

2020

SEEDING Background Report

Social Economy Enterprises
addressing Digitalisation,
Industrial Relations
and the European Pillar
of Social Rights

led by
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Introduction

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The SEEDING project aims to investigate how social economy enterprises are dealing with the processes of digitalisation and automation, in order to better understand whether their experience can inform industrial relations and help to address the goals of the European Pillar of Social Rights (in brief the "social pillar").

The project stems from the acknowledgement that ensuring secure and adaptable employment, fair working conditions, equal opportunities and social inclusion are key priorities for EU policies. At the same time, achieving these goals has to cope with challenges emerging from globalisation, the digital revolution, changing work patterns, and societal and demographic developments.

Whereas the social pillar addresses these challenges at macro level by setting the framework for European and national policies targeting workers and citizens at risk of social exclusion, the project promotes a complementary approach, inquiring into how companies with social values or where workers are involved in governance, such as cooperatives and social enterprises, and their federal and support organisations, can contribute to tackling risks of social exclusion and unfair working conditions stemming from rising digital technologies.

Whilst there is not yet a consensus at international level on the definition of what constitutes a "social

enterprise", the European Commission defines it as "an operator in the social economy whose main objective is to have a social impact rather than make a profit for its owners or shareholders. It operates by providing goods and services for the market in an entrepreneurial and innovative fashion and uses its profits primarily to achieve social objectives. It is managed in an open and responsible manner and, in particular, involves employees, consumers and stakeholders affected by its commercial activities"¹. A shared international definition of "cooperatives" is provided by the International Cooperative Alliance (ICA) in its Statement on the Cooperative Identity², and is usually cited in regulations addressing cooperatives at international and national levels.

As defined by the ICA statement, 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"³. The issue of digitalisation is crucial for social economy enterprises because the changes it implies offer both challenges and opportunities for the model of business they represent.

New digital technologies enable quicker exchanges of best practices and offer tools to support the values of the social economy through new collaborative, short-circuit and circular economic models, on which

social economy actors could have a defining influence if they rise to the challenge. At the same time, the increased automation of tasks, and changes in business management and HR management practices made simpler by new technologies, entail risks in terms of job losses and the possible deterioration of wages and working conditions⁴. Thanks to their social aims and governance models, social economy enterprises may be better equipped than other businesses to face these risks in a socially sustainable way. The objective of the project is to grasp knowledge from the experiences developed in the social economy to:

- provide a perspective on the impact of digitalisation on employment and industrial relations;
- exploit the potential benefits of the digitalisation of production while preventing or managing its negative impacts on employment and working conditions;
- implement principles enshrined in the European Pillar of Social Rights, especially in terms of job security and adaptability, fair wages and fair working conditions.

The present Background Report is meant to provide contextual information about the countries covered by the action, namely France, Germany, Ireland, Italy, Poland, Slovenia and Spain.

In particular, for each country covered, the partnership carried out a secondary analysis addressing:

- features of digital transformation;
- definition and features of social economy enterprises;
- overview of the industrial relations system;
- pace of digitalisation processes and impact on employment and working conditions;
- features of public policies affecting digitalisation.

The analysis was developed according to a common methodology and specific research questions, representing the backbone of the current report.

The purpose is to provide a consensual "problem definition" and to collect all necessary contextual elements to understand the relevant country-level developments in the areas of employment and working conditions, industrial relations, social economy and digitalisation. Findings are illustrated country by country in the following chapters. Subsequently, the project will explore a set of cases studies of social economy enterprises, or of organisations representing them, addressing challenges posed by digitalisation.

These examples will feed discussion among partners, experts and stakeholders, to capitalise on the research and provide policy guidelines to different target groups on how to exploit opportunities from digitalisation and limit its drawbacks for workers.

¹ See: https://ec.europa.eu/growth/sectors/social-economy/enterprises_en.

² See: <https://www.ica.coop/en/cooperatives/cooperative-identity>.

³ For further detail on the definitions of cooperative and social enterprise and the related debate, see also Eurofound (2019).

⁴ For a preliminary overview of how digitalisation can impact employment and working conditions, see Eurofound (2018).



Consortium

The project consortium comprises the following organisations:

DIESIS — Since 1997, Diesis Network has supported the development of the social economy, social entrepreneurship and social innovation in Europe through the implementation of knowledge-based activities, such as training, project design, consultancy and advisory services, technical assistance and research. With 40 member organisations, Diesis Network is one of the widest EU networks specialised in supporting social economy and social enterprise development. It covers 20 countries through major national federations and national support networks associating more than 80,000 organisations and 1.2 million workers. Diesis Network works in partnership with European thematic networks and platforms such as ETUC, REVES, Social Economy Europe and EMES. It is also a member of CECOP. Diesis also provided expertise to the ESF Social Economy Thematic Network, which assisted Member States on the transnational aspects of the ESF.

Fondazione Giacomo Brodolini (FGB) is an EU-level institution with over 40 years of research experience in the fields of labour, industrial relations and social policies. FGB has gained an international reputation in applying a rigorous scientific and interdisciplinary approach to its research activities, policy evaluation and implementation of

research projects, and has extensive experience of working with a wide network of national and multi-level actors, specifically stakeholders in the above-mentioned fields, including social partners, national and local authorities and EU-level institutions, such as the European Commission, Eurofound and the European Parliament.

Legacoop Produzione e Servizi is an Italian employers' organisation representing cooperatives and mutual societies in the fields of construction, logistics and transport, industry, cleaning and integrated services, facility management and ecology, supervision, services to cultural heritage, catering, engineering and design, consulting and ICT. It has 2,700 member organisations employing over 200,000 employees across the country.

Born in 1997, **Gruppo Cooperativo CGM** today one of the largest Italian network of social cooperatives and social enterprises. Its aim is to promote communities' welfare by projecting and promoting quality services at an affordable price. CGM associates 57 consortia and 649 non-profit and social cooperatives, employing about 42,000 workers.

Association Social Economy Slovenia (ASES) is an umbrella organisation of social economy enterprises and cooperatives in Slovenia. It is a non-governmental institution based on social economy principles. ASES is also involved in leading the process of creation of Social Economy South

East Europe as a network organisation in the region of South East Europe. Slovenia was appointed to a one-year term of office as Chair of the Supervisory Board of the Luxembourg Declaration adopted in December 2015 — European Capital of Social Economy for 2018. ASES plays the role of the technical secretariat, also shaping the rules for the Capital of Social Economy.

COCETA associates and represents worker cooperatives in Spain. In its over 30 years of existence, it has established itself as the platform for the representation, coordination, promotion, information and training of Spanish workers' cooperatives. The federation's work and mission aim to promote the principles which characterise the cooperative management model, and which distinguish it from other business formulas. It associates approximately 17,300 workers' cooperatives in the country. COCETA works on outreach projects and promotion of cooperatives, and develops tools and plans to train people who work in cooperatives and the unemployed. The organisational framework brings together 16 regional organisations and a team of more than 100 highly trained and specialised workers.

Innova e.G. is a German support organisation for cooperatives whose mission is to deliver training and advice for new cooperatives.

The **Foundation for Social and Economic Initiatives (FISE)** is an independent Polish non-profit

organisation created in 1990. FISE's mission is the creation of decent job opportunities for every person who wants to work and develop, with a special focus on those who are at risk of social exclusion. Since 2005 FISE has been animating discussions among NGOs, the public administration and business about the development of the social economy sector in Poland. In 2016, FISE started new activities focused on the search for social innovations, especially in the labour market.

The **ETUC** is the major trade union organisation representing workers at European level. European integration has reinforced the EU's role in economic, employment and social policy throughout the 27 Member States. The ETUC is a European social partner, which means that the European Commission consults it when developing social and economic policies. It also negotiates autonomous agreements and work programmes with European employers' organisations. It coordinates the national and sectoral policies of its affiliates on social and economic matters, particularly in the framework of the EU institutional processes, including European economic governance and the EU Semester.

Method Consultants (who are Gerard Doyle and Tanya Lalor) provides wide-ranging research and consultancy services to the community, voluntary and local development sectors in Ireland. Its specialist areas include social



enterprise strategy and project development, social research, public policy and labour market analysis, evaluation, community development and governance. Method Consultants has a combined experience of over 60 years of working both on a professional basis and in a voluntary capacity serving on the boards of community and voluntary organisations.

Digitalisation and key EU policies

Although the key digital technologies, starting with the invention of microprocessors and microchips, were invented between the 1950s and the 1970s, it is only over the last two decades, thanks to developments in nanotechnology and high-capacity network infrastructures, that the digitalisation of production has significantly expanded outside the ICT and telecommunications sectors.

By leveraging features essentially attributable to the quick transferability of data and their "public good" features, i.e. non-rivalry and non-excludability in consumption, new technologies are triggering disruptive innovation across all sectors⁵, with risks of job destruction or of polarisation between high-skilled and low-skilled jobs⁶, but are also creating new opportunities, the ultimate effects being affected by the governance of change besides the technical features⁷. Whereas there

is still some confusion on the terminology adopted in literature and in policy-making to address these changes (e.g. Industry 4.0, Smart Industry, Work 4.0, fourth or even fifth industrial revolution etc.), at EU level, Eurofound (2018a) classified technological innovation process according to three drivers, namely:

- Automation of work (making use of advanced robotics, algorithms and artificial intelligence);
- Digitisation of processes (e.g. by means of the Internet of Things, 3D printing and additive manufacturing technologies, virtual reality and augmented reality);
- Coordination by platforms (use of digital networks to coordinate economic transactions in an algorithmic way).

At the same time, policies addressing digitalisation at EU level, while promoting research and mutual learning on features, trends and policies addressing emerging technologies, are monitoring and developing the actual ability of citizens and businesses to access and seize overall opportunities from digital services.

Back in 2015, with the Digital Single Market Strategy ((COM (2015) 192)) the Commission established a policy framework based on three pillars, namely:

- Improving access to digital goods

and services (ensuring better access to online goods and services across Europe);

An environment where digital networks and services can prosper (providing high-speed, secure and trustworthy infrastructure and services supported by the right regulatory conditions);

Digital as a driver for growth (maximising the potential of the Digital Economy, to enable every citizen to enjoy its benefits, in particular by enhancing digital skills).

The strategy, leading to 30 legislative proposals under the Juncker Commission, was followed in 2020 by the EU Digital Strategy ((COM(2020)67)), which set out actions to pursue the following objectives:

Technology that works for people (development, deployment and uptake of technology that makes a difference to people's lives in a way that respects European values), e.g.: investments in 5G technologies, smart transport and energy infrastructures, and cybersecurity; initiatives to improve access to digital services, digital skills, and labour conditions of platform workers;

A fair and competitive economy (a frictionless single market, ensuring fair competition between companies of all sizes and in any sector, also in the development,

marketing and use of digital technologies, products and services, and where consumers can be confident that their rights are respected), e.g.: measures to ensure that markets characterised by large platforms acting as gatekeepers remain contestable, actions to facilitate clean, circular, digital and globally competitive EU industries, measures to regulate crypto assets and address tax challenges arising from the digitalisation of the economy;

An open, democratic and sustainable society (a trustworthy environment in which citizens are empowered in how they act and interact, and in which the data they provide to enable a digital transformation enhances EU democratic values and fundamental rights, and contributes to a sustainable, climate-neutral and resource-efficient economy), e.g.: a circular electronics initiative, measures to support digital transformation of media and media pluralism, the promotion of e-health data records.

As a way to monitor progress by Member States and the EU as a whole as well as to inform the European Semester, starting from 2014 the European Commission avails of the "Digital Economy and Society Index" (DESI)⁸, an index measuring key dimensions of the digital progress of our society, namely:

- Connectivity (fixed broadband take-up, fixed broadband coverage

⁵ This is opposed to the concept of incremental innovation, concerning innovations which improve the performance of an existing technology rather than replacing it.

⁶ Frey and Osborne (2017); Degryse (2016); Eurofound (2018a, 2018b, 2018c).

⁷ Eurofound (2018b) and, for examples of good practices, Handwerkskammer Frankfurt-Rhein-Main (2016).

⁸ See: <https://ec.europa.eu/digital-single-market/en/desi>.

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mobile broadband and broadband prices);

- Human capital (internet user skills and advanced skills);
- Use of internet (citizens' use of internet services and online transactions);
- Integration of digital technology (business digitisation and e-commerce);
- Digital public services (e-government).

Reports and data released annually show how Member States are still progressing at different speeds, with significant inequalities arising both between and within countries. This recalls the need to keep balancing the attention paid to new technologies with policies concerning the actual supply of and access to basic digital infrastructures and services.

Countries in focus

2



France

Digital transformation: trends and debate

France in general is an innovation-friendly country (according to the Bloomberg Innovation Index⁹, in 2018 and 2019 France is the 10th most innovative country in the world). However, it is lagging behind in international and European comparisons in some areas, especially in the area of internet usage and broadband connection speeds. The biggest challenge for the country is to involve small and medium-sized companies in the digital transformation process (Christ and Frankenger, 2016). On the other hand, France stands in only 15th place out of the (at the time) 28 EU Member States in the Digital Economy and Society Index (DESI 2019) and has not moved forward quickly in the last few years. According to DESI, although 81% of the population use the internet, only 57% have basic digital skills. The proportion of ICT specialists in the workforce is relatively low (3.5%). The government and President Macron seem to keep digitalisation issues high on the agenda. In order to emphasise the issue, a National Digital Council was set up. Social partners are consulted in the field, and five representative trade unions and employers' organisations (CFDT, CFE/CGC, CGT, FO, and MEDEF) were involved in drafting the so-called "Metting report" which was issued in 2015 and specifically targeted digitalisation and its effect on work (Peña-Casas et al., 2018).

The national reform programme "Industrie du Futur" (IdF)¹⁰ was negotiated by involving the social partners and was introduced in 2015. The IdF has five pillars: developing cutting-edge technologies, promoting adaptability of companies, employee training, promoting IdF and promoting wide-scale cooperation. In the course of a dialogue, the government and the trade unions have developed a concept aimed at promoting, on the one hand, multidisciplinary research measures, dealing especially with the role of people in Industry 4.0, and on the other hand, training measures to upskill the workforce. The IdF also resulted in the establishment of the "Alliance Industrie du Futur" in order to implement the goals of the IdF¹¹. In general, according to available sources, the trade unions consider there is a danger of digital exclusion, which should be prevented by further educational provision and recognising that digitalisation puts some jobs in danger and social inequality could increase (Christ and Frankenger, 2016). The government initiative on digitalisation, Mission Société Numérique¹² has recently written a strategy "pour un numérique inclusif" and the minister Cédric O has announced a €250 million plan for digital inclusion. Regarding social dialogue, according to the recent findings of the Diresec¹³ project, social dialogue in France is well equipped to anticipate changes, and digitalisation is "considered as a powerful driver for changes

in employment", whilst "a few initiatives on skills development at sectoral level, on the impact of digitalisation on job level and on skills at local level" are observed. Talking about digitalisation and new types of work, the so-called gig economy is facing legal action in France. Thus, for example, in March 2020, France's top court recognised the right of an Uber driver to be considered an employee, and the European Court of Justice has recently found in favour of French regulations that require landlords to obtain approval from the city council before listing their properties on rental sites such as Airbnb. Platform cooperatives are also progressively gaining in importance in France. As a special initiative, CGSCOP, the support network for worker cooperatives in France, has launched an investment fund for cooperative digital companies (<https://coopventure.fr/>). Also, the Conseil National du Numérique has written recommendations for the government about platform work, involving platform cooperatives¹⁴. A typical form of multistakeholder cooperative (Collective Interest Cooperative, SCIC)¹⁵ is being used for some of the most interesting initiatives such as digital car-sharing cooperatives.

