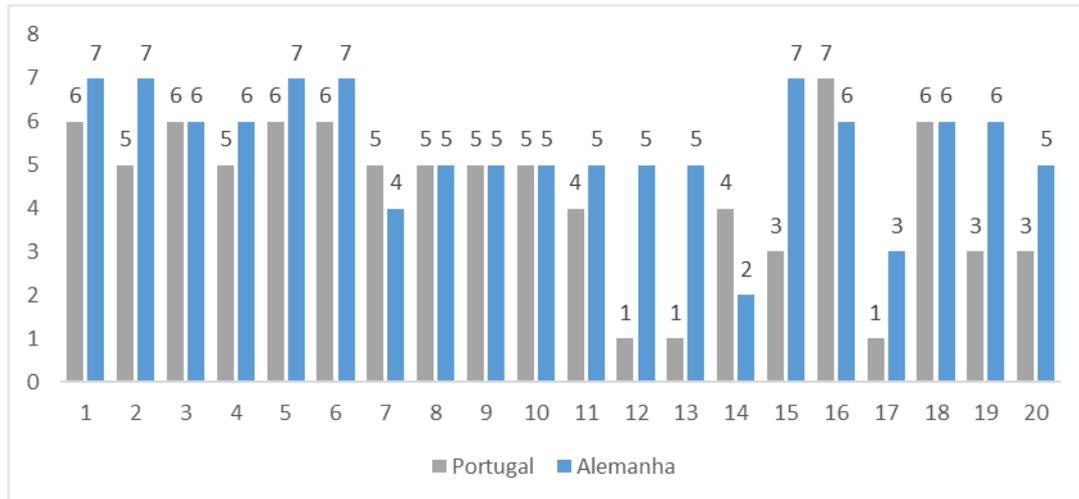
Regarding Category 2 - Governance structure - out of a total of 42 variables (21 variables for Portuguese cooperatives and 21 variables for German cooperatives), German cooperatives also lead this category by fulfilling 5 more variables than Portuguese cooperatives.

Regarding Category 3 - Supervision - out of a total of 42 variables (21 variables for Portuguese cooperatives and 21 variables for German cooperatives), German cooperatives comply with 5 more variables. In this category, we give an emphasis to some Portuguese cooperatives to which 4 variables could not be applied.

In summary, German cooperatives comply with the highest number of variables of all information categories analysed. If we consider the 280 variables that all cooperatives (Portuguese and German) can comply with, Portuguese cooperatives only meet 87 variables, which shows a compliance level of 31%, while German cooperatives comply with 109 variables, i.e. 38.9%.

Furthermore, Graph 2 presents the distribution of the variables fulfilled by Portuguese and German cooperatives.

Graph. 2. Distribution of the variables verified

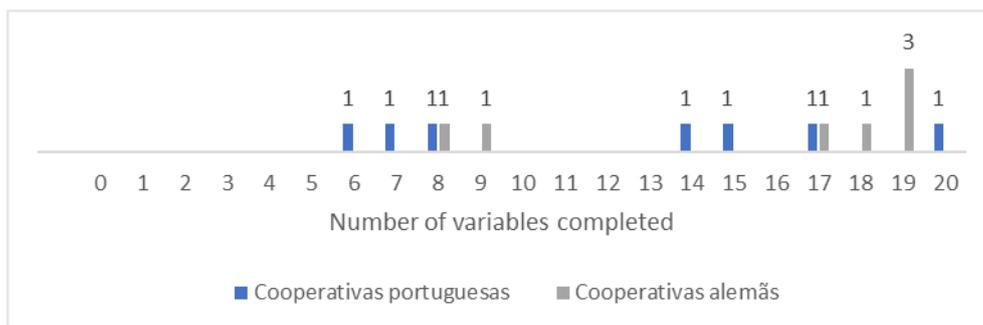


Source: Elaborated by the authors

A detailed analysis of the variables complied with by Portuguese cooperatives shows that variable 16 (Presentation of the term of office of the corporate bodies) meets the highest level of compliance followed by variables 1, 3, 5, 6 (Balance Sheet, Financial Statements and Annex requirements of category 1) and variable 18 (Opinion of the Board of Directors of category 3).

In contrast, all German cooperatives comply with variables 1, 2, 5, 6 (Requirements of the Balance Sheet, the Financial Statement and the Annex of the category Information in the financial reporting documents) and variable 15 (Designation and the number of members of each corporate body of category 2). We then proceeded to analyse the TCI of the cooperatives (Graph 3 and Table 6).

