CENTRO DE RELAÇÕES LABORAIS

Digital Economy and Collective Bargaining

Executive Summary

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0. INTRODUCTION: PURPOSE OF THE STUDY, METHODOLOGY AND SEQUENCE

1. Purpose

The purpose of this study is to reflect on the impacts of the so-called Digital Economy in work and employment, in the context of the Portuguese reality and from the collective agreements point of view. It intends to ascertain the state of the art in this matter by answering three broad sets of questions:

- To account for the changes that Portuguese enterprises have introduced based on digital technologies;
- To verify if and to what extent the introduction of these changes has had the participation of the company's employees;
- Evaluate if and to what extent these matters have had the attention of collective agreements, and what intervention can collective bargaining have in this context.

2. Methodology and Sequence

In **methodological terms,** the study is the end product of a broader project comprising three phases:

- **Phase 1 - Design of a questionnaire,** the script of which was approved by CRL members, to collect information and opinion from workers' collective representative structures, enterprises and collective labour bodies on the impacts of digital technologies and the Digital Economy in their business area and context or intervention area.
- **Phase 2 - Implementation of the questionnaire,** which was addressed to the entities indicated by the social partners, members of the CRL.
- **Phase 3 - Elaboration of the present study,** which incorporates and processes the contributions obtained in the responses to the questionnaire.

There were 59 responses to the questionnaires, which were grouped according to the criteria: type of the respondent entity; sector of activity in which this entity operates; size of the

respondent entity; geographical distribution; and degree of coverage of these entities by collective labour regulation instrument. The breakdown by type of entity is as follows:

- Enterprises' employers or representatives (26);
- Structures of collective representation in the company, workers committees and members of trade union committees (14);
- Other sectoral bodies (19), including 9 trade union leaders, 9 employers' committees and 1 training and technology centre.

In sequential terms, the reflection on a wide range of subjects associated to the digital economy focused on the workplace is carried out around the following chapters:

I. The digital economy and the world of work: socioeconomic and cultural context;
II. Areas touched in employment and labour relations: general framework and Portuguese situation;
III. Digital Enterprises and Technologies: responses to the questionnaire;
IV. Conclusions: what role for collective bargaining in the context of the digital economy and labour? Contents of collective agreement in this subject and reflection on the role that collective bargaining can play in this context.

I. THE DIGITAL ECONOMY AND THE WORLD OF WORK 4.0: SOCIOECONOMIC AND CULTURAL CONTEXT

1. Four major factors are identified at the basis of Digital Economy and the world of work 4.0:

- The digitalization movement itself;
- Globalization trends;
- Demographic changes;
- The evolution of people's cultural and social expectations (I.1)

2. The term digitalization identifies the transition from analogue technology to digital technology, which has been under way since the 1990s. This digital evolution is projected in several areas:

- Computer and software technologies (ICTs), clouds and artificial intelligence;
- Robotics and digital sensors;
- Digital connectivity technology and provision of online information.

An effort was made to understand the level of digitization in the national context through a set of data from the European Commission, EUROSTAT and OECD, which describe the Portuguese situation compared to the European average in recent years. These data point to a progressive improvement in the Portuguese situation, although it still contrasts from the EU average in the following indicators:

- Percentage of people employed as ICT specialists in total employed persons, 2004-2017 (Table 4);
- Percentage of persons employed with computers over total employed persons, 2010-2017 (table 5);
- Enterprises purchasing through computer networks, 2010-2017 (Table 6);
- Individuals who bought online in the last 12 months, by age, 2016 (chart 5).

On the other hand, the *Digital Economy and Society Index (DESI)* was further examined, whose report on Portugal (situation in 2018) places our country close to the European average, except for data concerning human capital and the use of the internet, where Portugal is placed on a lower level (graphs 2, 3 and 4) (I.2) .

3. The term globalization encompasses a set of diverse and complex phenomena that have in common the fact that they occur on a global scale. These phenomena include:
   - The dissemination of **the exchange of goods and services at a global level** with a decentralized production, which is enabled by digital technologies;
   - The **consumers mass access to information** in any part of the world, that is made possible by online communications, with its inherent advantages;
   - The **migratory movements** of people from less developed countries to more developed countries.