Social economy enterprises: definitions and features

France was the first country in Europe to recover the 19th-century concept of social economy, during the 1970s and to include it in policy documents. In the decades that

followed the addition of new actors such as transformative economy (1980s), solidarity economy (1990s) and social enterprises (around 2010) resulted in the current definition of the Social and Solidarity Economy (Duverger, 2016). Nowadays the social economy is widely recognised in the country with a law since 2014 and a specific department in government (now a State Secretary). However, the term "social enterprise" seems less frequently used than in some other European countries. France is among the very few countries that has so far adopted a law on the social and solidarity economy. The French Law on the Social and Solidarity Economy (SSE)¹⁶ was adopted in 2014, providing a regulatory framework to support traditional SSE organisations and new social enterprises (OECD, 2017). The law broadened the definitions used for social economy by setting up its scope and establishes conditions to be considered as an SSE organisation:

1. a goal other than mere profit-sharing;
2. democratic governance;
3. economic activity that has social utility purposes (support to vulnerable persons, combating exclusion and inequalities, citizenship education, sustainable development);
4. financial management which respects a set of conditions concerning the limited

⁹ See: <https://www.bnnbloomberg.ca/these-are-the-world-s-most-innovative-economies-1.1201700>.

¹⁰ See: https://ec.europa.eu/futurium/en/system/files/ged/fr_country_analysis.pdf.

¹¹ See: <http://www.industrie-dufutur.org>.

¹² See: <https://societenumerique.gouv.fr/>.

¹³ Findings of Diresec project: 'Digitalisation and Restructuring: which role for social dialogue?', Diresec project: <http://www.1mayo.ccoo.es/b7407178a061b19eb2da83ab0b3090e9000001.pdf>.

¹⁴ See: https://cnnumerique.fr/files/uploads/2020/2020.07.29_Working_in_the_platform_era_Synthesis.pdf. ¹⁵ See: <https://www.les-scic.coop/sites/fr/les-scic/>.

¹⁶ Loi no. 2014-856 du 31 juillet 2014 relative à l'économie sociale et solidaire (National Law on Social and Solidary Economy).

distribution of profits and a high degree of asset-lock (reinvestment of a proportion of surpluses, more restrictive takeover conditions, etc.). Thus, in addition to associations, cooperatives, mutual societies and foundations, which are typically considered as the core of the social economy, the law also includes commercial companies, provided that they fulfil the above conditions.

The law has also established new financial tools for the sector, including a social innovation fund (FISO)¹⁷ and the public discourse tends to go towards the need for private funding rather than using public sources (CIRIEC International, 2017). However, there exists a strong social finance market with public and private initiatives to foster both savings and investment in the social economy. Thus, for example, since 2010 all companies having an employee savings plan must offer the option of a Solidarity Enterprise Mutual Fund (Fonds Commun de Placement d'Entreprise Solidaire, FCPES) which needs to invest 5–10% of its assets in social economy enterprises.

Regarding governance, in general the “one member, one vote” principle applies. In more complex companies, one-tier or two-tier structures can be applied.

Regarding types of social economy enterprises, it is also worth mentioning two legal innovations:

the SCIC and the Activity and Employment Cooperative (CAE). The first is a French response to the development of social cooperatives. It is a legal form born in 2001 to facilitate the creation of multi-stakeholder cooperatives including public actors aimed at addressing collective needs. The second is a cooperative of entrepreneurs which initially developed in the 1990s. Both are included in the Law in the Third Title (Dispositions regarding Cooperative Law).

Social economy enterprises are active in most industries (agriculture, banking, consumption, housing, industry, services and social, retail) and in a very large spectrum of activities. The most active fields are work integration, renewable energies, fair trade, organic food and agriculture, health, care for the elderly, fighting against exclusion, sports, education and culture. There are no legal restrictions on type of activity, but specific rules apply in different industries.

Despite the poor availability of recent, reliable data on the SSE, and some inconsistencies between the available studies, on average SSEs seem to account for more than 10% of total employment in the country, with 2.4 million paid workers, of whom 68% are women¹⁸. For the purpose of this background report, the numbers below are taken from the updated European Commission, Directorate-General for Employment, Social Affairs and Inclusion (2016) country report on France (2016),

which uses the data produced by the joint effort of the national statistics office (INSEE) and the National Observatory on the Social and Solidarity Economy (CIRIEC International, 2017, p. 80).

Table 1. Social and solidarity economy enterprises in France, 2016

Associations	Cooperatives	Mutual societies	Foundations	Commercial enterprises	Total SSE
215,027	8,858	752	503	54	225,194

Source: INSEE SIRENE 2016 in: European Commission, Directorate-General for Employment, Social Affairs and Inclusion (2016)

Table 2. Social and solidarity economy enterprises in France, 2013

	Associations	Cooperatives	Mutual societies	Foundations	Total SSE	Share of SSE in the total economy
Enterprises	153,746	8,510	813	474	163,543	7 %
Number of paid workers	1,849,717	309,062	133,960	77,562	2,370,301	10.5%
Number of paid workers – FTE	1,539,657	290,052	119,319	69,760	2,018,788	9.9%
Gross wages (billions of euro)	42.8	11.5	4.7	2.2	61.2	8.5%

Source: Observatoire national de l'ESS – CNCRESS, from INSEE Clap 2013 in: European Commission, Directorate-General for Employment, Social Affairs and Inclusion (2016)

SSEs are spread over all regions of France and are considered to be an important economic force. As shown by most research, surveys and statistics, within the SSE wages are lower in associations, while cooperatives and mutuals offer higher salaries than either the public or the private sector. The weight of associations within the SEE has the result that in 2009 employees of SSE organisations earned, on average, 16% less than in the rest of the private sector and 7% less than in the public sector, when compared with their full-time equivalents¹⁹. This difference is mainly due to the situation of

¹⁷ See: <https://les-aides.fr/fiche/a5ZiAXtG2e3B/bpifrance/fiso-2-fonds-d-innovation-sociale.html>.

¹⁸ See: <https://ess-france.org/fr/less-en-chiffres>.

¹⁹ See: <https://www.insee.fr/en/statistiques/1281125>.

associations (sectors they are active in, feminisation and age of their workforce) and also to the fact that people tend to have part-time jobs in the SEE. Wages are particularly low in social, sport and cultural activities but higher in health, thanks to research centres. However, the overall job satisfaction is higher in SSE organisations, and wage inequalities are smaller.

It seems that the government is keeping social economy high on the agenda. It intends to take the initiative to fully integrate social economy enterprises into the whole economy not only in France but globally. In the recently presented recovery plan (France Relance) it also plays a central role and can be found in several of its chapters.²⁰ In 2019 the Ministry for the Ecological and Inclusive Transition, in partnership with the Ministry for Europe and Foreign Affairs, established a Global Alliance – the Pact for Impact initiative.²¹

Overview of industrial relations context

France is a large country with more than 65 million people, 25.6 million of whom are employees.²² With regard to social partners, the trade union density is one of the lowest in Europe, c. 8%, and there are many active and representative confederations at the national level: CGT, CFDT, FO, CFTC and CFE-CGC. Despite the low percentage of organised workers, the mobilisation power of trade unions for particular causes is very strong.

Membership of employers' organisations is voluntary. Figures show that employers are members of at least one employers' organisation and the density is much higher than in the case of trade unions (according to the latest available data from a few years ago, c. 44%). The three biggest employers' organisations in France are MEDEF, CGPME and UPA.

Collective bargaining coverage is high: according to estimates 98%. Collective bargaining takes place at three levels: at national level covering all employees; at industry level that can involve national, regional, or local bargaining; and at company or plant level. In terms of the numbers of employees covered, industry-level bargaining is the most important level. A trade union needs to attract 8% of the votes cast in the industry to be considered representative. Once signed, the terms of the agreement are binding on all employers which are members of the employers' organisation that has signed the agreement and must be applied to all employees. The government also generally extends the terms of an agreement, making it binding on all employers. The second most important level is the company level. Under the 2008 legislation, a valid agreement can only be reached if it is signed by unions which have 30% support in the company and is not opposed by unions with majority support. A union is representative at company level if it has the support of 10% of the workforce. Since the labour law reform of 2016, company-

level agreements may override industry-level agreements.

National-level negotiations for the whole economy cover a wide range of issues, including social security and industrial relations. The government must consult unions and employers in case of any development of legislation in the areas of industrial relations, employment and training. National agreements are only valid if they have been signed by a confederation or confederations with at least 30% support nationally, and if they are not opposed by other confederations that together have majority support.

France has a complex system of employee representation at workplace level, both through the unions and through structures directly elected by the whole of the workforce. Where trade unions are present, the key figure is the trade union delegate. There is employee-level representation in both state- and privately-owned companies. Employee representation at board level is obligatory in larger share-based companies with 5,000 or more employees worldwide, or 1,000 or more in France. There should be one employee representative where there are up to 12 board members, and two where there are more than 12. This applies whether the company has a single board or a two-tier board system (less common) in which case the employee representative or representatives become members of the supervisory board. Other companies can also

choose voluntarily to have employee representatives on the board, although this is rare. The position of an employee representative at board level cannot be combined with any other elected position, such as a member of the works council or a trade union representative.

Financial participation is a long-standing tradition and is very strong in France. Companies with 50 employees or more are required by law to offer a profit-sharing scheme.

The state plays a very direct and important role by setting a national minimum wage (SMIC); however wages and working time are negotiated at sectoral and company level. There are four national level tripartite bodies (CESE, CNNC, ONE and CNFPTLV).

Pace and features of digitalisation in private businesses and the related impact on employment and working conditions

According to the 2019 DESI covering the integration of digital technology by businesses, France moved up to the 15th place in the ranking (EU-28 average). Between 2016 and 2018, the proportion of French companies using electronic invoicing and cloud computing increased from 11% to 16% and from 12% to 15% respectively. The share of companies using electronic information sharing solutions is higher than for the EU as a whole (2017). However, relatively fewer companies are active on social media, and e-commerce uptake

²⁰ See: https://minefi.hosting.augure.com/Augure_Minefi/r/ContenuEnLigne/Download?id=6BB64408-E5AA-449A-A563-12F73B6DE72D&filename=119%20-%20Le%20plan%20de%20relance%20confirme%20la%20nouvelle%20dimension%20de%20l%20e2%80%99%20C3%A9conomie%20sociale%20et%20le%20solidaire.pdf

²¹ New Global Alliance for the Social and Solidarity Economy and the Inclusive Economy: <https://www.gouvernement.fr/en/new-global-alliance-for-the-social-and-solidarity-economy-and-the-inclusive-economy>

²² Statista, 2019: <https://www.statista.com/statistics/275310/employment-in-france/>

levels by French enterprises are still below the EU average and vary significantly with company size: only 15% of small and medium-sized enterprises sell online compared to nearly 44% of large enterprises.

According to a non-representative survey by MJV Technology and Innovation (2018), 88% of workers (mainly managers) in companies with more than 500 employees state that the company they work for is going through a digital transformation process.

A study published by French research group Eléas (2016)²³ showed that 37% of French workers used their devices to do work out-of-hours every day. About 60% of workers were in favour of regulation to clarify their rights.

According to the Mettling report, there are six major consequences of the digital transformation for the workplace: the widespread use of new work tools, the impact on professions and skills, the impact on the organisation of work, the impact on management, the emergence of new forms of non-salaried employment and the change in the working environment of executives.

Public policies concerning the digitalisation of the economy

In October 2018, France launched "France Num", a national initiative for the digital transformation of small and medium-sized enterprises and microenterprises. This initiative

aims to further promote the digital transformation of businesses. It includes a dedicated guarantee scheme (initial contribution from the French state of € 30 million) that partly draws on EU funding and seeks to unlock €1 billion worth of loans to small and medium-sized enterprises and microenterprises to be provided via commercial banks over the course of 2019. France Num's main strategic objective is to enable all companies within the target population (about 3.7 million) to use the services provided through the national platform by 2021.

France is committed to the development of innovative digital technologies including by means of strategic investments coordinated at EU level: it is a member of the EuroHPC Joint Undertaking and has signed the European Blockchain Partnership Declaration as well as the Declaration of Cooperation on Artificial Intelligence. In addition, drawing on the findings of the 2018 Villani Report, a national strategy for artificial intelligence (AI for Humanity) has been designed and foresees €1.5 billion in public investment by 2022 (including €400 million for innovation). Priority areas include mobility, environment, security and health, notably the creation of a Health Data Hub. The Innovation and Industry Fund (Fonds pour l'innovation et l'industrie) has also started funding two major undertakings (grands défis) selected by the National Innovation Council in the field of artificial intelligence.

Digital technology is a key issue

for France's foreign policy and public action as well. The Ministry for Europe and Foreign Affairs has drawn up and on 15 December 2017 introduced France's International Digital Strategy²⁴. The strategy focuses on three key pillars: governance, the economy and security. It represents a reference framework and diplomatic roadmap for the years ahead.

Strategies and tools devised by employers' organisations and unions to address digitalisation challenges

The social partners in France are quite active on digitalisation issues. After an intensive discussion by the social partners, and using evidence from studies, the "right to disconnect" or "right to switch off" has been established in France thus meeting the unions' requests — first by a decision in 2001 by the Supreme Court, and then in 2015 by a reform of the French Labour Code. These changes, brought about by the so-called El Khomri Law, do not apply to independent workers, e.g. crowd workers generally classified as such. The right to disconnect has been in force since 1 January 2017. The labour law requires organisations with more than 50 workers to start negotiations to define the rights of employees. Trade unions, especially sectoral ones, seek and provide new solutions for members in atypical jobs and in the so-called gig economy, with strikes occurring at companies like Deliveroo and UberEats.

On 19 June 2013, social partners concluded the National

Interprofessional Agreement "towards a policy of improving the quality of working life and professional equality". The agreement was signed by all the three employers' organisations and three of the five union confederations — CFDT, CFE-CGC and CFTC. However, CGT and CGT-FO refused to sign it. The agreement asks social partners to look at the way in which technology allows work to intrude on employees' private lives through the use of devices such as laptops and smartphones. There is a suggestion that agreement could be reached on a period of time during which internet connectivity between the worker and the workplace could be suspended.

At company level, it is interesting to highlight that in 2015 the Thales Group (France) agreed a framework agreement on rules for telework (European Commission, 2018, p. 161).

On 27 September 2016, the telecommunications group Orange signed an agreement on measures to accompany its digital transformation (Turlan, 2017). This is the first agreement by one of the 40 companies registered on the Paris Stock Exchange entirely dedicated to digital transformation. The purpose of the agreement is to highlight the opportunities and risks of digital transformation. It applies to the company's 96,000 French employees and, indirectly, to every member of the group's total 154,000 workforce, who stand to benefit from good company practices developed in France. The aim was to

²³ See: <https://www.eleas.fr/app/uploads/2016/10/CP-Eléas-Enqu%C3%AAtes-Pratiques-num%C3%A9riques-2016.pdf>.

²⁴ See: https://www.diplomatie.gouv.fr/IMG/pdf/strategie_numerique_a4_02_interactif_cle445a6a.pdf.

reach a "balanced position" between two contrasting approaches: that of adopting the digital transformation "unconditionally" and that of refusing to enter into the transformation at all. Orange as an employer sees this process a way of improving working conditions for employees.

Regarding platform cooperatives, a newly established trade union is targeting freelancers (independants.co). Also, there is a current governmental mission²⁵ about better representation of digital platform workers.

