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# QUANTIFYING INDUSTRIAL STRATEGIES ACROSS NINE OECD COUNTRIES

OECD SCIENCE, TECHNOLOGY  
AND INDUSTRY  
**POLICY PAPERS**

June 2023 **No. 150**

## OECD Science, Technology and Industry Policy Papers

This paper was approved and declassified by written procedure by the Committee for Industry, Innovation and Entrepreneurship (CIIE) on 9 June 2023 and prepared for publication by the OECD Secretariat.

*Note to Delegations:*

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*DSTI/CIIE(2023)4/FINAL*

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## Quantifying industrial strategies across nine OECD countries

Chiara Criscuolo, Luis Díaz, Louise Guillouet, Guy Lalanne, Charles-Édouard van de Put, Camilla Weder, and Hadas Zazon Deutsch (OECD)

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Industrial policy has resurfaced prominently in academic and policy discussions in the wake of major shocks and long-term trends. However, quantifying industrial strategies across countries remains difficult. The ‘Quantifying Industrial Strategies’ (QIS) project measures industrial policy expenditures by gathering and harmonising publicly available data, based on a new methodology. This report summarises the composition of industrial strategies in the first nine participating countries in terms of expenditures, priorities, and policy instruments for the period 2019-21. The report finds that industrial policies are sizeable, with 1.5% of GDP in grants and tax expenditures, and with an important heterogeneity across countries in terms of strategic priorities; industrial strategies mainly rely on sectoral instruments, representing on average 29% of grants and tax expenditures; and green instruments are important and rose significantly in six out of nine countries between 2019 and 2021.

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**Keywords:** benchmarking, industrial policy, industrial strategies.

**JEL codes:** L52, L53, O25, O38, Q58

# Acknowledgements

The authors thank Gordon Hanson, Nathaniel Lane, Dani Rodrik and the members of the project's advisory group (see Annex A). The authors also thank the contacts in the national administrations of Canada, Denmark, the European Union, France, Ireland, Israel, Italy, the Netherlands, Sweden and the United Kingdom.

Canada: Dany Brouillette, Kaleigh Dowsett

Denmark: Lone Ank, Jesper Christiansen, Kristian Yde Halse, Emil Strand

The European Union: Giuseppina Bitondo, Philippe Bresson, Giuseppina Cannas, Anca Dumitrescu Goranov, Vincenzo Gente, Antoine Mathieu Collin, Konstantinos Panagopoulos, Stéphane Perroux

France: Paul Cusson, Lorine Labrue, Mathilde Le, Alexis Loublrier, Baptiste Thornary

Ireland: David Barrett, Federica De Blasio, Elizabeth Harvey, Rory Mulholland, Osama Noujoum

Israel: Yaniv Avitan, Yasmin Azhari, Gilad Be'ery, Nir Ben Aharon, Paolo Camarotta, Adi Finkelstein, Yoav Friedmann, Yossi Hadas, Hilal Khalayleh, Gilad Katzav, Assaf Kovo, Gal Levant, Shlomi Phillips, Oran Rozenberg

Italy: Alessandra Concetti, Maria Benedetta Francesconi, Paola Martini, Ilaria Sanapo

The Netherlands: Henry Van der Wiel, Jouke Wortelboer

Sweden: Marie Claesson, Åsa Forsum, Andreas Gustafsson, Rikhard Guvenius, Andreas Halvarsson, Peter Höglund, Kristin Jarvmark, Marcus Jernström, Chizheng Miao, Martin Rickardsson, Tobias Suomela, Ola Svensson, Fredrik Uhrzander, Brazaitis Vytautas (Nordic Investment Bank), Johanna Zola

The United Kingdom: Felicity Anscomb d'Ghani, Joe Anson, Nick Blayney, Thomas Doris, Michael Humphries, Ahmed Khan, Ifran Naeem, Ben Pringle, George Ralph, Fiona Shand, Sarah Wingrove

The authors would also like to thank Silvia Appelt, Marius Berger, Angela De Martis, Milenko Fadic, Fernando Galindo-Rueda, Nicolas Gonne, Hanna-Mari Kilpelainen, Kohei Kitazawa, Jens Lundsgaard, Mark Mateo, Max Molaro, Justin Quéméner, Bhavita Ragoo, and Teresa Thomas for their contribution to this project or their comments.