   In this regard, some data are presented here which illustrate the effects of the phenomenon of globalization in Portugal: evolution 2008-2017 with positive signs in 2017: imports and exports (figure 6); migratory flows to and from Portugal (figures 7 and 8) (I.3).

4. The third factor to take into account for the understanding of the Digital Economy and the world of work 4.0 arises out of **demographic changes.** These changes directly affect the availability and characterization of the workforce, as well as social security systems.

   Thus, the **increase in the average life expectancy and the birth rate,** on the one hand; and the trend towards a **global increase in people's qualifications,** on the other, can contribute to changing the structure of the labour market.
   Some data show that Portugal has been following the global trends that show an increase in the population education (1998-2017) (figure 9), an **increase in the average life expectancy** along with a **decline in the birth rate** (1990-2017) (graphs 10, 11 and 12) (I.4).

5. Finally, reference is made to **the evolution of the people's social and cultural expectations** in relation to the professional component in their lives. This evolution is clear in several phenomena:
   - The **evolution of family models,** with the increase of sole parenthood situations, but also with the dissemination of more equal parental work-family reconciliation practices within the couple (Table 7).
   - The **loss of homogeneity of the employee's profile** with the emergence of, along with the so-called "typical worker", other types of workers, who deviate from the classic worker pattern for one reason or another. Although this trend of diversifying the employees' profile is not new, it is stimulated by digital technologies.
   - **The increase of the sharing economy** (E-cars or E-houses, for example). These collaborative economy phenomena has repercussions in the employment area in the so-called collaborative work (coworking or crowdworking) (I.5).

II. MAJOR IMPACT AREAS OF THE WORLD OF WORK 4.0 IN EMPLOYMENT AND WORK RELATIONS: GENERAL LEGAL FRAMEWORK AND THE PORTUGUESE CASE

1. The study identifies, among others, the following major impact areas of the digital economy in employment and labour relations:
   - Level and quality of employment and new business and work models;
   - Recruitment processes;
   - Working hours and place of work;

- Changes within organizations, worker-machine relationship and digital control of worker activity;
- Employees personality rights and access, processing and protection of their personal data;
- Professional qualification;
- Safety and health of workers;
- Communication models within the enterprises and forms of communication between workers and employers and their representative structures;
- Social Security.

2. Regarding the **evolution of employment,** the study attempts to assess whether and to what extent digital technologies influence:

- The employment level;
- The quality of employment;
- The type of available jobs, including the emergence of new business and work models driven by digital platforms, and the growth of some atypical work contracts, such as employed teleworking, other forms of remote work (such as smartwork) and, although indirectly, temporary work (II.2.1).

The general characterization of the employed Portuguese population is based on two sources: Employment Survey of the Portuguese Office for National Statistics (INE) and the *Single Report,* Personnel Survey (GEP) (Office for Strategy and Planning, Ministry of Labour, Solidarity and Social Security)

The breakdown of workers by sex, age and situation in relation to their occupation shows a positive trend in the employed population as of 2014, with gender parity almost achieved in 2017; in contrast, there is a clear ageing of the employed population (tables 8, 9 and 10).

On the other hand, in the situation of workers in relation to their occupation, employees are predominant; and employment growth between 2011 and 2017 is due to the increase in this group, resulting from the increase in fixed-term and open-ended contracts (tables 10 and 11 and graphs 13, 14 and 15). On the other hand, other forms of employment contracts, such as agency workers and teleworking, are still very incipient (Tables 12, 13 and 14).

In terms of **business and employment models enabled by digital technologies,** the Portuguese labour legal framework shows some sensitivity and has a set of tools that fit the phenomenology of subordinated employment and quasi-subordinated employment carried out through digital technologies.

This is the case of teleworking and other forms of distance work (including working at home) and, indirectly, temporary work (II.2.2).

3. A second area where digital technologies have an impact in employment is in **recruitment processes.**

The study shows how digital technologies have become a common resource in employee selection by enterprises, as well as the growing importance of digital platforms such as Linkedin, and search engines such as *Google, YouTube* or *Facebook* for gathering information about people.