Germany

Digital transformation: trends and debate

In April 2015, the Federal Ministry of Labour and Social Affairs initiated a dialogue process on the effects of the digitisation of the economy on the world of work by presenting a Green Paper. The dialogue took place with the involvement of experts from science, the social partners, associations and company practice. The dialogue was concluded at the end of 2016 with the White Paper Work 4.0²⁶. The White Paper reflects the findings and results of the dialogue and discusses future perspectives. According to the White Paper, in 2016 over 80% of employees in Germany were using digital information or communication technology in their professional activities. The transition from analogue to digital technology has been taking place since the 1980s; the triumphant

advance of the internet began in the 1990s, and the era of mobile devices began in the 2000s. The degree of digitisation in the individual sectors in Germany varies greatly. While the IOT and media sector has been largely digitised and changed in several thrusts over the past two decades, this process is still to come in large parts of manufacturing industry. While state-of-the-art technologies have already found their way into half of companies in Germany, a third have not yet started using these technologies. Start-ups play a decisive role as drivers of innovation alongside traditional companies. Often larger companies buy up start-ups as innovation drivers or set up their own departments or subsidiaries as independent laboratories ("labs") to develop and test new ideas. In addition, state-funded research is of crucial importance. Productivity growth in Germany, as in many industrialised countries, has slowed down significantly since 2000. This is particularly true of the last decade. As a result, the large growth potential of digitisation is not currently reflected in the productivity statistics. Nobel Prize winner Paul Krugman sums up the discussion: "It remains peculiar how we're simultaneously worrying that robots will take all our jobs and bemoaning the stalling out of productivity growth. What is the story, really?" The failure to increase productivity applies to both labour productivity and capital productivity. In view of demographic change (increasing share of the non-working

population), a contribution of digitisation to solving the problems arising from demographic change is questionable. This development is currently being discussed in Germany as the "productivity paradox of digitisation". However, many expect this growth to occur in the future, especially through expected investment in digitisation.

Social economy enterprises: definitions and features

There is no official definition of a social enterprise or of the social economy sector in Germany. The most common understanding of the German term Sozialwirtschaft (social economy) is the work of the six non-statutory welfare umbrella organisations in Germany: the Arbeiterwohlfahrt, the Deutsche Caritasverband, the Deutsches Rotes Kreuz, the Deutsche Paritätische Wohlfahrtsverband, the Diakonisches Werk der Evangelischen Kirche in Deutschland and the Zentralwohlfahrtsstelle der Juden. According to the latest available data, the sector employs 1,673,861 people as of 2012 (CIRIEC International, 2017).

The largest area of work for the voluntary welfare services in terms of the number of facilities, beds and places is youth welfare, with 38,367 facilities and services and 2,076,693 beds and places. This corresponds to just over a third (37%) of all facilities and 56% of all beds and places provided. This is followed by care for the elderly and

care for the disabled, with 18,051 and 16,446 facilities and services, respectively, accounting for 17% and 16% respectively. They also have quite comparable numbers of beds and places: care for the elderly with 520,727 beds/places and care for the disabled with 509,395 beds/places (14% each). In second place is health assistance with 392,188 employees, which corresponds to a share of 23%. The third largest area is child and youth welfare with just over one-fifth of the employees, namely 362,950 persons.

The main differences from the European definition of social economy are the centralised organisation in the sector based on different religions and beliefs, and the less democratic governance models involving the enterprises' employees, customers and other stakeholders. Due to their ownership by religious organisations there is very often a lower level of workers' rights than in other enterprises.

Traditionally, cooperatives in Germany have been active in the banking, agricultural and housing sector, or they are cooperatives of independent companies to strengthen the competitiveness of the member companies. In terms of their self-image, most cooperatives do not consider themselves to be part of the social economy. Since 1990, however, social cooperatives have been founded in Germany, many of them as self-help institutions of those affected, some as so-called "solidarity social cooperatives"

²⁵ See: <https://www.gouvernement.fr/partage/11338-pour-une-meilleure-representation-des-travailleurs-des-plateformes-numeriques>.

²⁶ See: https://www.bmas.de/SharedDocs/Downloads/EN/PDF-Publikationen/a883-white-paper.pdf?__blob=publicationFile&v=3.

for the benefit of the community. Often self-employed people join together to form a social cooperative, especially in the health and social sector, in order to offer services from one source and on an equal footing. In addition, there is an increasing number of energy cooperatives founded by citizens for the production and distribution of renewable energies. These developments have blurred the dividing lines between the social economy and cooperatives in Germany. This development was reflected in the reform of the Cooperatives Act of 2006, which allowed the fulfilment of social and cultural interests of members as purposes of cooperatives. In Germany there are about 8,000 cooperatives with a total of about 20 million members. There are only very few cooperatives in which employees are the primary and predominant members.

As the legal regulations for cooperatives make the administration of cooperatives very costly, start-ups with a small number of members and start-ups of the future employees of the cooperative were founded using other legal forms. This also applies to social cooperatives for the integration of people excluded from the labour market into social enterprises. These cooperative-like enterprises are not statistically recorded, with the exception of integration enterprises, and the lack of legal regulation of the social character of these enterprises makes them less resistant in crises. According to estimates, there are several thousand of these social enterprises in Germany, which

cooperate in smaller, frequently regional, networks.

Overview of industrial relations context

Sectoral collective bargaining represents the dominant level of collective bargaining in Germany. Sectoral bargaining usually takes place at local level, whilst core elements of the agreements do not differ much from region to region.

Agreements cover members of employers' organisations and all trade union members, and are usually extended by employers to all workers. Yet employers' organisations can offer membership free of the duty to apply its collective agreements.

Extension mechanisms were amended in 2015 as the previous rules based on a minimum coverage of the agreement (50% of the sectoral employees) proved ineffective given the declining trends in membership rates. Extension will now be granted if it is "of public interest". At the same time, the government introduced a statutory minimum wage and a minimum wage commission which is entitled to adjust its amount. The commission's members are appointed by the government. Social partners submit a joint proposal for the chair and propose six members with voting rights, divided on an equal basis. Two members without voting rights are chosen from the scientific community.

At enterprise or workplace level, the elected members of the works council (Betriebsrat) represent the interests of all employees. This is not a trade union body. However, cooperation between works councils and trade unions represented in a given workplace is expressly ensured by law. Works councils can be formed in all private enterprises with at least five employees and are elected by the entire workforce. Senior executives and senior management are not represented in the works council. All employees who have been employed by the company for at least six months can put themselves up for election. The trade unions represented in the company can submit their own nominations, although lists of candidates who are independent of the trade unions can also be submitted. The number of works council members depends on the size of the company. In companies with more than 200 employees one member of the works council can be entirely released from his or her work duties to perform works council tasks. Works councils have a number of rights related to information (for example, hiring new employees), consultation (for example, in the case of new technology) and co-determination (for example, organisation of working time). The works council can oppose dismissals, although ultimately it cannot prevent them.

The works council is not entitled to conduct collective bargaining or call for strike action. It can only reach agreements that do not

conflict with existing collective agreements between the trade unions and the employer organisations. The establishment of works councils is not obligatory. In companies without works councils the trade unions do, however, have a right of initiative enabling them to instigate a procedure to bring a works council into being. The establishment of works councils in the German Sozialwirtschaft led by churches is less effective.

There is a works council in only 10% of companies with five employees or more, although 45% of all employees work in such companies. In the western Länder the employees are represented by a works council in 90% of all large companies with more than 500 employees. The eastern Länder are not far behind on 85%. According to an analysis of works council elections in 2010 commissioned by the Hans-Böckler-Stiftung, around 77% of all works council members at that time were also members of a DGB trade union. Most of the other works council members did not belong to a trade union. Works council members enjoy far-reaching employment protection, which means that works councils have now become a de facto institutional basis for a trade union presence in companies. As a rule, however, trade unions are strongly represented only where the works councils are largely trade union dominated.

Works councils have a right to obtain advice, including advice concerning

the digitalisation of work. When the works council may make use of external expertise is governed by § 80 (3) BetrVG. Accordingly, the works council can use external advice just as naturally as the employer if this is necessary for the completion of its tasks, i.e. whenever without this support the work council is not or is only insufficiently able to fulfil its tasks.

Besides workplace codetermination in the form of works councils, there is also so-called "enterprise codetermination". Historically, this is based on the demand for enterprise democratisation, a key item on the trade union agenda in the wake of the Nazi period. The codetermination in the coal and steel industries that came into force in 1951 was one of the most notable outcomes of this demand. As a consequence of this historical development concerning coal and steel codetermination, all corporations with more than 2,000 employees are subject to so-called parity-based codetermination: in other words, both shareholders and employees have the same number of representatives in the enterprise supervisory board. On the employees' side both enterprise and external trade union representatives can be elected, in a certain ratio. In case of conflict, the shareholders' side, which as a rule appoints the chair, has a casting vote. Finally, there is so-called "one-third participation" in around 1,100 to 1,200 corporations with more than 500 employees. This means that one-third of the seats are reserved for employees' and trade union representatives.

[Pace and features of digitalisation in private businesses and the related impact on employment and working conditions](#)

It appears that even with more digitalisation, people who have good vocational training will continue to be able to count on demand for their work. On the other hand, demand is likely to decline for people who do not have good formal vocational training or who are already being used for so-called simple jobs. The demand for such jobs is estimated to be 1.3 million higher than the supply in 2025. According to the forecast, simple work will only remain where automation does not pay off or where consumers prefer and demand a person as a contact partner. Thus, there will be a constant pressure on employees to qualify their skills. New job profiles will emerge and other professions will be squeezed out of the market. The participation of employees in the design of continuing vocational training in companies will become the key to the use of continuing training opportunities by employees.

Both employees and companies in general look positively towards greater flexibility in the timing and location of working hours in life. However, conflicts of interest are inevitable since peripheral time situations and current personal circumstances have to be taken into account. A special kind of flexibility in work is the increase in solo self-employment in the course

of digitalisation. The cooperation of solo self-employed people with each other and with companies does not take place within a company framework, but the companies are partly dissolved as an organisational unit of work and replaced by networks and/or platforms. In the process, the social and employee rights associated with work are also lost, since the special need for protection of workers is called into question.

Even if the German digitisation debate focuses mainly on industrial activities, the change is still affecting all sectors, albeit at different speeds and with different intensities. Many industries, such as media, retail, finance, various trades and even logistics, are already being confronted with digitisation, and the effects are already being clearly felt.

At the same time, services related to industrial production and industrial products are emerging in new value-added networks. Employment forecasts predict growth above all in the areas of business-related services and social services. Especially against the background of increasing female employment and demographic change, the care sector offers considerable employment opportunities. Demand will continue to rise, especially in the areas of childcare and nursing care as well as in household-related services. A good and affordable range of care services is therefore also an important contribution to securing the skilled labour base, as it relieves employees of the tasks involved. Since the potential for rationalisation in these

occupations is limited, they represent an important field of employment. However, services with a comparatively low automation risk are also affected by digitisation – many services are already provided via platforms. This trend is likely to continue.

[Public policies concerning digitalisation of economy](#)

Labour market policy also has a key role to play in shaping structural change. A look back shows that as early as the mid-1960s there was a broad social debate on the consequences of automation and its design. It culminated in the Employment Promotion Act of 1969, which laid the foundation for preventive labour market policy. Today, some 50 years later, the digital transformation requires a new orientation of labour market policy. It is necessary to prevent or reduce unemployment and to ensure a high level of employment. Precisely because the potential labour force will decline for demographic reasons, it is important to ensure that supply and demand on the labour market do not diverge. The White Paper on Work 4.0 recommends that the introduction of occupational health and safety instruments should be developed further into an "Occupational Health and Safety 4.0". To this end, a programme to protect and strengthen health in the event of work-related mental stress is being pursued.

The White Paper on Work 4.0 recommends the old idea

of the cooperative, so that it can take on new meaning in the course of digitisation. While many of the new digital platforms are financed by venture capital and are subject to an expected return on investment, a cooperative would be funded through quasi-middle-class "crowdfunding". Cooperatives, whether as communities of values or "only" as economic interest groups, also offer themselves as an alternative organisational model for centralised platforms in the sharing economy. The federal government must also intensify the dialogue with business and society on this issue.

An extension of the company concept to a virtual company is being discussed in order to structure cooperation between traditional employees, temporary employees and contractors.

Strategies and tools devised by employers' organisations and unions to address digitalisation challenges

Technology advice centres (TBSs) and other employee-related advice centres offer advice, further training and specialist information on all questions relating to employment, work organisation, technology and health. In particular, they are contact points for works councils if they need support in the course of digitisation and other technological changes in companies²⁷. The advice is provided in accordance with § 80.3 or § 111 BetrVG (Works Council Constitution Act) or according to the corresponding provisions of the staff representation laws of the

Länder and the federal government as well as the regulations for staff representatives of the Catholic and Protestant churches. Through the ESF social partner guideline, the Federal Ministry of Labour and Social Affairs (BMAS) supports the efforts of the social partners and company players to secure skilled workers and adapt to demographic and technological change. The programme was developed, monitored and implemented in close cooperation with the Confederation of German Employers' Associations (BDA) and the German Trade Union Confederation (DGB).

The interim assessment of the programme shows that in-company continuing training is successful where managers and personnel managers and works councils and employees cooperate with one another and where qualification is a common goal. Joint planning and project development promote acceptance among employees. Participation is perceived as appreciation and increases the willingness to participate. The social partners are involved in the projects and play a decisive role, particularly in terms of activation and transfer. In the past three years, more than 16,500 employees in 1,800 companies have already been reached, 1,300 of them small and medium-sized enterprises. This clearly exceeds expectations.

A total of 36 collective agreements and 31 social partner agreements promote the ESF social partner

guideline after 3 years of implementation. 21 new social partner agreements have been concluded explicitly for the guideline, including in sectors such as health and care or trade where there are currently no agreements on further training and equality – another remarkable success of the initiative.

Ireland

Digital transformation: trends and debate

Analysis of the Irish economy has revealed a two-tiered digital economy, with a small number of foreign-owned multinationals with high digitalisation levels and productivity contrasting with indigenous SMEs which tend to be slower in embracing digital solutions (Indecon, 2016). The primary barriers to the greater penetration of digital technology across SMEs in Ireland are a lack of knowledge about digital opportunities, technical know-how and financing issues (McKinsey Global Institute, 2017).

Ireland ranks 7th in DESI as of 2019. The country ranks very high when it comes to the integration of digital technologies by businesses, mostly because many SMEs have embraced e-commerce. This is an area where Ireland scores much higher than any other EU country.

In relation to employment, the majority of sectors of the Irish economy are expecting to be employing more people in 2023 than in 2018. However, the increasing

adoption of digital technologies is disrupting traditional types of employment, with one in three jobs in Ireland forecast to be disrupted by digitalisation.

As part of a country-wide study (EGFSN, 2018), a range of stakeholders were recently interviewed to gain their perspective on the impact of digitalisation in the workplace²⁸. The findings from the interviews forecast that the jobs most at risk are expected to be low-level, low-skilled roles. Tradespeople will also be required in smaller numbers, and job losses are predicted in the construction and manufacturing sectors. People whose jobs involve manual data entry will be under threat in sectors such as financial services, retail and pharmaceuticals. Interviewees considered the level of jobs risk in the software sector to be small, with software testing being the only area perceived to be under threat. Interviewees were asked to rate the challenges businesses faced in securing a skilled workforce. The biggest challenge identified was finding people with a combination of technology and soft skills (such as the ability to communicate and collaborate effectively). The next highest-rated challenge identified was linked to this, in that it referred to a mix of technology and business skills. The third most significant challenge related to difficulties in attracting talented people who are highly adaptable, open-minded, and ready to learn. The digital world will challenge people to be flexible and aware that over the span of the

²⁷ See: <https://www.tbs-netz.de/startseite/>.

²⁸ The stakeholders were employees of enterprises, individuals associated with representative bodies and representatives of Regional Skills Fora.

working lives, they will have to learn new competencies and take on many new roles.

The study identified the following policy requirements:

- the state needs to continue resourcing its current training and skill development programmes;
- there needs to be greater emphasis on the acquisition of soft skills in the education system;
- a greater focus on apprenticeships is needed;
- a culture of life-long learning needs to be promoted in Ireland.