# Executive summary

Even as industrial policy is coming back to the forefront of discussions in both academic and policy circles, it remains difficult to properly quantify industrial strategies and identify strategic priorities in a country, and even more so across countries. However, quantification is crucial to guide policymaking, contribute to global transparency on government support to businesses, facilitate international coordination for providing policy solutions to global challenges, and evaluate policies.

Against this backdrop, the 'Quantifying Industrial Strategies' (QuIS) project aims at measuring industrial policy expenditures across OECD countries. Relying on the conceptual framework for industrial strategies developed in previous work and the recently published methodology for data collection, QuIS gathers publicly available data from several sources on industrial policy expenditures. To ensure a sufficient degree of comparability while maintaining the highest quality, data have been harmonised across countries and verified with experts from the relevant national administrations.

In previous work (Criscuolo et al., 2022<sup>[1]</sup>), industrial policy is defined as interventions intended to improve structurally the performance of the business sector. Industrial policies cover the business sector, beyond manufacturing, and comprise a vast set of instruments, ranging from the design of intellectual property systems to public procurement, R&D incentives, or public provision of skills.

In this first phase of the project, QuIS focuses on industrial policy expenditures, defined as direct support extended by the public sector to businesses, aimed at promoting investment, improving competitiveness, or supporting economic development. These instruments are tax expenditures, grants, government venture capital, loans and guarantees. In addition, this project focuses on industrial policy instruments with annual expenditures higher than 0.002% of GDP. Finally, policy instruments targeting agriculture are excluded from the scope of the report, but the rest of the sectors are included (e.g. manufacturing, services, energy, mining). For each instrument, several characteristics of the policy are recorded in the database. For instance, policies can be tagged in seven categories, which are not mutually exclusive: Digital, Green, Sectoral, Technology-focused, SMEs and young firms, R&D and Jobs/skills policies. All the definitions are available in Criscuolo, Lalanne and Díaz (2022<sup>[2]</sup>) and summarised in Table A A.2.

This report compares the composition of industrial strategies in participating countries in terms of industrial policy expenditures, policy priorities and policy instruments. The countries that volunteered to participate in this first phase of the project are: Canada, Denmark, France, Ireland, Israel, Italy, the Netherlands, Sweden and the United Kingdom. The European Union (EU) also participates in the project and this report covers EU-level industrial policy expenditures for the participating countries, when relevant. The period covered is 2019-2021 and the results mainly cover "structural policies", while COVID-19 emergency support measures are presented separately. It is accompanied by a set of 9 country notes detailing industrial strategies in each country. Harmonised data at the policy instrument level are available on the OECD website.

The main results are the following:

- Industrial policies are sizeable. Countries spend on average 1.4% of GDP on industrial policies through grants and tax expenditures, with a preference for tax expenditures, and provide an additional 1.8% of GDP through financial instruments (loans, loan guarantees, equity investments – including 1.1% of GDP on export finance schemes).
- Industrial strategies are still dominated by a sectoral approach. On average, sectoral policies represent almost 30% of industrial policy grants and tax expenditures, much more than industrial policies with a ‘green’, ‘jobs and skills’ or ‘SMEs and young firms’ component, each category representing between 10% and 20% of grants and tax expenditures. Industrial policies supporting the digital transition are still small in the countries analysed, representing around 3% of grants and tax expenditures.
- There is a significant degree of heterogeneity across countries, with grants and tax expenditures ranging from 0.6% of GDP in Ireland to 2.3% in the United Kingdom. There is also a considerable degree of heterogeneity in terms of strategic priorities. 34% of grants and tax expenditures are green in Denmark vs less than 1% in Ireland; 35% is related to jobs and skills in France vs less than 1% in Israel. In the Netherlands policies supporting ‘SMEs and young firms’ represent 30% of grants and tax expenditures, compared with 12% on average across the country sample. Financial instruments range from 0.4% of GDP in Ireland and the United Kingdom to 5.4% in Canada, where the larger expenditure is mainly explained by a higher level of export finance.
- Green instruments rose in most countries between 2019 and 2021 (from 0.22% to 0.24% of GDP, on average) and are to a large extent also sector- or technology-specific. All countries signal commitments to continue this trend. Green grants are particularly driven by instruments supporting the production of renewable electricity in the energy sector and specific technologies (e.g., wind turbines). Support to reduce process emissions or the use of fossil fuels in the transport and manufacturing sectors are less important.
- Across participating countries, sectoral support, mostly via grants and tax expenditures, primarily targets energy, transport and manufacturing. Support targeting the energy sector is mostly provided through green grants, representing a key role in the industrial strategies of Italy, Denmark and France. Support targeting the manufacturing sector is the highest in France, mainly relying on grants covering energy costs. There is an overall preference of supporting the transport sector through tax expenditures on fuel taxes and on maritime transport. Although other service sectors are rarely targeted by sectoral support, they may largely benefit from non-sectoral support as they represent a large share of value added in participating countries.
- COVID emergency support dwarfed structural support in most of the countries, again with substantial heterogeneity between countries. QuIS participating countries provided an average of 7% of GDP on COVID support in the form of financial instruments in 2020. On average, 2.5% of GDP was spent on grants and tax expenditures for COVID emergency support in 2020. In most countries, COVID emergency support through financial instruments was rapidly phased out, while emergency grants and tax expenditures remained sizeable in 2021 (1.5% of GDP).

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# 1 Introduction and background

Industrial policy has recently made a comeback to the forefront of discussions in both academic and policy circles. It is gaining traction across OECD countries in the wake of major shocks and long-term trends, such as the 2008 Global Financial Crisis, the COVID-19 pandemic, tensions in international trade and geopolitics, the productivity slowdown, the digital transformation and climate change.

The importance of industrial policy continues to grow as countries seek to ensure a green, digital, and inclusive recovery after the COVID 19 pandemic and to reduce dependence on critical raw materials and other strategic inputs after recent shortages following the Russian Federation's war of aggression against Ukraine. To meet these urgent needs, governments have announced new industrial strategies such as UK's 'Industrial Strategy: building a Britain fit for the future' (2017), the European Green Deal (2019), the Next Generation EU fund (2020), the Korean New Deal (2020); and most recently the US Inflation Reduction Act (2022), the US CHIPS and Science act (2022), the European Chips Act (2022) and the EU Green Deal Industrial Plan (2023).

Virtually every government uses industrial strategies, but surprisingly little work is devoted to quantifying them, analysing their structure and evaluating their effectiveness. Even if a fully-fledged cost-benefit analysis of industrial strategies will not be available anytime soon, three interrelated issues need to be addressed to pave the way for better industrial policies. First, there is no agreement on which interventions are considered 'industrial policy' and no conceptual framework to help countries design industrial strategies. Second, amidst this increasing number of industrial strategies, and despite the availability of information on countries' strategies and plans, it remains difficult to properly measure and compare the amounts spent on industrial policies and identify what countries' strategic priorities are. For instance, as more and more countries are committing to net-zero greenhouse gas emissions by mid-century, what is the budget committed to the green transition and what share of industrial policy expenditures does this amount represent? Third, the evidence on the effectiveness of single industrial policy tools, let alone entire industrial strategies, is limited, mixed and not always convincing.

Relying on the conceptual framework developed in Criscuolo et al. (2022<sup>[1]</sup>), the 'Quantifying Industrial Strategies' (QuIS) project measures industrial policy expenditures across countries by gathering publicly available data from many decentralised sources on industrial policy expenditures. To ensure the highest quality and a sufficient degree of comparability, data have been harmonised across countries and verified with experts from national administrations. Besides contributing to global transparency and cross-country comparability of industrial policies, as well as facilitating international coordination for the industrial dimension of global challenges, measuring industrial policy expenditures is also a first step towards evaluation.