However, there are increased risks of invasion of privacy arising from these open forms of access to information.

In legal terms, the Labour Code guarantees the protection of the personality rights of job applicants and equal opportunities in access to employment by prohibiting the discriminatory treatment of candidates. Therefore:

- In order to **protect the personality rights of job applicants,** there a number of restrictions concerning the questions that can be asked to candidates and recruitment techniques, including recruiting processes records (Articles 17, 18 and 19 of the LC).
- In order to **guarantee equal opportunities and treatment in access to employment,** discriminatory practices in contracting procedures are prohibited (articles 24, 1 and 2, a), 25, and 30 no. 1 and 2 of the LC).
- Lastly, and to the extent that recruitment procedures involve the **collection and processing of personal data,** these Code provisions must comply with the **New General Data Protection Regulation** (Reg. (EU) 2016/679 of the European Parliament and of the Council of 04/27/2016) (II.3.2.).

4. Another area where digital technologies influence the world of work 4.0 is that of **location and working hours.**

Regarding the workplace, we can see the transition from a rigid and stable matrix of the workplace, which was traditional among us, to a matrix of higher flexibility, which is enabled by the geographical mobility regime (article 194 of the LC) but also by the growing acceptance of distance work employment contracts (such as teleworking - art 165 of the LC) and also by quasi-subordinated employment relationships in which the employee carries out his activity from his home (Law No. 101/2009, of 8 September). With regard to working time, there is a clear evolution of traditionally rigid working time regimes towards the highly flexible regimes that we now see in terms of the distribution of working time (such as adaptability schemes, hour banks or concentrated working hours - art. 203 et seq. of the LC) as well as the emergence of contractual models that are characterized precisely by a different configuration of their working hours (for example, part-time work and intermittent work - arts. 150 and 157 of the LC, respectively) (II.4.2).

Although geographical and temporal flexibility is not the creation of digital technologies, the contribution of these technologies to supporting and encouraging them is undeniable.
In fact, the higher flexibility of the working time and workplace may lead to changes in the traditional safeguarding of the stability of the workplace, increased risks in terms of health and safety at work and the worker's privacy, and the risk of a blurring of lines between working time and non-working time (II.4.1).

Also in this domain, Portugal follows the trend seen in other countries.
Thus, in regard to the working time regime applicable to all employees, we see that, between 2010-2016, the ratio between flexible and fixed working hours schemes tends to increase the relative weight of flexible work (in 2016 , 76.5% / 23.5%). It is also clear that there are many working time flexibility models provided for in collective labour regulation instruments and in individual and corporate schemes (Tables 17 and 18).

5. **Robotics and the development of the so-called Internet of things and artificial intelligence** is one of the main areas within digitalization. The impacts of these phenomena in the organization of work are summarized in four broad categories:
   - The **progressive disappearance of a number of professions**, which are now carried out by machines;
   - The **reinforcement and refocusing of vocational training** towards digital technologies;

- The **reconfiguration of the worker-machine relation** within the enterprise;
- The **implementation of human work control practices by digital means** (II.5.1).

The Portuguese legal system deals mainly with the **problems related to the control of human work by electronic and digital means,** imposing limits to the employer's powers in this area, while seeking to guarantee the worker's personality rights in the work place. In this sense, the Labour Code provides, in particular, for the following:

- **The rules for the use of remote surveillance in the workplace** (articles 20 and 21 of the LC);
- **The right of personal portrayal and the right to the privacy of the worker's private life** (articles 79 and 80 of the CC and article 16 No. 2 of the LC);
- **The right to privacy and confidentiality of the worker regarding the content of messages of a personal nature and access to non-professional information which they send or receive via email** (article 22 of the LC, articles 75, 76 and 80 of the CC, and article 16, paragraph 2 of the LC);
- **Prohibition of discrimination against the worker in relation to other workers,** based on discrimination factors set forth in the law (article 24 no 1, 25 no 1, 30 and 31 of the LC);
- **Prohibition of harassment practices against the worker** (article 29 of the LC) (II.5.2).