Social economy enterprises: definitions and features

In July 2019, the Minister for Rural and Community Development launched Ireland's first national social enterprise policy. The policy includes a definition of social enterprise:

"A social enterprise is an enterprise whose objective is to achieve a social, societal, or environmental impact, rather than maximising profit for its owners or shareholders. It pursues its objectives by trading on an ongoing basis through the provision of goods and/or services, and by reinvesting surpluses into achieving social objectives. It is governed in a fully accountable and transparent manner".

Contrarily to the EU definition, the participatory dimension of social enterprises is not acknowledged (for example, that the users of social enterprises' services are often represented and participate in their decision-making structures, or that employees, consumers or other stakeholders are involved in its structures).

Ireland does not have a tailor-made legal form for social enterprises. Instead, social enterprises incorporate using existing legal forms (generally the company limited by guarantee). Also, Ireland has neither a social enterprise mark nor a certification scheme. (DG Employment, Social Affairs and Inclusion, 2015).

Using the definition contained in the national social policy for Ireland, social enterprises are present in most communities (Doyle and Lalor, 2012). In the main, they tend to be established to fulfil a social objective. As in a number of other EU states, little data exists in Ireland about the size of the sector (Doyle and Lalor, 2012). Research undertaken in 2009 conservatively estimated that social enterprises in disadvantaged areas generated €240 million of revenue per year and employed 9,300 people directly. The most prominent sources of state funding include the Community Services Programme (CSP), which supports local social, economic and environmental services that tackle disadvantage by providing a co-funding contribution towards

the cost of employing a manager and staff²⁹. In addition, there are a small number of social enterprise specific funding schemes such as the Sustainable Energy Authority of Ireland (SEAI)'s administered fund to contract approved social enterprises to insulate the homes of households at risk of fuel poverty. The Early Childhood Care and Education fund provides funding to community childcare projects to provide affordable childcare services³⁰. Social enterprises often secure a range of support from the Local Development Companies through the Social Inclusion and Community Activation Programme (SICAP)³¹ and the LEADER programme³². However, Ireland does not have a dedicated and specialised support system compared to other EU countries such as Italy (Doyle and Lalor, 2012). Ireland's transition to a fossil-free society provides opportunities for communities to develop social enterprises in the areas of renewable energy production. However, Ireland lags behind a number of EU countries in this regard. For example, there are approximately 20 community-owned renewable energy initiatives in Ireland compared to approximately 800 in Germany³³. However, this low number could significantly increase due to the introduction of a number of state policy supports.

Limited research is undertaken on social enterprise as a whole in Ireland, and in particular, there is an absence of research on employment and working conditions of those employed in social enterprises.

The lack of research could be partially attributed to the state not allocating funding for research on social enterprise (as the state views the sector as performing a residual role in Irish society) (Doyle and Lalor, 2012). Also, civil society organisations, think tanks and the trade union movement have not commissioned significant research on social enterprise as a whole, and interest in social enterprises is only emerging amongst these institutions.

While not defined in law, cooperatives have registered as cooperative societies under the Industrial and Provident Societies Acts, 1893 and 2005 and the Credit Union Act, 1997.

In relation to credit unions, the majority of the credit unions in the Republic of Ireland and in Northern Ireland are represented by the Irish League of Credit Unions (ILCU). Credit unions affiliated to the ILCU have 3.6 million members throughout the island of Ireland. Globally, this is one of the highest numbers of credit union members per head of population³⁴. The ILCU affiliated credit unions have €14.2 billion in savings and €17 billion in assets. The strength of the agricultural cooperative sector can be seen from figures published by the Irish Cooperative Organisation Society (ICOS). In total, ICOS represents 130 cooperatives with a combined turnover of €14 billion and a membership of 150,000 people, with ICOS-affiliated cooperatives employing 12,000 people in Ireland

29 See: <https://www.pobal.ie/programmes/community-services-programme-csp/>. Approximately 440 social enterprises receive funding under this programme.

30 See: <https://www.pobal.ie/programmes/early-years-capital-and-school-aged-childcare-funding-programmes/>.

31 The Social Inclusion and Community Activation Programme (SICAP) 2018–2022 provides funding to tackle poverty and social exclusion through local engagement and partnerships between disadvantaged individuals, community organisations and public sector agencies.

32 LEADER has provided rural communities across the European Union with the resources to enable local partners to actively engage and direct the local development of their area, through community-led local development.

33 See: <https://www.interreg-europe.eu/policy-learning/news/3908/rescoop-supporting-renewable-energy-co-operatives-across-europe/>.

34 Figures here relate to Irish League of Credit Unions (ILCU) affiliated credit unions, for which data is publicly available at: <https://www.creditunion.ie/about-credit-unions/key-statistics/>.

and a further 24,000 abroad (ICOS, 2019). The worker cooperative sector in Ireland is small and fragmented. It is estimated that there are only 19 workers' cooperatives in Ireland (Gavin, 2012).

Overview of industrial relations context

The system of industrial relations and collective bargaining in Ireland has been described as based on voluntarism, and the primary means of settling disputes and reaching agreement on terms and conditions of employment (over and above statutory conditions) has been collective bargaining at workplace level³⁵. Such agreements reached between unions and employers in the workplace are, therefore, binding in honour only. The collective bargaining framework is based on pluralist traditions for the most part. There are no participatory structures which are institutionalised in law, with the exception of the Worker Participation (State Enterprises) Act of 1977, and its 1988 reform. The act requires all state-sponsored bodies to include on their Board of Management a number of directors who are nominated by the trade unions and representative bodies, and elected by the workforce. The only other mandatory employee participatory requirements are set through occupational health and safety legislation (whereby staff safety representatives are selected by employees).

In recent years, given the increase

in employment and labour law, and the extension of labour law into collective bargaining areas, a debate has grown up as to how "voluntarist" the system of industrial relations actually is (Dobbins, 2005). The increase in individual labour law and rights-based legislation has coincided with a decline in trade union density and collective bargaining at local level in Ireland. Third-party institutions have an increasing role in deciding outcomes, many of which are mandatory and binding on the parties.

The organisation of employees within trade unions in Ireland is largely differentiated on the basis of occupational groups. Since the late 1990s, when union density was around 46%, Ireland has experienced a decline in trade union density. The most recent data reports union density at 25% (reaching 28% for female workers, against 22% for male ones).

The decline in trade union membership has been mainly concentrated in the private sector. Figures compiled from the National Workplace Survey (cited in Fulton, 2015) show that in 2014 union density in the public sector was more than two-thirds of employees (68.7%). The decline in union density in the private sector resulted from difficulties experienced by trade unions in breaking into many of the growing sectors of the economy, such as (mainly US) electronic companies which are among the largest employers in the county, and the hospitality sector.

There is no single set of national statistics on the coverage of collective bargaining. The results of the 2009 National Workplace Survey show that only 18% of private sector employees work for companies which engage in collective bargaining. However, this figure does not include those in the construction sector, where terms and conditions are governed by industry-level agreements. Overall, Eurofound (2014) estimated in 2014 that 44% of employees were covered by collective bargaining.

From 1987 to 2009 collective bargaining in Ireland took place within the framework of a series of national agreements (National Social Partnership Agreements), initially between Congress, on the worker's side, the employers' association Ibec, the government and farming organisations. Community and voluntary organisations then became involved from 1997 onwards. These agreements dealt with pay but also tackled broader economic and social issues, such as, from 1997 onwards, poverty and social exclusion and the promotion of social partnership. According to O'Donnell and O'Reardon, 1996 (cited in Wallace et al., 2013):

"A relevant feature of the first social partnership agreement was the wage restraint (and industrial peace) which unions traded in return for an input to the wider economic and social agenda".

These pacts did not have legal force but unions and employers' organisations were expected to exert discipline on their own members to ensure they kept to the terms of the agreements. Any disputes related to their implementation at industry or local level could be referred to the industrial relations disputes resolution machinery.

The economic crash and unilateral actions by government put pressure on social partnership, and eventually employers withdrew from the process. National agreements are unlikely to return in the near future. Richard Bruton, Minister for Jobs, Enterprise and Innovation, said in March 2014 that there was no case for a return to old-style social partnership, which had "involved issues that were primarily matters for government to decide" (Irish Times, 2014). The collapse of the national partnership agreements has returned collective bargaining to company level (in the private sector). In addition, the industrial relations focus turned to controlling and reducing pay and headcounts, especially in the private sector (Wallace et al., 2013).

Pace and features of digitalisation in private businesses and the related impact on employment and working conditions

Amongst the DESI dimensions, Ireland has made most progress in 2017 with integration of digital technologies. In particular, significant increases in SMEs selling online, cross-border selling online, use

³⁵ Even though the recent history of industrial relations in Ireland has been characterised by national agreements, these had to be ratified at local or plant level, even if this was essentially a formality. It should be noted, however, that ancillary features of these agreements, such as plant-based productivity arrangements, still had to be negotiated locally.

of cloud technologies and use of social media were recorded. Nevertheless, there continues to be room for improvement especially in electronic information sharing and the use of radio frequency identification technology (RFID). Ireland performs relatively well in relation to connectivity compared to other EU countries. In Ireland 98% of households are covered by fixed broadband, in line with the EU average of 97%. In terms of the integration of digital technologies by businesses, Ireland performs very well, ranking first on this DESI dimension.

The SME Digital Health Index 2018 provides an analysis of usage and attitudes towards digital assets by SMEs³⁶. A key component of this report is the Digital Skills Assessment Framework. This is a new approach to measuring and analysing SMEs' digital skills. Each SME is awarded an overall grade for its ability to communicate with its customers online, facilitate transactions, and enhance or "boost" its online presence. The index reports that more SMEs have websites than ever before (72%) and approximately 30% of SMEs can process sales orders through their websites, despite e-commerce being worth €12.3 billion to the Irish economy.

Employment trends over the last decade indicate that there is already a shift away from the jobs in sectors most exposed to automation towards sectors with the lowest automation risks. There is a strong relationship between occupations with the

highest risk of automation and educational attainment: higher levels of education tend to be associated with lower automation risks (Doyle and Jacobs, 2018).

The Irish research has indicated that³⁷:

- Approximately two out of every five jobs in Ireland are likely to be substantially impacted by automation;
- Over 33% of jobs have a high risk/probability of automation;
- At least half of employment in the transportation and storage; agriculture, forestry and fishing; wholesale and retail; and construction sectors are facing a risk of automation;
- Between the fourth quarter of 2007 and the fourth quarter of 2017, the wholesale and retail sector saw a reduction in employment of 7.5%; the industry sector declined by 6.2%; and the transportation and storage sector fell by 0.5%. In contrast, information and communications increased by 35%; education increased by 20.6%; and human health and social work activities increased by 16.8%;
- The South-East and Border regions have been identified as having the highest risk profile while Dublin had the lowest risk profile.

From 2018 to 2023, the agriculture, retail, transport, hospitality and manufacturing sectors are estimated

to experience the largest percentage of their workforce lost to the adoption of digital technologies. By 2023 it is forecast that approximately 46,000 roles will have been displaced due to the adoption of digital technologies.

Public policies concerning digitalisation of the economy

There are a limited number of delivery tools in place across all sectors in Ireland.

In relation to the trade union movement, a representative of the Irish Congress of Trade Unions and the Nevin Economic Research Institute³⁸ informed the Seeding researchers that the trade union movement has, to date, not developed tools to address digitalisation challenges. Consultations were also undertaken with the European Foundation for the Improvement of Living and Working Conditions (Eurofound) to identify any examples of practice among employers in Ireland. The state operates a number of programmes with the aim of increasing the adoption of digital technologies by SMEs. These include Springboard³⁹ and the Trading Online Voucher Scheme. The state has also established Skillnet Ireland, outlined below, which has been accessed by the ICT sector.

In relation to the private sector, a key initiative has been undertaken by Technology Ireland, a network of over 200 companies in the ICT, digital and software technology

sector located throughout Ireland, which is part of the Ibec structure⁴⁰. Technology Ireland formed the "Technology Ireland ICT Skillnet" in 2005. This is a network of companies which collaborate to address skills needs within the technology sector. Training programmes are co-funded by the network members as well as by Skillnet Ireland (which is a business support agency of the Government of Ireland, mandated to advance the competitiveness, productivity and innovation of Irish businesses through workforce development).⁴¹

Technology Ireland ICT Skillnet has provided training to over 4,500 staff in the ICT sector in the following areas⁴²:

- artificial intelligence
- blockchain
- cloud computing
- cybersecurity
- data centre management
- data science and analytics
- global business services/shared services
- internet of things
- innovation
- leadership in technology
- software architecture
- software development

³⁶ See: <https://www.iecr.ie/sme-digital-health-index/>.

³⁷ See, in particular: Nedelkoska and Quintini (2018), Doyle and Jacobs (2018).

³⁸ The Institute is part of the Trade Union related Research Institutes.

³⁹ The Springboard+ upskilling initiative in higher education offers free courses at certificate, degree and masters level leading to qualifications in areas where there are employment opportunities in the economy. See: <https://springboardcourses.ie/about>.

⁴⁰ Ibec (formerly Irish Business and Employers Confederation) is the largest business lobby group in Ireland.

⁴¹ Skillnet Ireland is funded from the National Training Fund through the Department of Education and Skills. See: <https://www.skillnetireland.ie/>.

⁴² See: <https://www.ictskillnet.ie/>.

It also delivers an "Innovation Programme" which is focused on supporting digital technology companies to scale.

Italy

Digital transformation: trends and debate

The digitalisation and automation of jobs in Italy has been at the core of political debate in recent years, in an attempt to contextualise the ongoing and expected changes in the economy, and especially in the manufacturing sector, with a view to supporting the growth of the Italian productive system.

The topic gained much attention in the public discourse as early as in 2010, when the largest car manufacturer in the country, FCA (formerly Fiat) launched an investment plan entailing increased automation of production in its plants and the adoption of the World Class Manufacturing system. Investments were to introduce innovative machines and workstations able to reduce "waste", including unnecessary movements of workers, thus increasing productivity and automating/alleviating heavy tasks.

The plan was actually proposed together with a set of requests for derogations on workers' rights and changes in work organisation which triggered strong debate with unions and among unions, soon gaining a

national resonance. As concerns the scope of this project, it is relevant to note that much discussion actually concerned whether the increased automation of production and elimination of unnecessary movements, together with reduction of breaks, could increase monotony and work-related stress and trigger musculoskeletal disorders or whether on the contrary they could benefit workers thanks to the elimination of heavier tasks and uncomfortable positions (Tuccino, 2011). Indeed, one of FCA's requests was about reducing and postponing breaks.

Since then, the topic of automation in Italian manufacturing companies has gained visibility and, because of the advances in technology, concerns have arisen over the risk of job losses. Similar fears arose with the rise of automation in the banking sector, probably the service branch most affected so far by digital transformation, with the development of online banking tools, moving customers away from local branches to remote assistance and self-service apps (Banca d'Italia, 2018).

More recently, risks arising from platform work entered into the debate on digitalisation. After strikes and protests, first by taxi drivers opposing unfair competition by Uber drivers, and then by food delivery workers employed through digital platforms, more and more attention has focused on the role of platforms in influencing the working time and pay of platform workers, together with other issues concerning

control of workers, privacy, health and safety (Eurofound, 2016).

Similarly, the use of mobile based apps and devices to control workers' performance has triggered debate over the risks of excessive controls over workers, not only in the gig economy but also in the economy as a whole, with much discussion of, for instance, working conditions at Amazon logistics centres⁴³. As concerns the attitude of the government, the incumbent and previous cabinets have considered digitalisation of the economy, especially in manufacturing, as a process to be fostered in order to make sure the Italian productive system keeps pace with global competitors.

A significant push in this direction was given by the Renzi cabinet in 2017, with the approval of a programme of financial aid for private investment. Despite its declared aim of supporting technological innovation, the programme subsidised a wide array of machineries and goods which did not necessarily have innovative features.

The concerns of social partners about the need for investment in skills and competences to innovate in production and ensure complementarity between technological innovation and employment growth later contributed towards allocating some of the programme's resources to training initiatives.