Graph. 3. Total compliance index (tci)



Source: Elaborated by the authors

Only one of the cooperatives analysed meets all 20 variables and therefore achieves 100% compliance. This is the Portuguese cooperative Mútua de pescadores, CRL. The German cooperatives comply most often with 19 of the 20 variables (95%), fulfilled by three cooperatives. Once the analysis of the variables was concluded, we proceeded to calculate the TCI. The results are shown in Table 6.

Table. 6. Total Compliance Index (TCI)

Total Compliance Index (TCI)		
<i>Number of parameters met</i>	Portugal	Germany
	Frequency	Frequency
0	0	0

1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	1	0
7	1	0
8	1	1
9	0	1
10	0	0
11	0	0
12	0	0
13	0	0
14	1	0
15	1	0
16	0	0
17	1	1
18	0	1
19	0	3
20	1	0
<i>TCI (Weighted Average)</i>	12,43	15,57
%	62%	78%

Source: Elaborated by the authors

The TCI value for Portuguese cooperatives (Table 6) is 12.43, meaning that, on average, the Portuguese cooperatives analysed comply with 12 of the 20 variables analysed. In contrast, the TCI value for German cooperatives is 15.57, i.e. on average German cooperatives comply with 16 of the 20 variables analysed. We found that the average level of compliance of information in the accountability documents of Portuguese and German cooperatives, according to the variables used in the study, is 62% and 78%, respectively (Table 6).

In short, the analysis of the TCI per country for all the categories analysed proves that the level of transparency is higher in German cooperatives as they exceed the TCI of Portuguese cooperatives by 3.14. We now move on to the analysis of the level of transparency per category.

1st RQ What is the level of transparency of cooperatives in the disclosure of information in the financial reporting documents?

To answer the first research question we need to recall the financial reporting structure of cooperatives in Portugal and Germany. Table 7 summarises the main financial reporting documents disclosed by the cooperatives.

Table. 7. Main financial reporting documents

<i>Portugal</i>	<i>Germany</i>
<p><i>Statutes – Estatutos;</i> <i>Financial Statements – Demonstrações Financeiras (consisting of Balance Sheet, Statement of profit or loss by nature or function; Statement of Changes in Net Assets; Cash Flow Statement and Annex);</i> <i>Management Report – Relatório de gestão;</i> <i>Social Balance Sheet- Balanço Social;</i> <i>Legal certification of accounts – Certificação legal de contas;</i> <i>Opinion of the supervisory board – Parecer do Conselho Fiscal.</i></p>	<p>Statutes – Satzung; Financial Statements – Jahresabschluss (consisting of Balance Sheet, Statement of profit or loss by application of GKV or UKV; Statement of Changes in Net Assets – Entwicklung des Konzern-Anlagevermögens, Cash flow statement – Kapitalflussrechnung and Annex – Anhang); Management Report; - Lagebericht; Legal certification of accounts- Bestätigungsvermerk; Opinion of the supervisory board - Bericht des Aufsichtsrat.</p>

Source: Elaborated by the author

Based on the set of documents to be prepared by cooperatives in Portugal and in Germany, it was found that the documents are similar, with the exception of the Social Balance Sheet. This document is required in Portugal and not foreseen in the German legislation.

Regarding the structure and content of the documents, more significant differences were identified in the Balance Sheet, the Statement of profit or loss and Notes and the Management Report. In the Balance Sheet, the German accounting model includes only two items related to reserves (legal reserve and other reserves) while the Portuguese accounting model contains three items (legal reserve, education and training reserve and other reserves). This is due to the fact that the German law does not foresee the establishment of a mandatory education and training reserve. Regarding Statement of profit or loss, Portuguese cooperatives must present the Statement of profit or loss by nature and functions. German cooperatives may choose between two methods (UKV or GKV) with their own models of Financial Statements. Regarding the Annex to the Financial Statements, the Portuguese model is better structured, but does not require as detailed information as the German model.