6. **The use of digital technologies in the work place represents also a risk for the employee's personality rights**. Therefore, the study identifies the following potentially problematic areas:
    - **Collection, storage and processing of the workers' personal data,** both in general and in relation to particularly sensitive data, such as health data and the private and family life of the worker;
    - **Distinction between the workers' professional and private domain;**
    - **Technological control of work activity** and its limits, including harassment;
    - **Regulation concerning the digital communication tools made available to the employee by the enterprise** (II.6.1).

In this regard, the **national legal system** is especially demanding as far as the protection of personality rights in the context of the employment relationship (articles 14 to 22 of the LC). Although established on equal terms (i.e., in relation to the worker and the employer), this scheme is primarily intended to protect the employee's personality rights. On the other hand, although this legal regime is not necessarily related to digital technologies, several of the Code's provisions show the legislator's awareness of the present technological environment surrounding the several employment relationships and try to address this issue directly (II.6.2).

7. In the field of **vocational training,** the challenge is to ensure the constant updating of workers and entrepreneurs regarding the development of digital technologies, which, sooner or later and to a greater or lesser degree, have an impact on the business environment (II.7.1).

According to EUROSTAT data, the percentage of companies that carry out vocational training actions in Portugal is equivalent to the European average. (Table 19).

In terms of vocational training, the Portuguese legal system has evolved towards increasing training requirements, especially since Portugal joined the EU and, to a certain extent, to meet the European Union's requirements stated in the Treaties (in particular, art. 145, 162 , 165 and 166 of the TFEU). In this context, the Labour Code establishes a set of rules to promote vocational training in the workplace, in terms of initial training and lifelong learning training (articles 127 no. 1 d) and 128 no. 1 d), art. 130 a), and art. 131 of the LC).

With specific focus on new technologies, we also highlight the teleworker's right to adequate training on the use of information and communication technologies that are required to the exercise of his work (article 169 no. 2 of the LC); and, in the context of dismissal due to inadaptability of the employee, the right of the employee to receive vocational training appropriate to the changes in his job description, which is one of the legal requirements for dismissal due to inadaptability, both in terms of technological redundancy (Article 375 c) of the LC), and in the new form of dismissal due to inadaptability introduced by Law no. 23/2012, of 25 of June (article 375 no. 2 b) of the LC) (II.7.2).

8. The **safety and health of workers in the digital age** can be viewed from two different perspectives:

- The protection of workers' health data;

- The health and safety in the workplace system itself.

On the one hand, **personal data on health or pregnancy, as well as biometric data,** which can be collected and processed digitally, are especially sensitive data and therefore require increased protection. In another perspective, the **global system of protection of safety and health in the workplace** can be inadequate to some work models enabled by digital technologies, due to the difficulties in ensuring the application of such rules in a place of work outside the enterprise facilities. Lastly, **working models resulting from digital technologies** may present new occupational risks associated to them or, at least, can increase the intensity of existing occupational risks (such as stress and harassment by technological means, among others) (II.8.1).

The Portuguese legal system, in this area (Labour Code and Law no. 102/2009, of 10 September), is in accordance with the parameters of the European Union. It is also necessary to adapt the national legal system to the new General Data Protection Regulation (Reg. (EU) 2016/679 of the European Parliament and of the Council of 04/27/2016), because the worker's health data are personal data.

Some studies mention, however, the operational difficulties that may arise in the application of the legal regime to the employment contract types enabled by digital technologies, such as teleworking and other forms of telecommuting, work contracts with diffused workplace, autonomous employment associated to work carried out from the worker's home, and self-employment, because the placed of work do not coincide with the enterprises facilities, which makes it difficult to assess working conditions and conduct inspections in this area (II.8.2).

9. Digital technologies also play an important role in the **communication models of both enterprises and collective labour bodies**. Various methods of communication are included here, at various levels and with different stakeholders:

- Communications between the employer and the employees within the company;
- Communications between workers and their representative structures (workers' committees and trade union delegations);
- Communications between trade union associations and employers' associations and their respective associates.

With the exception of the first, all other communication models relate to models that enable industrial relations.