Some attention was also paid to digitalisation of public services, following the establishment by the Monti cabinet of the Agency for Digital Italy, a public body charged with supporting digital transformation in the public sector.

A different attitude concerned the development of platforms, with protests by workers gaining much attention from the Conte I and the (incumbent) Conte II government. In 2018, the government disclosed a bill to tackle bogus self-employment, including by platform companies, by extending the notion of employment. The bill was subsequently withdrawn, overcome by an attempt to mediate between platforms, unions and grassroots movements of platform delivery workers by means of a consultation table at the Ministry of Labour premises. After long negotiations and given divergent positions between the parties, the government eventually introduced a set of protections for self-employed platform delivery workers (Decree Law 101/2019, later converted into Law 128/2019), limiting the possibility for delivery platforms to use contractual schemes devoid of any labour and social rights.

Social economy enterprises: definitions and features

Italian legislation (Legislative Decree 112/2017) defines "social enterprises" as private entities which (i) carry out a general interest not-for-profit enterprise activity;

43 See Adnkronos (2018) on reactions following the possible use by Amazon of digital bracelets to monitor the position of its employees, and Berberi and Rossi (2019) on unions' protests concerning working conditions and, especially, the imposition of intense working rhythms for delivery workers by means of apps.

(ii) have social goals, and (iii) adopt transparent and participative decision-making procedures, by supporting the involvement of workers and stakeholders.

Whilst companies with different legal statuses can qualify as social enterprises, social cooperatives, recognised as a type of cooperative since 1991, are considered as such *ex lege*.

Social enterprises may operate in the following sectors: social and health services, education and training, environmental protection, scientific research with a social purpose, cultural, recreational and artistic activities, social tourism, international development cooperation, fair trade, humanitarian assistance, social agriculture, social housing, amateur sport, protection of human rights, micro-loans, and the redevelopment of dormant public assets and of public assets seized from criminal organisations.

Their statutes must indicate the circumstances and the means of involvement of workers in decision-making, and social enterprises must report relevant information in their compulsory social accounts. Above minimum size thresholds, workers must be entitled to nominate at least one member of the board and of the supervisory body.

The regulation of cooperatives resembles the international principles established by ICA. The law devotes specific attention

to the democratic governance and mutual features of cooperatives, and imposes limits on the remuneration of shareholder capital⁴⁴ and on the number of shares that a member can own.

As to the mutual goal, specific tax advantages are given to cooperatives when their activities are implemented primarily by/in favour of the members. In addition, asset lock provisions forbid the distribution of reserves among members and, in case of closure, impose the devolution of assets to mutual funds promoting the establishment and development of cooperatives.

However, the law suffers from weak enforcement, whereas possible derogations from labour law and the liability of directors of cooperatives triggered fraudulent use of this legal status (Istat, 2019a). In order to tackle cases of "bogus cooperatives" (i.e. cooperatives not controlled by their members), restrictions have recently been introduced⁴⁵, including a new governance board composed of three members in lieu of a single CEO. As social enterprises encompass different legal statutes, equipping companies registering as such with a set of incentives and duties, the number of official social enterprises is likely to underestimate the actual number of companies actually matching the requisites of the law.

According to recent research combining administrative data from 2016 and 2017, there are about 18,792 official social enterprises in Italy, 16,918 of which are social cooperatives (Venturi, 2017).

Yet about 93,000 companies could be considered as potential social enterprises, because of their not-for-profit orientation.

Their main fields of activity are health, education, culture, sport and recreation.

Meanwhile as of 2015 there are 59,027 cooperatives (1.3% of private businesses active in the country), which account for 1,151,349 workers, including social cooperatives (Istat, 2019a).

About half of cooperatives are workers' cooperatives (49.8%), followed by social cooperatives (24.2%), users' or consumers' cooperatives (6.5%), agricultural cooperatives (3%), and cooperative banks (0.5%)⁴⁶. In terms of employment size, the share of workers' cooperatives drops to 42.2%, followed by social cooperatives (33%), whereas all other types remain below 5%.

Cooperatives are widespread across different economic sectors, with a prevalence in social and health services, transport and storage, and services to businesses.

Despite their overall weak presence in manufacturing, cooperatives account for a significant share in some subsectors, for instance in the manufacture of beverages (mostly due to wine producers) and in metalwork, where almost 60% of cooperatives have been established over the last five years.

Cooperatives are strongly rooted in some Italian regions, especially Emilia Romagna and Trentino-Alto Adige. Nevertheless, their presence keeps growing across Italy, including in the south of the country, where they are less common.

There is no significant evidence concerning working conditions in cooperatives and social enterprises.

Istat (2019a) data suggest that part-time work is particularly widespread among social cooperatives, a circumstance which may be influenced by their involvement in education; they often replace or complement educational services, while being outside the scope of collective agreements for public teachers and personnel, which base working time and, consequently, remuneration on the timing of school activities.

The same report highlights no particular differences in the prevalence of permanent contracts among the staff.

Other existing official surveys addressing satisfaction at work do not disaggregate findings for cooperatives, nor for social enterprises.

Overview of industrial relations context

The Italian industrial relations system is based on a two-tier structure:

■ At sectoral level, social partners

⁴⁴ Instead, budget surpluses can be distributed among members in proportion to their transactions with the cooperative (so-called 'ristorno').

⁴⁵ Law 205/2017 (2018 Stability Law).

⁴⁶ A 3% share is not classified.

sign agreements complementing law on terms and conditions of employment and setting pay scales according to levels of job classification (so-called National Collective Bargaining Agreements, NCBAAs);

The decentralised level integrates provisions agreed at the sectoral level by adapting rules to the context and to specific features of work organisation and by defining additional pay, often linked to the productivity of the company, of work teams or of the individual worker.

In sectors featuring a lower size of companies, such as retailing, craft, agriculture and construction, decentralised bargaining generally takes place at territorial rather than at company level.

In the absence of legal provisions as to the representativeness of social partners (which is mostly left to interpretation by case law and relevant authorities), as a rule collective agreements only apply to the employees of employers affiliated to the signatory employers' organisations, or of employers voluntarily agreeing to apply them. Nevertheless, the law has constantly endorsed NCBAAs by entitling them to complement or derogate from law in a number of fields (e.g. working time, apprenticeships and atypical employment contracts), whilst case law has adopted minimum levels of pay set by NCBAAs as key to determining the remuneration

workers are entitled to according to Article 36 of the Constitution.

The architecture so built has recently shown its limits, along with a gradual shift of the legislation toward the decentralised level of bargaining, opt-outs by employers from NCBAAs, and the gradual increase in the number of NCBAAs, owing to conflicts between signatory organisations, and to the growing number of NCBAAs signed by social partner organisations whose representativeness is doubtful.

Currently, draft bills are under discussion to introduce a statutory minimum wage and to regulate the representativeness of social partners.

Specifically concerning cooperatives, existing regulation and byelaws explicitly bind companies to apply minimum rates of pay set by NCBAAs signed by the largest social partners, in an effort to tackle social dumping relying on the application of less costly NCBAAs.

Pace and features of digitalisation in private businesses and the related impact on employment and working conditions

First of all, it should be remembered that access to ultra-broadband is quite limited in Italy, with only 9.9% of companies staffed with at least 10 employees having access to Internet with a speed over 100 Mb/s, a factor which inhibits the adoption of particularly advanced technologies,

such as IoT and big data analysis (Istat, 2019b).

As to digital innovation, according to recent findings by Istat, the technologies preferred by Italian companies are rather simple. Most companies invest in technologies for cybersecurity, web applications, social media, and cloud computing.

Nevertheless, if one focuses on large companies, cloud computing and big data analysis appear to be investment areas for 51% and 62% of them, respectively. Investments in augmented reality, 3D printing and advanced robotics still concern a minority of large enterprises (Istat, 2018, p. 74). More recent data suggest that about 30% of companies implemented technological investments in 2016/2017 and that the same share intended to make them or had already made them in the 2018–2019 period (Istat, 2019b).

Interesting evidence emerges when we look at innovative companies. Many players in the pharmaceutical sector are ahead in the introduction of cobots and of digitalisation processes throughout the production chain. The latter allow information to be shared in real time between clients, producers, and suppliers and physical prototypes to be replaced with virtual prototypes (Camera dei Deputati, 2016).

A survey carried out between October 2017 and February 2018 on companies active in the

manufacturing sector and providing services to enterprises seems to confirm that the use of new technologies will remain confined within a relatively small group of enterprises (MET, 2018). The survey, implemented for the Ministry of Economic Development, suggests that only 8.4% of companies have a "4.0" technology, and a 10% share intend to introduce one of them during the three years following the survey. Interestingly, the respondents highlight that the most important objective of investing in 4.0 technologies is to improve quality and reduce errors (63.4%), whereas "reduction of personnel" is a target for only 6.3% of businesses interviewed. Nevertheless, a 46.3% share select "improvement of productivity", which might also imply reductions in employment. Other objectives linked with 4.0 technologies are "flexibility of production" (25.3%) and "improvement of safety and of the workplace" (20.9%).

Public policies concerning digitalisation of economy

In order to support digitalisation in private enterprises, in 2017 the Italian government launched the Industry 4.0 programme, (later changed to Enterprise 4.0 to better reflect the aim of supporting digitalisation in companies from all sectors). Public investment is also planned, targeting in particular the development of ultra-broadband and the digitalisation of public administration.

The Enterprise 4.0 programme builds on a mix of measures, structured across tax incentives, measures easing access to credit, and training initiatives developed by partnerships in which social partners play a key role.

Key tax incentives are accelerated depreciation – the so-called iperammortamento and superammortamento. These measures allow companies to deduct from taxes an amount higher than that actually spent to introduce digital technologies (iperammortamento), and for instrumental goods (superammortamento)⁴⁷. Although the two tax incentives are often presented together as part of the plan, actually only the first targets incentives in hardware and software labelled as "4.0". However, superammortamento represents a (usual) aid for a rather wide set of capital goods purchased by enterprises. These subsidies were reshaped by the 2020 budget law, reducing in particular incentives for capital goods not related with digital technologies.

Other incentives target investments in research and development and "incomes from software protected by copyright or patents", with the introduction of a special tax regime meant to incentivise the registration of patents in Italy, and the reporting of related income created worldwide.

As far as access to credit is concerned, the so-called Nuova Sabatini targets companies

accessing loans from banks to invest in machinery, capital goods and digital technologies. In particular, companies can access a state subsidy to offset the costs of loan interest. In addition, SMEs can access a guarantee fund covering up to 80% of loans.

The plan also includes funding to support training by networks of universities, schools and social partners to equip workers and students with competences necessary to deal with new technologies.

Strategies and tools devised by employers' organisations and unions to address digitalisation challenges

The largest Italian trade union, CGIL, launched its "Work 4.0" project in late 2016. An internal team has been assigned the goal of studying and sharing analysis on the digitalisation of work, and elaborating new union initiatives and proposals.

The team cooperates with a network of more than 100 experts from different fields of expertise and with different backgrounds (trade unionists, activists, entrepreneurs, professors) and, by means of a digital platform, with an even larger network of stakeholders.

The project delivers a magazine insert focusing on digitalisation (Idea Diffusa), and has produced a toolkit for unionists addressing collective bargaining in the digitalisation era (CGIL, 2019; Mancini, 2018).

Discussion and training initiatives are also under way in other unions. FIM, the metalworking union affiliated to CISL, cooperates with universities and research centres to analyse changes brought about by digitalisation in the sector, especially concerning tasks, skills, and the role of blue-collar workers in the factories (Bentivogli, 2015).

UIL has created a department within its federation in the service sector, called UIL Networkers. The department, born to organise and support IT professionals, soon enlarged its scope to address platform workers, and launched an online observatory. Its activists reach out to workers in forums and crowdwork platforms to discuss their aspirations and needs and to provide information on their rights (Veronese et al., 2019).

Employers' organisations usually provide support and advice to their affiliates to help them to apply for public funding linked with digital investments. In addition, they often organise events and training to support innovation by their member companies.

For instance, in 2019 the SME-related CNA launched the "PMI Digital Lab"⁴⁸ project, entailing a set of events in 10 Italian cities to discuss digital transformation with experts and entrepreneurs at seminars and workshops, which gave the audience the opportunity to explore digital solutions for their companies (CNA, 2019). The events

are one of the initiatives that CNA has been promoting in the area of digital innovation, alongside training and seminars on changes brought about by new technologies in production and work organisation.

Confindustria, one of the leading organisations in Italy with a membership of mainly medium and large companies in the industry and service sectors, organises the regular "Connex" fair, meant as an iterative event, where businesses, start-ups and innovators can meet each other and discuss key topics such as smart factories, ecological sustainability, people and industry 4.0, and smart cities.⁴⁹

The three largest organisations of Italian cooperatives, acting together through the Association of Italian Cooperatives (ACI) are implementing a number of projects to promote awareness of the possible advantages of new technologies, to support proper staff training and to stimulate synergies between innovative cooperatives.⁵⁰

As concerns digitalisation and collective agreements, it is worth mentioning that the social partners at national level are committed to improving digital skills in the training provided by paritarian vocational training funds, and have asked the government to support training for workers in the skills needed to cope with new technologies.⁵¹

In the area of gig economy, in July

⁴⁷ Other tax incentives specifically target expenses on research and development.

⁴⁸ PMI is the Italian for 'SMEs'.

⁴⁹ See: <https://connex.confindustria.it/2020/>.

⁵⁰ See: <https://www.alleanzacooperative.it/cambiare-italia-cooperando/i-nostri-progetti/innovazione>.

⁵¹ See, for instance, the "Training 4.0" agreement: https://www.confindustria.it/wcm/connect/af333e2d-9b52-42ba-9946-c9b0a052e9ce/Accordo+Confindustria+Cgil+Cisl+Uil+Formazione%2B4.0.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE-af333e2d-9b52-42ba-9946-c9b0a052e9ce-mC.zjvb.

2018 the social partners representing logistics activities defined minimum pay and terms of employment of "urban delivery workers", clearly meant to apply to work performed through platforms. Although the largest food delivery platforms refused to apply the agreement, pursuant to Law 128/2019 the minimum hourly pay rates it sets shall become compulsory for self-employed platform delivery workers unless an agreement is reached by October 2020.⁵²

Poland^a

Digital transformation: trends and debate

Analysis conducted in 2019 leads to the conclusion that Polish policies and strategic documents are mostly outdated or require adaptation to today's fast-paced world.

The main strategies such as "Poland 2030. Long-term National Development Strategy 2030 – Third Wave of Modernity"⁵³ and the "Strategy for Innovation and Efficiency of the Economy – Dynamic Poland 2020"⁵⁴, which were both issued in 2013, are not enough to meet contemporary challenges related to the digital world, robotisation and work automation. Although innovation is mentioned in both of them, it is understood rather as innovative or smart technologies decreasing the level of environmental damage or leading to increased competitive advantage.

The National Research Programme

issued by the National Centre for Research and Development in 2011 also shows that advanced information, communication, and mechatronic technologies constitute the priority in research programmes. These programmes support further development of the Polish economy. The document shows the course adopted by the NCRD with regard to programme financing.⁵⁵

The Strategy for Responsible Development 2020⁵⁶ (with a 2030 perspective) shows robotisation and automation as key challenges for the Polish economy. It also states that further changes in production and communication industries can lead to considerable changes on the labour market which will no longer need vast groups of employees with low- or medium-level qualifications. Robotisation, digitalisation and intelligent software are the subject of planning in the following areas:

- flagship projects in healthcare, defence capabilities, circular economy, and low emissions;
- support for the development of Industry 4.0;
- National Intelligent Specialisation with regard to technology automation and robotisation.