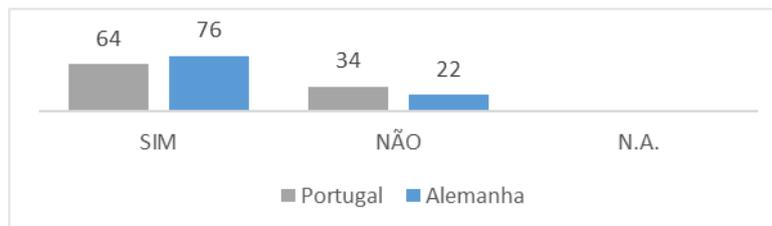
In the management report, differences were found regarding the structure and, above all, the way information is presented by Portuguese cooperatives compared to German cooperatives.

To address the research question, the financial documents presented by the cooperatives were analysed. Specifically, the compliance with the requirements of the Balance Sheet, the Statement of profit or loss and the Annex was assessed, with a view to forming the main documents of the annual financial statements that should be included in the management reports to be presented by the cooperatives of both countries.

The category Information in the financial reporting documents is composed of three parameters, namely, the Balance Sheet requirements, the Statement of profit or loss requirements and the Annex requirements. For each parameter a set of variables presented in Table 4 are analysed. It is important to highlight that the set of variables included in this category were chosen based on the comparison of the rules legally imposed for the preparation of financial documents. In particular, the comparison between the rules imposed by the SNC and PCC (in the case of Portuguese cooperatives) and the HGB and GenG (in the case of German cooperatives), as well as the complementary legislation, made it possible to gather as variables the most important information items required in the Management Report, in the Financial Statements and in the statutes of the cooperatives.

The analysis of the compliance of the variables by the cooperatives regarding the Information in the financial reporting documents (Graph 4) shows that German cooperatives are more compliant than Portuguese cooperatives.

Graph. 4. Distribution of the variables of the category information in financial reporting documents

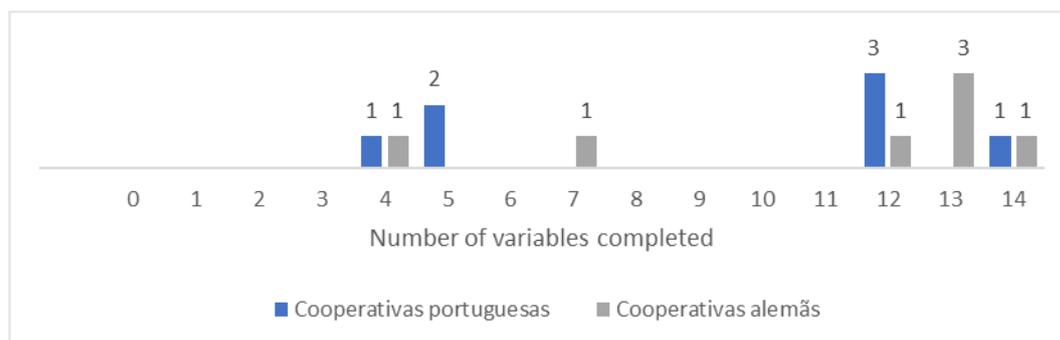


Source: Elaborated by the authors

Out of a total of 98 compliance variables, German cooperatives comply with 12 more variables compared to Portuguese cooperatives. This result may suggest that German cooperatives are more transparent than Portuguese cooperatives.

The PCI was then calculated for the Category Information in the Financial Reporting Documents (Graph 5).

Graph. 5. Partial compliance index (PCI) of the category information in financial reporting documents



Source: Elaborated by the authors

The PCI calculated for the Information in the financial reporting documents shows that the highest number of variables met is 14, namely met by a German cooperative (Noweda eG) and a Portuguese cooperative (Mútua de Pescadores, CRL) (Graph 5 and Table 8).

Regarding the remaining Portuguese cooperatives, three cooperatives comply with 12 of the 14 variables, namely: Cooperativa Agrícola de Barcelos, CRL; Cooperativa Agrícola de Alcobaça, CRL and CERCIFAF - Cooperativa de Educação e Reabilitação de crianças inadaptadas de Fafe, CRL. Considering a total of seven cooperatives, four cooperatives comply with more than half of the variables, which leads us to believe that the result obtained is quite positive. In addition, the higher level of transparency can be justified by the fact that both cooperatives are bound by specific regulations with regard to their sector of activity. The Portuguese cooperative Mútua de pescadores, CRL is required, in addition to the rules imposed by the SNC, to comply with the specific regulations for the insurance sector (Graph 5 and Table 8).