In all the above mentioned models, communication using digital media (general emails, online platforms, the Intranet or the companies' website) is increasingly popular and important. These practices pose new challenges to the legal system as regards the adaptation (or replacement?) of traditional communication tools. However, attention should be given to the control of the use of these tools which are potentially more invasive of people's privacy (II.9.1).

In Portugal, there are several issues that fall within the **employer's duty to inform** (for example, articles 20 no. 3, 99 no. 3, 146 no. 4, 202 no. 1, 202 no. 3 of the LC).

As regards the **intervention of the workers' representatives in the company and their communication with the workers themselves,** the legal norms obey by the industrial company paradigm, when they foresee, for example, the right of the workers' commission and union representatives to a physical place for the performance of their activities (Article 421 no. 1 and 464 of the LC), or when they determine that the trade union information shall be "posted on the premises of the company and in a place designated by the employer" (article 465 of the LC). The challenge of the Portuguese legal system in this area is therefore the adaptation of information and communication models to digital communication technologies (II.9.2).

10. Social security programs were outside the scope of this study, because its analysis is not consistent with the adopted methodology, based on the questionnaire addressed to companies, workers' representatives and to trade unions and employers' associations.
Nevertheless, this topic is mentioned in many studies on the Digital Economy in the world of work 4.0 and can be summed up in three words: sustainability, coverage and overall configuration of social security systems (II.10).

III. ENTERPRISES AND DIGITAL TECHNOLOGIES: RESPONSES TO THE QUESTIONNAIRE

1. The aim of Part III of the study is to present the results of the questionnaire addressed to the aforementioned respondents, with a double objective:

- To observe the extent to which Portuguese enterprises and institutions have introduced changes related to digital technologies in the last 5 years;

- To know if and to what extent the workers participated in the introduction of these changes.

The questionnaire started with the identification of the respondents (point 1) and then developed its analysis in four axes (points 2 to 5):

- Point 2 - **General information** on the changes introduced in companies to the need to modernize processes and ways of working in the light of technological changes
- Point 3 - **Recruitment and contracting models**
- Point 4 - **Employment schemes, working methods and working time schemes, place of work and communication**
- Point 5 - **Technological information, professional training and sharing of resources.**

2. The questionnaire, combining closed-ended, open-ended and semi-open-ended questions, allowed each respondent to answer the questions that best translate their reality. This option led to a variable response rate per issue.

   The processing of the responses to the open questions tried to embrace the diversity of solutions and to reflect the particularities of the various sectors and business contexts.
   On the other hand, even in open responses, there was a clear standardization of the themes or solutions proposed by the respondents, whether they were workers, employers, or collective representation bodies. But overall, the number of responses to closed-ended questions was higher than that of answers to open-ended questions (III.1).

3. In the 'General Information' section (section 2), the aim was to capture the opinion of the respondents on the main technological changes that have occurred in the last five years, their areas of impact and the technological tools and instruments used to introduce those changes.
   The set of answers to the first question (open-ended), about the main changes introduced in the company towards technological modernization, was grouped in 8 topics of which the changes in hardware and software stand out (table 20). These technological changes have had a high or medium impact in a number of areas such as planning, production, human resources, customer services and finance (table 21); and the type of technologies that support this evolution fall mainly on telecommunications, computers, computer networks and digital platforms (Table 22).

Still in this group, respondents were asked to indicate the areas in which, from their point of view, one should focus more to keep up with technological evolution. In 38 responses, 18 workers suggested greater investment in working hours flexibility, including telework, improved dialogue with workers, increase of professional training activities and improvement of the equipment quality; Employers (20) also indicate the strengthening of information and training in order to facilitate adaptation to technological change (Table 23).

In relation to this **point,** 57% of the respondents considered that the workers or their representatives participated in the process towards the technological modernization of the enterprise. The majority of respondents were employers (26 to 34); of all the workers (8) who responded to the questionnaire, two said that such participation was part of the right of information and consultation of structures of collective representation and another noted the existence of a bank of ideas open to the participation of the workers. (Table 25) (III.2).