The above-mentioned strategic documents do not mention threats which may derive from robotisation, automation and AI. Some possible explanations for this gap may be:

the low level of robotisation and automation in Poland as these processes are extremely expensive and take years to implement, meaning they are yet to come to the Polish economy and labour markets;

the high percentage of people employed in SMEs which do not have enough financial, technical, substantive and organisational potential to implement such new technologies fast and on a large scale;

the low labour cost: in Poland, employers' costs of hiring workers are almost 4 times lower than in Germany; therefore automation and robotisation will not happen very quickly here, nor will it take employees by surprise as could be the case in Western economies.

Social economy enterprises: definitions and features

Social economy and social enterprise in Poland are defined in the "National Programme for the Development of Social Economy", also called "KPRES" (Krajowy Program Rozwoju Ekonomii Społecznej). It was developed by wide group of researchers, practitioners and officials. The KPRES is an official resolution of the Council of Ministers. This strategic document was enacted in 2013 for the period 2014–2020 and outlines the main courses of action for the development of the social economy sector in Poland. Directions

presented in the KPRES are then included in regional operational programmes (ROPs) by regional local authorities. ROPs constitute the basis for the local public labour market and social cohesion institutions to carry out activities, as well as issuing calls for proposals for NGOs and private bodies regarding activities to develop and enhance the social economy sector. Other systemic measures in this area are carried out by the nationwide network of Social Economy Support Centres. Their activity is financed through public money (national and EU grants). To become a Social Economy Support Centre, one has to meet a number of criteria that are audited by the Ministry for Family, Labour and Social Affairs.

The KPRES provides the following definitions of social economy and social enterprise.

Social economy is a field of active citizenship which – through business activity and social benefit activity – serves to foster the labour market and social integration of people at risk of exclusion, create jobs, provide social services of general interest and encourage local development.

Social enterprise:

- runs business activity under regular rules concerning any other business activity in an open market economy;
- aims to create job opportunities (at least 50% of staff members derive from disadvantaged groups or 30%

⁵² As of September 2020, large delivery platforms, grouped in Assodelivery, reached an agreement for self-employed delivery workers with the right-wing union UGL only, entailing a piece rate pay scheme. The validity of the agreement was questioned by the Ministry of Labour and Social Policies, inviting Assodelivery to prosecute negotiations currently being held at its premises to reach an agreement suiting both the competences assigned to collective bargaining and the representativeness criteria for them to apply. See Halpeter and Iudicone (forthcoming).

⁵³ See: http://kigeit.org.pl/FTP/PRCIP/Literatura/002_Strategia_DSPK_PL2030_RM.pdf.

⁵⁴ See: http://kigeit.org.pl/FTP/PRCIP/Literatura/005_1_Strategia_Innowacyjnosci_i_Efektynosci_Gospodarki_2020.pdf.

^a The Polish report was first proofread by Anna Rosiak

⁵⁵ See: https://www.ncbr.gov.pl/fileadmin/user_upload/import/files/krajowy_program_badan.pdf.

⁵⁶ See: <https://www.gov.pl/documents/33377/436740/SOR.pdf>

of staff members are people with disabilities), or offers public benefit services (communal services, such as kindergartens, care services, maintenance of green areas) and at least 20% of staff members are people at risk of social exclusion;

- does not distribute its profit among staff or board members; the profit is invested in enhancing the enterprise's condition and used to support social and professional reintegration of the staff members, or is allocated to cover other socially important goals for which the enterprise was set up (e.g. environmental);

- is managed in democratic way or at least includes employees' opinions (implements participative tools to make most important decisions);

- is a body in which the management board have their wages limited.

"Social enterprise" is a status, not a legal form. Social Economy Support Centres (OWES) are expected to provide up-to-date information about active social enterprises from all over Poland. As of April 2019, the ministerial database contained 1,020 verified records of active social enterprises, divided among the following types:

- cooperatives (workers' cooperatives, consumers' cooperatives): 1 (a disabled workers' cooperative);
- social cooperatives (whose main aim is to support disadvantaged

people by creating job opportunities for them): 530;

- foundations and associations which, apart from their pro bono activity, run business activity: 285;

- non-profit companies (registered as limited liability companies): 204.

The numbers indicate how many of each type of social enterprise can be found in the official database run by the Ministry for Family, Labour and Social Affairs and updated on a monthly basis.

The most popular areas of activity for social enterprises are as follows:

- catering services and gastronomy (bars, restaurants, pubs, catering services)

- B2B services (printing, marketing, accounting, translation)

- education (kindergartens, schools)

- communal and social services (care services, green area maintenance, construction, public area cleaning)

- tourism and leisure

It should be stressed that the ministerial database does not contain information about the real number of entities that could fall under the "social enterprise" category. Social Economy in Poland in the New Financial Perspective 2020+ (issued on 18 June 2019) shows that the actual number of

social enterprises as defined in the KPRES could be 1,500–1,600.

"Social economy bodies" covers a much broader category. The above-mentioned document claims that the number of social economy bodies is much higher than the number of social enterprises (which are included in this category). In 2016, there were almost 91,000 non-profit organisations (foundations and associations), 1,500 cooperatives (60% of which were social cooperatives) and around 100 non-profit limited liability companies – all of which are considered to be social economy bodies.

The cooperative sector in Poland is quite small and divided into housing, workers', agricultural, handicraft, and social cooperatives, to name only the most common. The Polish Cooperative Act defines a cooperative as "a voluntary association of an unlimited number of persons, of variable membership and variable share capital, which conducts joint economic activity in the interests of its members", adding that "a cooperative may conduct social, educational and cultural activities for the benefit of its members and their community".

Considering the cooperative sector, few research studies are available and many are quite outdated. Analysis based on a number of databases and registers suggests that in the period 1988–2015 there was a 37.3% decrease in the number of all types of cooperatives (9,551 bodies in 2015)

(Kata, 2016). This number is much higher than the number quoted in the ministerial document. This may be due to the fact that the authors of the ministerial document did not consider all types of cooperative enterprise (e.g. agricultural). Out of 15 types of cooperative enterprises, only housing cooperatives and agricultural producers' cooperatives increased in number. Here it should be noted that social cooperatives are a different case, because the idea was introduced into the Polish legal system only in 2011 – so compared to 1988 the increase would be 100%, i.e. the most noticeable growth of all segments.

In 2014, the cooperative sector's share of Poland's GDP reached 0.8% and its share of employment was 1.4%. Both indicators have continued to decrease.

Regarding working conditions in cooperatives Social Economy in Poland in the New Financial Perspective 2020+ states that in 2017 cooperatives of all types (social cooperatives, workers' cooperatives, cooperatives of people with disabilities) employed 33,500 people on employment contracts and 2,400 people on civil contracts (fee-for-task agreements). These numbers include 10,000 people with disabilities and 1,400 who were formerly unemployed.

It is worth mentioning that while the number of social cooperatives has been constantly rising, the number of cooperatives of people with disabilities has decreased.

In the years 2009–2017 the number of such cooperatives decreased by 120 and the number of their employees fell by 27,500.

Overview of industrial relations context

It can be stated that in Poland there are two forms of collective bargaining: formal and informal. The latter is not regulated and can be initiated either by employees or by the employer. For example, there are companies which decide to set their own minimal wage or propose a 6-hour workday. Usually, such internal policies are focused on small details and it is difficult to distinguish such "soft bargaining" from standard corporate governance implemented to improve staff satisfaction. A collective labour agreement (układ zbiorowy pracy) may be established in the course of negotiations between an employer and trade union delegates. This means it is impossible to create a collective labour agreement without the formal presence of a registered trade union in the enterprise.

In Poland workers do not need to have a trade union within a company to start the process of collective bargaining. However, company or workplace agreements reached without the support of trade unions are rare.

Despite the fact that the Polish constitution guarantees the right to collective bargaining across all sectors of the economy, according

to the Ministry of Labour and Social Policy in 2013 there were fewer than 8,500 company, workplace, multi-employer and sectorial collective agreements covering only about 2 million workers (which means less than 17% of all working Poles).⁵⁷

According to ILO data from 2015, 17.2% of workers employed on a contract were covered by collective bargaining.⁵⁸

Since collective labour agreements may cover all workers, including those not unionised, the unionisation rate is low (about 12%), and is on a decreasing trend.⁵⁹ These numbers are among the lowest in Europe as measured both by OECD and by the ILO. Trade unions in Poland are present mostly in the public sector and in the biggest companies. The public sector employs 25% of all workers, whereas companies with over 250 workers employ 32% of the total number of people hired in enterprises and 19% of all working people. This means 70% to 80% of Polish workers can only rely on informal collective bargaining.

All trade unions in Poland – including the big three, Independent Self-Governing Trade Union "Solidarity" (NSZZ Solidarność), All-Poland Alliance of Trade Unions (OPZZ) and Trade Unions Forum (FZZ), which account for more than two-thirds of all trade union members together – are active solely in medium and big companies, with particular emphasis on the largest public sector companies and privatised public companies.

Pace and features of digitalisation in private businesses and the related impact on employment and working conditions

According to the 2019 Country Report, Poland continues to rank low, in 25th position in the DESI ranking. On the positive side, a slow and steady improvement of most of the indicators can also be observed. Poland currently has the highest mobile broadband take-up in the EU.

According to the Digital Intensity Index, 56% of companies have a very low level of digitisation (EU: 46%), and only 12% are highly digitised (EU: 18%). In 2014, the Warsaw Institute for Economic Studies (WISE) researched the potential risk of automation and robotisation in the Polish labour market. The analysis showed that 1/3 of all professions are at risk of being automated. Among those most likely to be replaced by robots (machines) the research lists cashiers, labourers (in construction or industry), security staff, drivers (engine drivers, lorry drivers, motorcycle drivers), office workers (secretaries and others), machine operators, blacksmiths, locksmiths and cooks – i.e. professions that do not require creativeness, interpersonal, social and managerial skills. Researchers show that the percentage of people employed in professions at risk of automation is 36%. On the other hand, the share of the workforce performing jobs that are quite safe in this context is 28% of all workers in Poland (in 2014) (Bitner et al. 2014).

Public policies concerning digitalisation of economy

The Strategy for Responsible Development 2020 (2030) stresses robotisation, automation, AI and digitalisation as challenges in the indispensable direction of the development of public and private sectors. Supporting innovative solutions in various economic sectors is one of the activities to be undertaken by the Polish authorities. It also underlines the need for support for SMEs. As of now there is still a low level of cooperation between the SME and the Research and Development sectors. The Strategy aims to support such cooperation and encourage SMEs to make their activity and offerings more innovative and competitive.

The European Innovation Scoreboard 2019 shows that Poland is a moderate innovator.⁶⁰ That is why the Strategy for Responsible Development 2020 (2030) seeks to support the innovation potential of Polish enterprises through various strategic projects.

One of the strategic activities will be "intelligent reindustrialisation" where among strategic projects we find the following directions:

- new industrial policy
- low-carbon industry
- roadmap for circular economy

⁵⁷ See, for instance: <https://stats.oecd.org/Index.aspx?DataSetCo=CBC>; and <https://www.etui.org/services/facts-figures/benchmarks/what-s-happening-to-collective-bargaining-in-europe>.

⁵⁸ See: <https://ilostat.ilo.org/topics/collective-bargaining/>.

⁵⁹ See: <https://ilostat.ilo.org/topics/union-membership/>.

⁶⁰ See: <https://ec.europa.eu/docsroom/documents/35907>.

- arms industry
- shipping industry
- medicine and pharmacy

Polish policies represent a certain ambivalence. Most of the long-term strategies were elaborated and issued before 2013 and today they are not up to date with the latest phenomena in industry and the labour market. Only the latest and most up-to-date strategy (the Strategy for Responsible Development 2020 (2030) perceives robotisation, digitalisation and automation as issues that need to be addressed. Conversely, public financing and EU support are still rooted in older strategies. The above-mentioned strategy indicates institutions and solutions that should support innovative directions in the Polish economy; however in most cases they are not yet ready to provide support in crucial areas of intervention.

One of the big financing tools that could be mentioned here is the Smart Growth Operational Programme which provides funds for innovative solutions and technologies.⁶¹

Strategies and tools devised by employers' organisations and unions to address digitalisation challenges

An analysis of the websites of the above-mentioned three biggest Polish trade unions and the three biggest employers' organisations (Lewiatan Confederation, Employers of Poland and the National Chamber of Commerce) shows that they are all

aware of digitalisation, automation and robotisation but do not run programmes or projects dedicated to these issues. Nearly all websites analysed provided some information, reprints of news articles or invitations to industry conferences. However none of them provided complete information, complex analyses or comprehensive opinions regarding these subjects.

Slovenia

Digital transformation: trends and debate

The digital transformation in Slovenia is addressed by various tools, but the main one is the S4 Slovenian Smart Specialisation Strategy (Slovenska Strategija Pametne Specializacije, S4). Its task is to connect Slovenia's four development goals, whose main objective is to create an "Innovation Knowledge Society". In this regard, the country has three different strategies in place: RISS 2011–2020 (Research and Innovation Strategy of Slovenia), SIP (Slovenian Industrial Policy) and Digital Agenda. Within each strategy, there are separate sub-strategies for different areas: environment protection, education, energy etc. (MGRT, 2017).

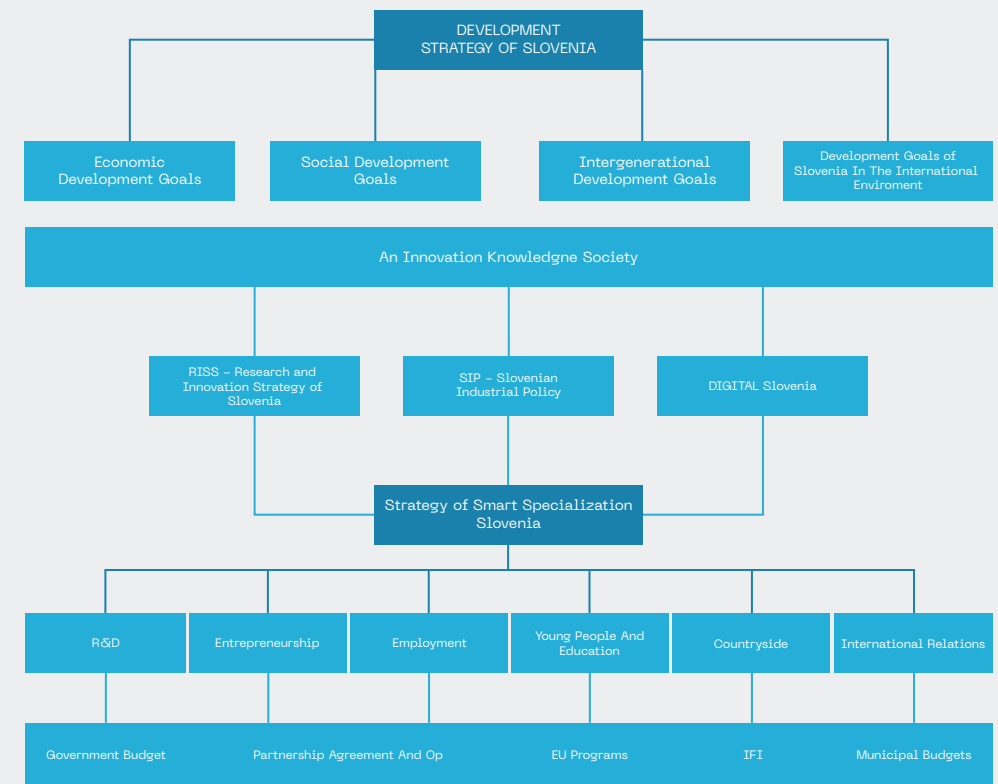


Figure 1: Smart Specialisation S4

⁶¹ See: <https://www.poir.gov.pl/strony/o-programie/zasady-co-moz-na-zrealizowac/>.

In Slovenia, industry 4.0 is still at the beginning of its development. Key concepts like digitisation, digitalisation and digital transformation are therefore still new in the Slovenian debate.