The PCI for Portuguese cooperatives (Graph 5 and Table 8) is 9.14, which indicates that, on average, cooperatives comply with 9 out of 14 variables (65%). German cooperatives have a PCI of 10.86, complying, on average, with 11 out of 14 variables (78%). The most frequent number of variables fulfilled (mode) for Portuguese cooperatives is 12 variables, fulfilled by Cooperativa Agrícola de Barcelos, CRL, Cooperativa Agrícola de Alcobaça, CRL and CERCIFAF - Cooperativa de Educação e Reabilitação de crianças inadaptadas de Fafe, CRL.

In the case of the German cooperatives, the most frequently fulfilled number of variables was 13, fulfilled by Soennecken eG, Bäko Süd-West Bäker- und Konditorengenossenschaft eG and EWS Elektrizitätswerke Schönau eG.

Table. 8. Partial compliance index (PCI) of the category information in the financial reporting documents

<i>Information in financial reporting documents</i>		
<i>Number of parameters met</i>	Portugal	Germany
	Frequency	Frequency
0	0	0
1	0	0
2	0	0
3	0	0
4	1	1
5	2	0
6	0	0
7	0	1
8	0	0
9	0	0
10	0	0
11	0	0
12	3	1
13	0	3
14	1	1
<i>PCI (Weighted Average)</i>	9,14	10,86
<i>%</i>	65%	78%

Source: Elaborated by the authors

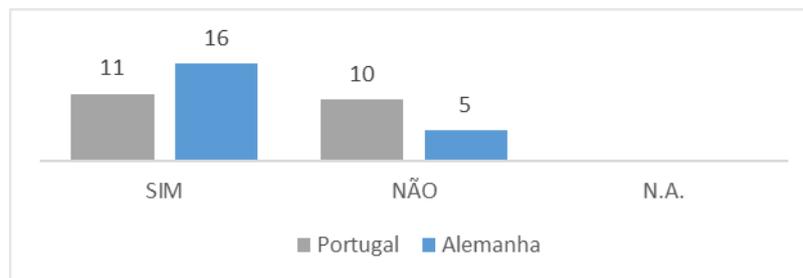
In view of the results obtained in this category and based on the classification of the PCIs presented in Table 7, German cooperatives have the highest PCI, which translates into a high level of transparency regarding the disclosure of information in their financial documents in accordance with the HGB and GenG standards.

2nd RQ: How transparent are cooperatives in disclosing their governance structures?

With a view to analysing the information disclosed on the governance structure of Portuguese and German cooperatives in the management report and the statutes, the three variables (15, 16 and 17) presented in Table 4 were analysed to verify whether the cooperatives present the designation and number of members of each corporate body, their term of office, as well as the qualifications of the members integrating the corporate bodies.

Thus, German cooperatives were found to be more compliant compared to Portuguese cooperatives regarding the category of governance structure, as shown in the graph below.

Graph. 6. Distribution of governance structure category variables

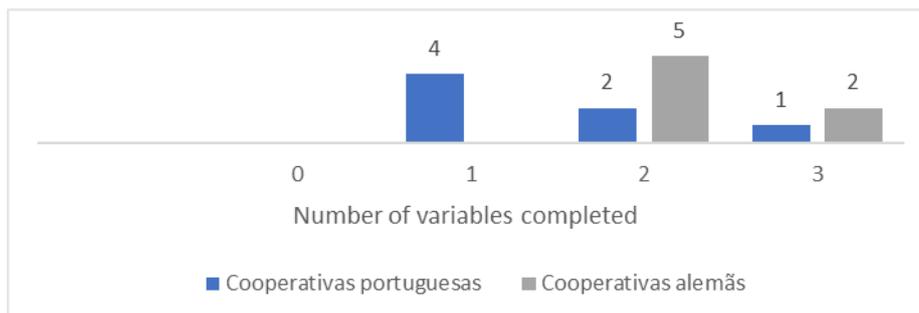


Source: Elaborated by the authors

Out of a total of 42 compliance variables, German cooperatives comply with 5 more variables compared to Portuguese cooperatives. This result suggests that German cooperatives are, also in this category, more transparent regarding the disclosure of certain information in their accountability documents compared to Portuguese cooperatives.

The following graph shows the partial compliance index of the governance structures of the cooperatives under study.