4. The purpose of **point 3** was to evaluate the recruitment and contracting models in organizations, in the perspective of whether and to what extent these models have adapted to the digital economy in the last five years, with the objective of evaluating:
   - The recruitment techniques used and to what extent they have changed with digital platforms and social networks. Here we observe the predominance of the face-to-face interview, followed by recruitment activities at universities (Table 26, Q 3.2.A). With digitalization (Table 26, Q 3.2.B), 68% of respondents report the impact of social networks on recruitment.
   - The **prevalent contracting models** in the enterprise and the changes that occurred. Respondents consider that open-ended contracts are predominant, followed by fixed-term employment contracts (Table 27). Telework has a low response (12% / 59 answers). However, the numbers extracted from this group do not coincide with the answers to the question about the place of work and the physical workplace where the work is carried out (27%/59 answers, table 32, Q 4.3), which may be due to the fact that the reality of distance working is broader than the teleworking category.

In this topic, both employers and workers stated that the participation of employees' representatives is practically non-existent (III.3).

5. The **third axis of the questionnaire** (point 4) focused on the following topics :
   - **Work methods in the organization,** including automation processes and workers involved, dematerialization, different service delivery models, co-working, network services and others;
   - **Working time schemes;**
   - P**lace of work;**
   - **Tools for the supervision of premises and equipment.**

Of particular note in the company's service delivery models is the growing presence of digital marketing, online sales, co-working schemes and digital collaboration in research and development. In the scale used (increased, unchanged and decreased) the 'increased' classification is, in fact, predominant in all points indicated (Table 28).

As for the **professional groups (according to the National Standard Classification of Occupations) with a greater involvement in the automation processes** in their respective business area, the large majority of responses indicate managers as the group with a greater intervention in this area, followed by technicians and intermediate level professionals (Table 29).

On the other hand, the cross-checking of responses related to working time schemes with the various domains of activity of the company, show **the areas where the changes in each regime were more significant.** Full-time work in the financial, planning, human resources and customer service areas is predominant. The production area is the one that better articulates the full-time regime with shift work, adaptability regime and hour bank (Tables 30 and 31).

An open-ended question was asked on the changes in the **place of work, physical workplace and presence in the company premises**. Teleworking and distance work (27%/59 answers, table 32, Q 4.3) had a higher response rate than the telework responses obtained in the question about contracting models (12%/59 responses, table 27, Q 3.1). This apparent contradiction may mean that some activities are already carried out remotely or at distance, but without necessarily representing a teleworking situation.

Finally, the data collected on the question **whether and to what extent the tools for monitoring the plant and equipment have been changed due to digital technologies** show an upward trend of video surveillance systems (68%/40 responses, consider that it increased), although a significant number of respondents considered that security services remained unchanged or increased (to 35%, these services increased and to 50% they remained unchanged) (III.4).

6. The fourth and final axis (point 5) focuses on **information technology, vocational training dedicated to digital technologies and sharing of technological resources.** In this very broad thematic area, respondents were asked about the following topics:
   - **Availability of human resources,** qualified for the use of information technologies; the existence of a training plan appropriate to the needs and changes resulting from digitization, as well as the need for vocational training in this area;
   - Processing of **employees' information and personal data** and processing of clients/users/associates information and the influence of technological evolution in the process;
   - **Availability to share technology, information and resources** and which ones;
   - Existence of **rules for the use of digital technologies.**

   The answers fell mainly on three of these topics: vocational training; protection of personal data, both in relation to employee data and customer data; and models of communication with the collaborators.
   On the other hand, it was not always been possible to determine whether the changes introduced in these areas have involved workers or not.

   On the **means of communication between the company and its workers,** the aim was to understand the dominant forms of communication and its evolution in the last 5 years, according to three parameters - high, medium and low.
   These responses show email as the preferred mean of communication (90% of responses), followed by the intranet and telephone communication (Table 41 /4.5.1.A). But when one asks which forms of communication have suffered the impacts of digitization (Table 41 /4.5.1.B), we see that new forms of communication already have a significant weight and the majority of the respondents state that digitalization influenced this domain

immensely - social networks (15/22 replies), web applications (25/33 replies) and communication by skype (16/24 replies). That is, all forms of communication that use computers are present in companies.