Digitisation is creating digital versions of analogue things (paper documents, microfilm images, photographs, sounds etc.), so making them more accessible and safer. This kind of change does not change the business model but just uses it;

Digitalisation means implementing digital data and improving how we interact with it. But it does not end there. Newly processed data helps to change business processes by making them simpler to operate. Digitalisation is a system of engagement, a system of insight, leveraging data and process;

Digital transformation is something completely different. At its core, it causes digital data generation through digitisation and it can use great business models and processes of digitalisation, but it must be something completely new, something user-friendly but at the same time causing disruptive change in markets.

Digital transformation is still new and the majority of the population is uninformed about it, but some enterprises and organisations are guiding people through this new subject area. For example, the

Digitrans (Digital Transformation in the Danube Region) team is leading the project of educating enterprises and individuals through workshops and conferences.⁶²

But digital transformation is approaching day-to-day life. Stories about Industry 4.0, about big data, the internet of things, augmented reality, bots, cloud computing, autonomous vehicles, drones, smart factories... and all of these buzzwords are becoming more and more frequent. The general majority of enterprises are still waiting for funds and stronger help from the EU and government. But on the other hand, there is movement in the critique of digital transformation and all the unknown applications which it could have in society.

Social economy enterprises: definitions and features

The social economy in Slovenia is defined by the Social Entrepreneurship Act, which was written in 2012 and also regulates social enterprises. After criticism, the law was reformed in 2018. The Act allows for non-profit organisations to apply for the status of social enterprises.

Since 2015 the main responsibility for implementing the Social Entrepreneurship Act lies with the Ministry of Economic Development and Technology (Ministrstvo za gospodarski razvoj in tehnologijo) and its dedicated Department for Social Entrepreneurship.

This department is responsible for legislative changes and runs subsidies, calls for proposals and political promotion of social entrepreneurship, and to some extent also cooperatives and the social economy in general. It also manages a register of social enterprises (Šporar et al., 2018).

Provisions affecting social enterprises can also be found in acts having a different scope, most notably in provisions concerning banks, social security, work rehabilitation and employment of people with disabilities, public procurement, physical assets of the state and local government, and volunteering.

In addition, ad-hoc laws regulate the specific legal forms that social enterprises and NGOs can take: cooperatives, associations, institutes and foundations. In 2017, there were 252 registered social enterprises in the country. Among them there are 82 private institutes, 73 cooperatives, 67 associations, 26 private organisations with limited liability and 4 organisations with other legal forms. In terms of territorial coverage, the social enterprises are quite evenly dispersed across all regions, although two regions together make up half of all social enterprises: Podravska region (29.08%) and the Central Slovenian region (19.52%).

The main activity of 29% of social enterprises is defined as "other service activities" (mainly related to the quality of life, sustainable

development, social innovation, etc.). The second largest group is involved in education (almost 15%), followed by those engaged in professional, scientific, and technical activities (13.10%) (Šporar et al., 2018).

The social economy is quite small in comparison to the EU as a whole, almost four times smaller. If we put this in percentages, it represents only 1.5% to 2% of all employment in Slovenia.

In general, the social economy in Slovenia is gaining momentum; however the problem is still a great dependence on public resources. Many enterprises would not survive on their own sales alone. The second problem is difficulty in accessing bank loans, because social enterprises have issues with liquidity.

As concerns working conditions, they differ for different types of positions. Usually managers are paid an average Slovenian worker's pay (when the small size of social enterprises is taken into account). However the other workers in social enterprises are generally from vulnerable groups; their jobs have low added value and are somehow subsidised. Their pay levels are low and generally contracts expire when subsidies are over. In order to extend contracts, social enterprises need to access new grants, which is stressful for the workers, because there is no job stability. However, the working conditions and climate are usually very good for workers as their rights are respected and their personal conditions are taken into consideration (Hrovatič 2016).

⁶² See: <http://www.interreg-danube.eu/approved-projects>.

The situation looks different in cooperatives, which are distinguished in the law mainly by reason of their ownership model and are not considered social enterprises by default.

Over the last few years many cooperatives in Slovenia have registered as social enterprises, which has led to some confusion between social enterprises and "classic" cooperatives. This is because cooperatives were not mentioned in the Social Entrepreneurship Act, but were included after an initiative by the Cooperative Union of Slovenia and some NGOs. The issue was that cooperatives in a position comparable to social enterprises could not claim the same public grants and support measures. Indeed, many Slovenian cooperatives did perform activities having a social aim, even before the act allowed their registration as social enterprises. For example, the only difference between a social cooperative and a regular one is at the level of understanding profit. (Krapež, 2018).

Overview of industrial relations context

In Slovenia, industrial relations are managed by the Economic and Social Council (ESC) which is made of representatives from the three different sides: the government, trade unions and employers' organisations.

The government's role in the ESC can be as an equal partner of three

or in the role of the employer in two-sided negotiations.

Employers are represented by:

- Združenje delodajalcev Slovenije (ZDS) or Association of Employers of Slovenia;
- Gospodarska zbornica Slovenije (GZS) or Chamber of Commerce and Industry of Slovenia;
- Obrtno-podjetniška zbornica Slovenije (OZS) or Chamber of Craft and Small Business of Slovenia;
- Združenje delodajalcev obrti in podjetnikov Slovenije (ZDOPS) or Association of Employers in Craft and Small Business of Slovenia;
- Trgovinska zbornica Slovenije (TZS) or Slovenian Chamber of Commerce.

Employees are represented by:

- Zveza svobodnih sindikatov Slovenije (ZSSS) or Association of Free Trade Unions of Slovenia;
- Neodvisnost – Konfederacija novih sindikatov Slovenije (KNSS) or Confederation of New Unions of Slovenia;
- Konfederacija sindikatov PERGAM Slovenije or PERGAM Confederation of Unions Slovenia;
- Konfederacija sindikatov '90 Slovenije or '90 Confederation of Unions Slovenia;

- Slovenska zveza sindikatov Alternativa or Alternative Slovenian Union Association;
- Sindikat delavcev Slovenije – Solidarnost, or Labour Union of Slovenia.

The Economic and Social Council works on three levels of industrial relations. The first is social dialogue, through which all general negotiations take place, where opinions are exchanged and information between all interested groups is swapped. The second level is a three-sided dialogue or interaction between all partners to achieve hard solutions and consensus. The last is a two-sided dialogue between two partners, usually between an employer representative and a trade union representative from the same industry. At this level, all working conditions are negotiated and collectively bargained.

Pace and features of digitalisation in private businesses and the related impact on employment and working conditions

In 2018, the Slovenian statistical office published findings on digitalisation, and computed a digital intensity index for enterprises with at least 10 persons employed in 2018. The index is calculated on the basis of 12 indicators used to monitor ICT usage in enterprises, namely:

1. Enterprises in which more than half of persons employed use computers with Internet access for business purposes;

2. Enterprises employing ICT specialists;
3. Maximum contracted download speed of the fastest fixed Internet connection is at least 30 Mbit/s;
4. Enterprises provided more than 20% of the persons employed with a portable device that allows a mobile connection to the Internet for business use;
5. Enterprises have a website;
6. Enterprise website provides at least one of the advanced functionalities;
7. Enterprise website has links or reference to the enterprise's social media profile;
8. Enterprises purchase medium or high cloud computing services;
9. Enterprises were sending e-invoices for automated processing to other enterprises or public authorities in the previous year;
10. Enterprises pay to advertise on the Internet;
11. Enterprises generated at least 1% of their turnover in the previous year via computer networks – with orders via websites or via electronic data interchange (EDI);
12. Enterprises generated more than 1% of their turnover via web sales and made more than 10% of their web sales to private customers.

In 2018, 42% of enterprises in Slovenia have a low, 32% a very low, 23% a high and 3% a very high digital intensity index.

As regards enterprise size (number of persons employed), most small enterprises have a low digital intensity index (41%), and most medium-sized enterprises have a low digital intensity index (46%), while most large enterprises have a high digital intensity index (49%) (Portal, 2018).

In conclusion, little data is available regarding the pace of digitalisation or digital transformation. At the moment, the stage is set to start putting strategies into practice, and this will generate more data to analyse. Despite this, challenges concerning risks of skills gaps can be observed. The pace of transformation is faster than the pace of preparing a highly educated and specialised workforce, and nowadays workers and jobseekers often have low digital competences.

Public policies concerning digitalisation of economy

In August 2018, a new cabinet took office. Despite an initial low commitment to implementing policies concerning digitalisation of the economy, things changed in mid-2019. On 12 June 2019, a conference on industry of the future (Konferenca industrija prihodnosti) took place, involving key stakeholders including the president of the government, the minister of economic development and technology and representatives

of all the most successful enterprises. The main goal of the conference was to jump start the digital transformation. At this event all previous policies for digitalisation of Slovenia were confirmed.

To achieve digitalisation and digital transformation, the Slovenian government opened many fronts. The first plan was formed as the S4 Slovenian Smart Specialisation strategy which is the fundamental strategy for digitalisation. This strategy created various support tools and organisations.

The Public Agency of the Republic of Slovenia for Promotion of Entrepreneurship, Internationalisation, Foreign Investment and Technology (SPIRIT)⁶³ strives to become an institution which, in cooperation with stakeholders, offers Slovenian companies effective and comprehensive support for development and promotion in the global competitive market. It renders its services according to the one-stop-shop principle as it merges all of the key activities required by companies at all stages of their lifecycles under one roof (SPIRIT, 2019).

The Slovenian Digital Coalition⁶⁴ aims to harmonise the digital transformation of Slovenia adopted in the Digital Slovenia 2020 strategic framework, in collaboration with stakeholders from trade and industry, research and development, civil society and the public sector.

It was established at the 11th Slovenian Business Summit, held on 24 November 2016, which highlighted digitalisation of the economy.

The Digital Innovation Hub⁶⁵ (DIH Slovenia) is the Industry Digital Transformation one-stop-shop in Slovenia and beyond. It creates awareness and provides services to grow digital competencies, share digital experience and case studies locally, regionally and internationally, influence the government to adapt regulation and open its data to foster entrepreneurship (DIH, 2019).

And the last of the tools are nine different Strategic Development and Innovation Partnerships (SRIPs). The purpose of these partnerships is to coordinate the development of resources by the stakeholders (companies and research organisations) in order to develop new products to launch on the global market. The partnerships are:

- Smart Cities and Communities (SRIP PMIS, <http://pmis.ijs.si/en/partnership/>)
- Smart buildings in the wood chain (SRIP PsiDL, <https://www.teces.si/en/>)
- Networks for the transition to a circular economy (SRIP ŠGZ <https://www.stajerskagz.si/en/>)
- Sustainable food production (SRIP GZS ZKP https://www.gzs.si/zbornica_kmetijskih_in_zivilskih_podjetij/)

- Sustainable tourism (SRIPT TGZS <https://sript.si/>)
- Factories of the future (SRIP CTOP <http://ctop.ijs.si/sl/o-partnerstvu/>)
- Health – medicine (SRIP SIS EGIZ <https://www.sis-egiz.eu/dejavnosti/srip/>)
- Mobility (SRIP ACS <http://www.acs-giz.si/>)
- Development of materials as products (SRIP MATPRO <https://matpro.gzs.si/>)

When partnerships are forged into joint ventures there is a demand for funds to turn projects into reality. In order to do so, they can access "vouchers", which work as subsidies funding access to services listed in a specific catalogue.

Strategies and tools devised by employers' organisations and unions to address digitalisation challenges

As of this moment, there is little constructive criticism or suggestions from social partners on digital transformation. These organisations will have to prepare to accompany and influence further implementation of Industry 4.0 in the Slovenian economy and supply chain. In particular, the unions' role seems particularly important ahead of possible changes in employment and working conditions.

⁶³ See: <https://www.spiritslovenia.si/>.

⁶⁴ See: <http://www.digitalna.si/>.

⁶⁵ See: <https://dih Slovenia.si/>.

Spain

Digital transformation: trends and debate

The digitalisation situation in Spain has changed substantially in recent years. Significant advances in infrastructure have been made, accompanied by significant changes in both the individual uses of digital technology and business. However, despite advances in the various areas related to digitalisation, in comparative terms the country ranks 35th in the Networked Readiness Index (NRI), below other EU countries such as Ireland, Lithuania and Portugal, as well as below the average for the European Union.

The evolution followed in recent years indicates improvements in Spain's "readiness for connectivity" in the areas of affordability, individual use and use in public administration. However compared to the European average Spain is still lagging in aspects such as the regulatory framework, infrastructure, digital skills, use in companies, and the economic impact of digitalisation such as changes in business models and their reflection in research, development and innovation.

This same situation is reflected in DESI, in which Spain ranks 11th out of the EU-28 Member States (European Commission, 2019).

In Spain, the progress of the digital economy is limited by a number of

barriers that curb its development potential and undermine the ability to take advantage of its benefits (particularly in terms of job creation). The high labour instability exacerbates this situation. Precariousness has become a structural component of the Spanish economy, especially following labour reforms introduced during the crisis, and can aggravate the most negative effects of digitalisation on the quality of employment. In this scenario, it is essential to articulate a strategy for the just transition to the digital economy that favours the creation of decent employment, and contributes in parallel to preventing and mitigating the risks of segmentation and social exclusion among the population.

Despite the digitalisation of economy, and its growing presence in the political and social debates of recent years, there is no unique and consensual delimitation of the topic, neither at the academic level nor among institutions or social partners.

This lack of definition can be explained by two key factors. On the one hand, the digital economy encompasses a set of technological innovations with diverse developments and potentials, which include, among others, advanced robotics, 3D printing, cloud computing, new energy storage devices and systems, smart materials, big data and the internet of things. It is also a field in permanent evolution, where changes are taking place very rapidly.

On the other hand, the rise of this phenomenon is not based solely on the emergence of new disruptive technologies, but on a different way of integrating them: growing connectivity is closely associated with business strategies of very different types. In some cases, there is a deepening of organisational formulas that have been in place for several years – such as the network company – but in others, new businesses and business models emerge (such as online intermediation platforms).

Regardless of the above, there is clear evidence that the penetration of technology in companies is generating significant groups of winners and losers, in which the latter are concentrated among workers who perform routine tasks and have low or medium qualifications and salaries. In other words, there are consequences on inequality in employment and wages. The problem that this poses can be aggravated by the appearance of new platforms and digital applications that lead to a casualisation of employment. Starting from the differentiation between routine and non-routine tasks, we can break down jobs according to:

- cognitive (or analytical) tasks, including, among others, the processes of analysis and diagnosis (legal, medical or scientific) that constitute non-routine tasks;
- "interpersonal tasks", i.e. those

where human relationships are key and hardly substitutable;

- manual tasks, which can be divided into clearly routine (picking and ordering objects, assembly processes) or tasks that are not easily replaceable (care, cleaning, safety, driving machines or vehicles). While the former are mostly associated with industry, the second type is usually associated with occupations in the service sector.

Those tasks where technological capital can replace people generate situations of inequality in employment and a worsening in working conditions. On the contrary, cognitive and interpersonal tasks seem to generate a greater volume of employment and higher salaries.

In the case of manual tasks that are not easily replaceable, the volume of job losses has barely been noticed in Spain.

In general terms, in Spain there has been a certain polarisation of employment in the last eight years⁶⁶, which however has not really led to a polarisation in wages. Among lower qualified people, a reduction of wages has been observed mainly because of the increasing share of temporary employment.

The improvement of human capital is a preferred objective for the government. Promoting scientific and technological progress and betting on training and human capital are

⁶⁶ See for example: <https://www.caixabankresearch.com/en/economy-cs-markets/labour-market-demographics/job-polarisation-spain>.

priorities for its digital strategy.⁶⁷ It seeks to adjust training to the requirements of the labour market, in particular by strengthening digital, scientific and technological skills.