Graph. 7. Partial compliance index (PCI) of the governance structure category



Source: Elaborated by the authors

Based on the calculation of the PCI (Graph 7 and Table 9), it was observed that the number of most frequently fulfilled variables is 2, fulfilled by five German cooperatives (Greenpeace Energy eG, NOWEDA eG, Mega eG, Bäko Süd-West Bäker- und Konditorengenossenschaft eG and BürgerEnergie Berlin eG) and two Portuguese ones (Cooperativa Agrícola de Barcelos, CRL and Cooperativa Agrícola de Alcobaça, CRL). The highest number of variables fulfilled is 3 for both Portuguese (Mútua de Pescadores, CRL) and German (Soennecken eG and EWS Elektrizitätswerke Schönau eG) cooperatives.

It should be highlighted that an analysis with approximate values shows that the cooperatives in both countries aim to comply with the same number of variables. However, if the figures without any rounding are considered, it becomes clear that the German cooperatives have a higher level of transparency.

Table 9. Partial compliance index (PCI) of the governance structure category

<i>Governance Structure</i>		
<i>Number of parameters met</i>	Portugal	Germany
	Frequency	Frequency
0	0	0
1	4	0
2	2	5
3	1	2
<i>PCI (Weighted Average)</i>	1,57	2,29
%	52%	76%

Source: Elaborated by the authors

The Portuguese cooperatives' PCI (Table 9) is 1.57, meaning that, on average, cooperatives comply with approximately 2 out of 3 variables (52%). German cooperatives have a PCI of 2.29, whereby, on average, they comply with 2 out of the total number of variables (76%).

By analysing the PCIs of the governance structure category and based on the classification of the PCIs in Table 9, we can note that German cooperatives have the highest PCI (76%), which translates into a high level of transparency regarding the disclosure of information on their governance structure in the management report and the statutes.

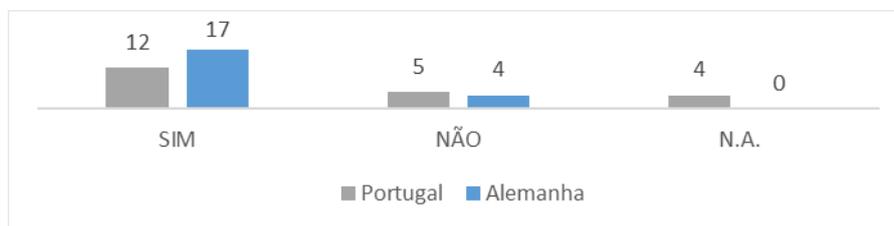
3rd RQ: How transparent are cooperatives about their supervision?

First, in order to assess the effectiveness of internal monitoring, we analysed the Report of the Supervisory Council and the respective Report of the selected cooperatives, both included in the Management Report. Then, as regards external supervision, we verified whether each of the studied cooperatives presents a Statement on the management report and the legal certification of accounts documents whenever these are required (in the case of Portuguese cooperatives) or a Statement from the auditing federation (in the case of German cooperatives).

The choice of variables for this category was based on the comparison made with the legally imposed rules regarding the supervision of cooperatives in both countries. It is also important to mention that the variable regarding the presentation of the Advisory of the management report and the legal certification of accounts documents is not applicable to some of the selected cooperatives. This is due to the fact that, taking into consideration the size of the cooperatives, small or medium cooperatives are not required to provide legal certification of accounts.

As shown below, German cooperatives have a higher compliance on the distribution of the variables in the oversight category.

Graph 8. Distribution of the supervisory category variables

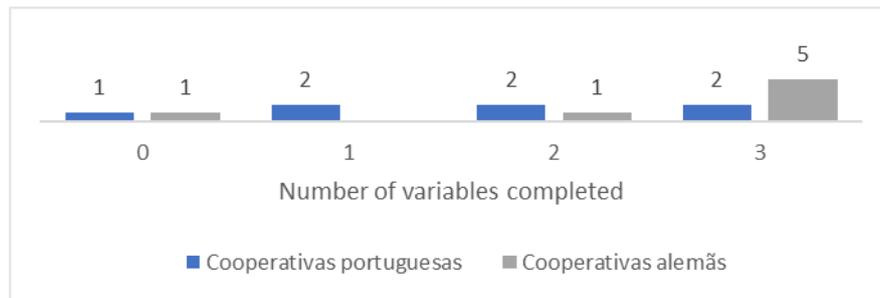


Source: Elaborated by the authors

Out of 42 compliance variables, German cooperatives comply with 5 more variables compared to Portuguese cooperatives (Graph 8). This proves that German cooperatives are more transparent compared to Portuguese cooperatives.