Finally, 64% of the 59 respondents consider that the company has **rules for the use of digital technologies,** mainly for internet access and the use of hardware and software (Table 42) (III.5).

IV. CONCLUSIONS WHAT ROLE FOR COLLECTIVE BARGAINING IN THE CONTEXT OF THE DIGITAL ECONOMY AND EMPLOYMENT 4.0?

1. In the Chapter focused on collective agreements, we highlight the presence of some areas touched by the digital economy in the contents of collective agreements. To this end, an attempt was made to describe the regulation of personality rights, in particular as regards the combination of the existing rules in this area with technological developments and data protection rules, in the areas of teleworking; electronic means of communication; electronic surveillance; individual record of Workers.

   The fifth topic concerns vocational training, whose central position as a vehicle for the adaptation to digital technologies was further elaborated in II.7.

   The analysis focused on collective agreements published in 2017 and the first half of 2018. In general terms, there is a small presence of the topics listed above in the 320 conventions studied - respectively in 2017 (208) and 2018 (112) - which can be seen mainly in first conventions and global reviews (Tables 43 and 44).

2. The main lines of action of the five themes are identified below:
   - In **teleworking** (10/320 conventions), most conventional clauses reproduce the stated in the Labour Code (Articles 165 to 171). However, conventional solutions that are different from the law are described in aspects such as: the right of first refusal to work in a telework regime of workers with disabilities, chronic illness or who are responsible for children up to 12 years of age or for family members with disabilities or chronic illness; duration of the telework scheme; conditions for termination of this scheme; register of working hours; vocational training and a period of time at the

company's premises to promote the integration of the teleworker into the company's structure and culture; rules on the supervision of work and the possibility of the employer to visit the workplace.

- **Electronic communications** (13 out of 320 conventions), there are conventions that allow for their general use as communication instruments within the company, but guarantee the privacy and confidentiality of all messages and elements unrelated to working life, while allowing the employer to establish rules on the use of the email as a communication tool.
- **Access to personal data or to the workers' individual record** (19 out of 320 conventions), it is usually referred to the legislation in force; on the other hand some references were found concerning the individual record of workers and the associated guarantees of protection (6 conventions/2017 and 1 convention/1st semester 2018).
- **Tools for remote surveillance** (13 out of 320 conventions), the content closely follows the existing legal framework, namely on the obligation of prior information of employees or their representative structures on their existence and purpose.
- **Vocational training,** in the period under review (five years), this topic is stated in 31% of conventions (99/320 conventions); however, only a portion foresees ICT training or technological training (28/99 of the conventions that regulate vocational training).

  Lastly, reference is often made to the vocational training of the worker's initiative, using his annual hour's credit for lifelong learning or by using a leave without pay for training purposes, in writing close to the law (article 317 of the LC). These provisions may correspond to the usual practice in some organizations, since in the responses to the questionnaire (III) a considerable number of respondents consider that vocational training is the result of the worker's own initiative (Table 36) (III.5).

3. Finally, and with regard to the **role of collective bargaining,** the study shows an ample scope for action in the subject. In this regard, moreover, some respondents' answers to open-ended questions point to a possible intervention of collective bargaining in the various axes of the questionnaire (Table 45).

   Thus, when asked about the priority areas of development in their sector or company, from the perspective of monitoring the technological process in the workplace (questions 2.6 and 2.8), and if there was room for collective bargaining intervention in these areas, the respondents identified several **areas where collective agreement could intervene**:

   - Vocational training;

- Telework, by encouraging it;
- Working hours, by reducing the time employees spend in the workplace and encouraging distance work in terms of facilitating the reconciliation with family responsibilities or guaranteeing the right to rest;
- Health and safety, highlighting the importance of new technologies in the prevention of accidents and diseases;
- Recruitment.

The difference between the responses according to the type of respondents (workers and union associations versus employers and employers' associations) arises essentially from the workers belief that collective bargaining is a way to guarantee the maintenance of jobs and rights; while on the employer side there are proposals for more flexible solutions regarding the organization and management of working time.

In summary, in the universe of respondents to the questionnaire, although the suggestions for negotiating content have not been many, the idea of the usefulness of collective bargaining intervention in these matters seems to be consolidated.