Social economy enterprises: definitions and features

Contrary to many countries, Spain has succeeded in achieving a high institutional recognition for the social economy. The cornerstone of this recognition is the approval of Law 5/2011 on Social Economy⁶⁸ which provides a legal definition as well as the setting out the scope and types of organisation belonging to this entrepreneurial sector. Furthermore, the social economy is also well organised, with a single organisation representing the voice of the whole social economy: CEPES.⁶⁹ Its members are national federations or confederations of a single type of social economy organisation (for example COCETA representing workers' cooperatives), regional federations or single organisations such as ONCE (see below).

Thus, the law defines the social economy as the set of economic and business activities active in the private sphere, and carried out by entities that pursue the general collective interest or the general economic or social interest or both in accordance with the following principles:

1. Primacy of people and social purpose over capital;

2. Distribution of surplus mainly on the basis of inputs provided by members (or their affiliates), or, where appropriate, for the social aims of the entity;
3. Promotion of solidarity among members and with society;
4. Independence from public powers.

As signalled above, CEPES plays a very relevant role in the social economy ecosystem. Despite not having normative power, it exerts an influence similar to that of the recognised social partners in the institutional social dialogue. Moreover it plays a central role in international relations, for example translating the law for the EESC or describing the main types of the institutions which form the social economy in Spain⁷⁰. Here we include a brief analysis of them:

Cooperatives: their legal definition at national level (Law 27/1999) follows the principles formulated by the International Cooperative Alliance. All these principles are followed by cooperatives, regardless of the varied legal and organisational types within cooperativism. They can be classified according to different criteria: first degree cooperatives (made up of individual members with a minimum of two or three depending on the region) or second degree cooperatives (which have as partners at least two cooperatives, forming a "cooperative of cooperatives").

From the point of view of the activity they carry out, we find 13 types of cooperatives, for example: workers' cooperatives, consumers' and users' cooperatives, agricultural cooperatives, transport cooperatives, educational cooperatives, housing cooperatives, health cooperatives, social initiative cooperatives, credit cooperatives, etc.

Spain is a highly decentralised state, and cooperative regulation and supervision are in the hands of the regional governments (the autonomous communities). Thus we find a cooperative law and register in almost each one of the 17 regions. However, there is a national law (the aforementioned Law 27/1999) for those cooperatives whose main activity is not carried out in one of the regions having a law (all of them except for Canary Islands). On the other hand, issues such as taxation (Law 20/1990 on the Tax Regime of Cooperatives) and Social Security (Royal Decree 1278/2000) are regulated at state level.

If they carry out their cooperative activity in a single autonomous community, specific regional regulations for cooperatives apply by virtue of the attribution of exclusive powers to the autonomous communities.

The so-called **labour companies** (sociedades laborales) a type of worker-owned company created in the 1980s. These share companies are regulated at national level (Law 44/2015) and at least 51% of shares

must be in the hands of the workers, with the maximum shareholding being one-third of the shares. According to CEPES "The fact that the workers are also the shareholders encourages self-motivation in entrepreneurial projects. The minimum number of members is three" (although they can be created by two persons and have 36 months to find the third partner), "and constitutional procedures are similar to those of other companies";

Mutual societies: bodies having a non-profit nature and democratic functioning which exercise an insurance activity of a voluntary nature, complementary to the statutory public social security system;

Special employment centres (a type of sheltered workshop): companies whose workforce is made up for the most part by people with disabilities, who cannot be fewer than 70% of the total number of workers;

Insertion companies (this is a type of work integration social enterprise): companies whose purpose is to enable access to employment for disadvantaged groups. They must have a minimum share of workers in insertion on their workforce, which ranges between 30% and 60% depending on the autonomous community (again regulation and registers are the competency of regional governments);

Fishermen's guilds: these are sector-based, public-law organisations of a non-profit nature. They represent the

⁶⁷ In particular, they have been key priorities in the Digital Agenda for Spain, targeting 2020, and in the new Digital Spain 2025 plan.

⁶⁸ Accessible in English at: <https://www.eesc.europa.eu/resources/docs/the-spanish-law-on-social-economy.pdf>.

⁶⁹ See: <https://www.cepes.es/>.

⁷⁰ See: https://www.cepes.es/social/econ_social_whats_it.

economic interests of fishing boat builders and fishing workers and operate as advisory and collaborative bodies in the corresponding administrations in the area of sea fishing and fishery planning.

Associations: despite not being singled out in the Law, there is an agreement that certain types of associations (mostly in the area of disabilities) can be included in the social economy. According to CEPES: "The main aim of this associative movement is to provide services where the profit-making sector fails to do so. This is usually the case with sectors having to do with people's fundamental rights, particularly with regard to especially vulnerable groups, such as people with a disability. Other features are innovation in the way social problems are dealt with, and the defence of social, legal and administrative changes aimed at protecting the rights and liberties of those with disabilities as the necessary basis for diversity, plurality and tolerance". It is worth noting that one of the most unique social economy organisation in Spain is ONCE⁷¹, an association of people with disabilities which runs a lottery (the only permitted private one) and uses the resulting revenue to provide services, including employment, for people with disabilities. It recently created a social enterprise holding company (ILUNION Group) with a total turnover of almost €1 billion;

Foundations: according to CEPES "These are non-profit organisations whose equity is dedicated to a general interest objective in the long term, by the will of their creators. Social economy foundations must fully comply with the above-mentioned social economy principles contained in Law 5/2011".

Here we can see the statistical picture of the social economy provided by CEPES. A total of 43,192 entities are mapped as of 2019.

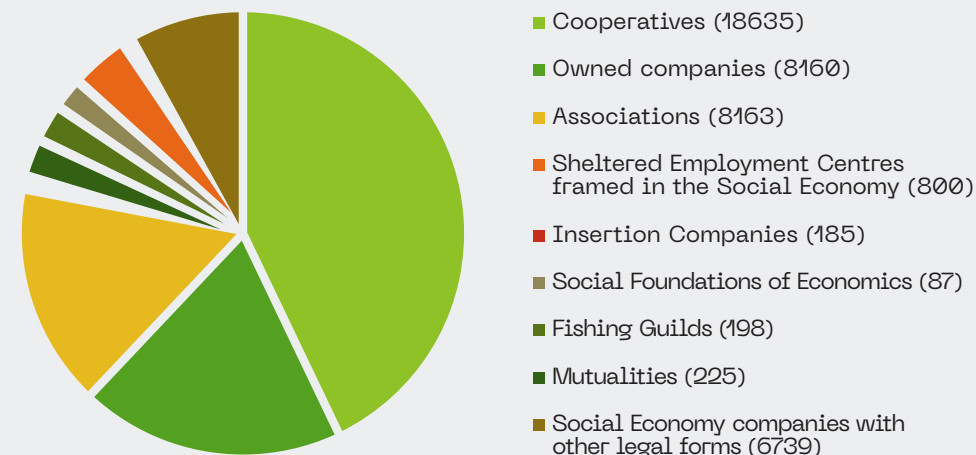


Figure 2: Number of social economy entities as of 2019

Source: CEPES.
Note: Data bring together figures from different sources, namely: public registers, social economy organisations and large social economy enterprises.

Overview of industrial relations context

Trade unions, employers' organisations and public institutions play a key role in the governance of employment relationships, working conditions and industrial relations structures. They are interlocking parts in a multilevel system of governance that includes the European, national, sectoral, regional (provincial or local) and company levels.

The main ministries dealing with social dialogue and working conditions are the Ministry of Employment and Social Security and the Employment Departments of the autonomous communities. These institutions are in charge of registering collective agreements. Once a collective agreement has been concluded, the signatory parties must send it to the public authority (the Ministry of Employment if it is national and the Employment Department of the autonomous community if it is regional) within 15 days. Prior to registration, the public authority makes sure the content of the agreement is in line with the legislation. If the collective agreement goes against the legislation, the public authority can challenge it.

In Spain, the concept of representativeness guarantees trade unions the capacity to negotiate agreements with the employers' organisations and with the government on behalf of all the

workers. The same applies to the employers' organisations.

Through the legal concept of "most representative organisations", employers' organisations and trade unions are entitled to conclude multi-employer collective agreements, to have institutional representation (in other words, to be a part of tripartite bodies, to be consulted by the government and to conclude social pacts) and to take part in extrajudicial systems of labour conflict resolution. Moreover, meeting the legal representativeness criterion is the basis for getting access to public funds. In addition, Spanish law recognises an intermediate category of "representative" trade unions and employers' organisations in a specific sector. Those organisations can conclude sectoral collective agreements but are not formally entitled to have institutional representation at national or regional level, nor are they entitled to receive public funds (Mongourdin-Denoix, 2010).

The thresholds to be considered a representative union or employers' organisation are set at 10% at national level, and 15% at regional level, and are computed at both cross-sectoral and sectoral levels.

The main legal criterion for determining the representativeness of trade unions is based on the election results of workers' delegates and working committee members at the workplace level (their electoral audience). For the employers' organisations, representativeness is, instead, based on their membership,

⁷¹ See: <https://www.once.es/otras-webs/english>.

and more specifically on the share of affiliated employers and of the workers they employ.

Pace and features of digitalisation in private businesses and the related impact on employment and working conditions

In Spain there are no official data on the impact of digitalisation on employment, whereas available studies provide conflicting results.⁷²

The digitalisation of the economy can enable the optimisation of resources, process and product innovation, and better informed decision-making, offering great potential in areas closely linked to social progress, such as health, education, work-life balance, environmental protection, food security, energy efficiency, transport systems and the management of cities.

The outcomes of this digital transition are uncertain and unpredictable, because of its constantly evolving features. In addition, the digital transformation provides the opportunity to change the pattern of growth and thereby ensure stable and sustainable progress, both in economic terms, and in social and environmental terms. Nevertheless, the changes that digitalisation is bringing about in the economy are not predetermined, but rather they depend on the strategy and the proactivity of the agents involved.

The digitalisation of the economy throws up manifold implications and impacts for working modalities and work organisation, and, therefore, for industrial relations and working conditions. Digitalisation of the production of goods and supply of services can affect significant aspects of the employment relationship, by triggering new ways of working, including: the content of the tasks; the exercise of the employer's powers of management and control; the place and time of the performance; pay; on-the-job training; health and safety at the workplace; access to social protection; and, in collective terms, the mechanisms of representation and collective bargaining. The generalisation of the use of information and communication technologies (ICTs) in companies has given rise to controversies and debates which have been projected into the legal field, onto the relationship between business managers' powers of supervision and control in relation to ICTs and onto the basic rights of workers. These are situations which require responses from the field of industrial relations, starting with the main instrument used, that is to say, collective bargaining. The dynamics of digitalisation, and its impact on industrial relations, also give rise to other challenges due to changes in the business models, the appearance of new forms of employment based on the online economy, and the rise in capacities increasingly enabling greater connectivity. In addition, the process of digitalisation is contributing to the advent of a great variety of new forms of jobs, which simultaneously offer new opportunities and bring about new risks.

Public policies concerning digitalisation of economy

Since 2013, Spain has had a formal strategy to develop the economy and the digital society, the so-called Digital Agenda for Spain, which was configured as the set of all the government's actions in the field of telecommunications, information society and electronic administration. This constituted the road map both for the fulfilment of the objectives of the Digital Agenda for Europe in 2015 and 2020, and for achieving specific objectives for the development of the economy and the digital society.

During its design, a prior consultation and participation process involving all the agents involved was carried out on the basis of the diagnosis made from the information provided by the National Telecommunications and Information Society Observatory (ONTSI) and a report of recommendations entrusted to a group of experts in the field. The actions of the Digital Agenda were structured around six main objectives:

- Encourage the deployment of networks and services to guarantee digital connectivity and provide infrastructure and services enabling the development of a true digital society and economy;
- Develop the digital economy for the growth, competitiveness, and internationalisation of Spanish companies, to improve competitiveness and promote

progress towards a high added value growth model;

- Improve digitalisation of public administration for an efficient provision of public services, in order to improve the efficiency of public administration, facilitating access to services by citizens and businesses;
- Strengthen cybersecurity to promote a safe and reliable digital environment for all;
- Promote research, development and innovation in "future" industries, to have an ICT industry capable of responding to the challenges and needs of the digital context;
- Promote the inclusion and digital literacy and training of new ICT professionals to ensure that all citizens can participate and be part of the economy and digital society.

The following plans were carried out to achieve marked objectives:

- Telecommunications and ultrafast networks plan value growth model;
- ICT plan in SMEs and electronic commerce plan to boost the digital economy and digital content
- Technology companies' internationalisation plan
- Development plan for the language technologies
- Digital public services plan

⁷² See, among many: CES (2017).

- Electronic Administration plan
- Smart cities national plan
- Digital ecosystem confidence plan
- ICT sector development and innovation plan
- Digital inclusion plan

Today, most public policies in digital matters are implemented through the Secretary of State for Digital Advancement and the entity Red.es, which is a public business agency of the Ministry of Economy and Business that depends on the Secretary of State for Digital Advancement.

In July 2020, the government disclosed the new Digital Spain 2025 plan, paving the way for a set of measures spread across 10 objectives and worth €140 billion. The new strategy places a great emphasis on the need to further improve digital connectivity, closing the gap between urban and rural areas, and to stimulate innovation in the private sector, especially in SMEs, including by means of measures addressing digitalisation in strategic sectors (agriculture and food industry, trade, health, transport, tourism and audiovisual).⁷³

Strategies and tools devised by employers' organisations and unions to address digitalisation challenges

Although most policies are developed directly by the Ministry of Economy and Business through the Secretary of State for Digital Advancement, employers' organisations and trade unions are devising tools to address the challenges of digitisation, especially in an active way, that is by developing training and support measures to ease access to funds.

⁷³ See: https://www.mineco.gob.es/stfls/mineco/prensa/ficheros/noticias/2018/Agenda_Digital_2025.pdf.

Conclusions

3



Beyond equipping the report with key contextual information on industrial relations systems, features and rules concerning social economy enterprises and how digitalisation and automation of production are addressed in the different countries, the report provides some interesting findings which inform the following analysis.

The debate and features of the digitalisation of the economy differ across the countries, and show different level of preparedness. Concerns arise especially as regards the loss of jobs characterised by repetitive tasks, both cognitive and manual, and as regards the lack of skills in the current workforce and companies to deal with new and rapidly evolving technologies. Lifelong learning, reskilling of workers and promotion of soft skills seem key to avoid shocks to countries' economies and unemployment rates in the near future.

The current trends suggest that most countries are still at an early stage of development in game-changing technologies like 3D printing, artificial intelligence or the internet of things. Sometimes the lack of proper digital infrastructures still represents a key barrier, especially the availability of ultra-broadband.

At the same time, governments have launched consultation tables, "alliances" between stakeholders, including social partners and innovative companies, and public investment plans, meant to support knowledge sharing, networking between companies and investments in new technologies. Social partners seem to play a less pronounced role, whilst promoting initiatives of awareness raising, training, or support to access funds.

As far as working conditions are concerned, the increasing possibility to perform telework, further enabled by the availability of cloud systems and mobile devices, is leading to concerns on the melting of borders between work and private life, with France introducing policies such as the "right to disconnect", and Germany "recommending" the development of "Occupational Health and Safety 4.0" to tackle risks of work-related stress.

Considering the features of social economy enterprises across the countries covered, some elements, such as financial problems hampering investment or reliance on public aids, limiting their investment horizon, may represent barriers to innovation, especially in social enterprises performing social services for disadvantaged people.

At the same time, there are at least two ways in which social economy enterprises can contribute to addressing the challenges posed by the digitalisation and automation of production.

The experience gained in some countries as brokers of labour market integration (especially where work integration social cooperatives are concerned) can prove useful in a context where skills needs are rapidly changing, rewarding those companies which are able to upskill their workforce and valorise the private needs and the competences of their staff. In addition, the ownership and governance structure of social economy enterprises, especially cooperatives, may represent a useful asset in elaborating digital innovation strategies able to achieve productivity increases while safeguarding the workforce.

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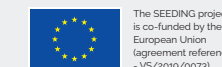
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