The PCI for the Supervisory category (Graph 9 and Table 10) reveals that the highest number of parameters met is 3, fulfilled by two Portuguese and five German cooperatives.

Graph. 9. Partial compliance index (pci) of the supervisory category



Source: Elaborated by the authors

The PCI of Portuguese cooperatives is 1.71, therefore, in average, cooperatives comply with 2 out of 3 variables (67%). In contrast, German cooperatives have a PCI of 2.43, so, in average, they comply with 2 out of 3 variables (67%) (Table 10).

Table. 10. Partial compliance index of the supervision category

<i>Supervision</i>		
<i>Number of parameters met</i>	Portugal	Germany
	Frequency	Frequency
0	1	1
1	2	0
2	2	1
3	2	5
<i>PCI (Weighted Average)</i>	1,71	2,43
<i>%</i>	57%	81%

Source: Elaborated by the authors

However, it should be noted that if the PCI result without any rounding is considered, the compliance of German cooperatives is noticeably higher, which proves a higher level of compliance of German cooperatives in this category.

In summary, the present study confirms through the model used (in accordance with Carvalho et al, 2010) that German cooperatives have a high level of transparency in all the categories analysed, with a special emphasis on the Supervisory category with the highest level of transparency (81%) (Table 11).

Table. 11. Summary of pci by country

<i>PCI</i>	Portugal	Germany
<i>Information in financial reporting documents</i>	65%	78%
<i>Governance structure</i>	52%	76%
<i>Supervision</i>	57%	81%

Source: Elaborated by the authors

This result shows an increased concern on the part of German cooperatives (in some cases by force of law) to include in their Management Report: a Statement from the Supervisory Board, a Report from the Board of Directors and a Statement from the auditing federation of which the cooperative is a member.

In the Portuguese case, the level of transparency of the Supervision can be classified as medium, given that the result obtained is 57%.

The category Governance structure shows the lowest levels of transparency for both countries, which can be justified on the grounds that some of the variables are not applicable to the selected cooperatives as they are small or medium-sized and have lower financial or non-financial reporting requirements.

In general terms, Portuguese cooperatives show a level of transparency considered medium with regard to all the categories of information analysed when compared to German cooperatives.

8. Conclusions

Accountability and transparency are associated with good governance or social responsible behaviour, which is highly relevant in what concerns cooperatives. There is a legal obligation for the governance bodies of the cooperative to incorporate the core values of CSR into their activity, which should be subject to control, both internally (by the general assembly and the supervisory board) and externally (audit).

This demand for accountability and transparency in cooperatives requires adequate internal and external supervision/audit models.

At the international level, the German model of supervision/auditing of cooperatives is a key reference. One of the particular features of the German model is the special relationship that the supervisory board must establish with the auditing federation (external supervision).

In Portugal, the external supervision of cooperatives is carried out by the *António Sérgio Cooperative for the Social Economy* (CASES). In Germany, external supervision of cooperatives is carried out by the DGRV, which is responsible for all issues of cooperative auditing, particularly the development of guidelines, the training of auditors, and the exercise of auditing.

This external supervision by the cooperative audit federation is undertaken in close cooperation with the board of directors and the internal supervisory body. The German auditing federations provide specific training to their auditors for auditing cooperatives, which is not the case in Portugal.

In the Portuguese legal system, unlike German law, there is no previous control over the incorporation and registration of the cooperative. The German cooperative law establishes a pre-registration audit by a cooperative auditing federation before a newly formed cooperative can be registered.

In the context of the empirical study, taking into account the variables used, we found that there are no significant differences between Portugal and Germany at the level of "Category 1 - Information in the financial reporting documents". The documents presented are basically the same, although there is a substantial difference in the transparency index of this category (65% vs 78%). This can be explained by the mechanisms for disclosing these documents, which are more effective in Germany, given the stricter supervision.

In terms of governance structure (Category 2), we note that the general meeting is an important control body alongside the supervisory board in Portugal. In Germany, on an internal level, control of the management body's activities is predominantly the responsibility of the Supervisory Board, which operates in articulation with the auditing federation. The transparency index of this category shows a clear difference between Portugal and Germany (52% vs. 76%), which can be explained by the fact that the German internal auditing, carried out by the Supervisory Board, is linked to and dependent on the external auditing, carried out by the auditing federation.

Regarding Category 3 - "Supervision", Germany presents a higher result than Portugal (81% vs 57%), clearly indicating greater transparency due to stricter internal and external supervision.

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