This report describes the composition of industrial strategies in participating countries in terms of industrial policy expenditures, policy priorities and policy instruments. The countries that have volunteered to participate in the first phase of the project are: Canada, Denmark, France, Ireland, Israel, Italy, the Netherlands, Sweden and the United Kingdom. The European Union (EU) also participates in the project and this report covers EU-level industrial policy expenditures for EU participating countries<sup>1</sup>. The period covered is 2019-2021 and the data track both structural policies and COVID-19 emergency support measures.

This is the fourth CIIE report aimed at building the evidence base for quantifying industrial strategies, after a framework paper, a review of the evidence on the effectiveness of industrial policies and a methodological paper on the collection of comparable cross-country industrial policy expenditures, (Criscuolo, Lalanne and Díaz, 2022<sup>[2]</sup>), and is accompanied by a set of 9 country notes. Harmonised data at the policy instrument level will also be published on the OECD website.

Criscuolo, Lalanne and Díaz (2022<sup>[2]</sup>) provide a detailed description of the scope, measurement methods and definitions used in this report, while Box 1 summarises the most important features of the framework and the methodology and *Source*: Criscuolo, Lalanne and Díaz .

Table A A.2 contains the description of the policy categories used in the project. The methodology has been agreed with the QuIS project's Advisory Group (see Table A A.1) and the OECD Committee for Industry, Innovation and Entrepreneurship.

The measurement of industrial policy expenditures is not new. In addition to national initiatives<sup>2</sup>, the OECD has longstanding work measuring government support across countries for particular sectors such as agriculture (updated annually), fisheries (updated biennially), fossil fuels (updated annually) or, more recently, for selected manufacturing firms<sup>3</sup>. In 1998, a book entitled 'Public Support to Industry' aimed 'to improve international transparency and to compare, OECD-wide, the trends and patterns of public support to manufacturing industry' (OECD, 1998<sup>[3]</sup>). More recently, initiatives such as the European Commission's State Aid Scoreboard (European Commission, 2021<sup>[4]</sup>) and a report published by the Center for Strategic and International Studies (DiPippo, Mazzocco and Kennedy, 2022<sup>[5]</sup>) provide cross-country comparisons, although with a different scope and country coverage.

The results presented in this report differ from previous attempts to measure economy-wide industrial policy in several respects.

- First, the measurement exercise is based on a conceptual framework, which helps the organisation and interpretation of the results.
- Second, beyond the amounts spent, the collection of policy characteristics, such as the eligibility criteria, based on legal requirements rather than policy narratives, significantly enriches the set of results and policy lessons.
- Finally, and most importantly, the efforts devoted to designing the methodology, curating the data and harmonising the numbers across countries, make this database particularly reliable and suited for quantitative analysis and policymaking.

The data collection process has been carried out in an exhaustive manner by looking through budgetary documents (e.g., from finance ministries and sectoral ministries), reports of specialised agencies (e.g., development banks and investment promotion agencies) and public governmental websites (e.g. of thematic areas such as business or green support). Besides the comprehensive review carried out by national administrations, the data have been corroborated by quality checks with complementary sources such as the [OECD STIP Compass](#) database, the [OECD MicroBeRD](#) project (for R&D support), the [OECD Inventory of Support Measures for Fossil Fuels](#), the [GTED](#) database (for tax expenditures), and the [EU State Aid database](#) (for instruments provided by EU countries), among others.

Despite extensive efforts to provide harmonised definitions and data, cross-country comparisons of industrial policy expenditures remain subject to a number of caveats. The most important one is the potential substitution between instruments that are in the scope and those that are excluded. This substitution may arise from different instrument choices by countries or from changes in a given country over time. Further discussions of the limitations are available in Criscuolo, Lalanne and Díaz (2022<sup>[2]</sup>).

The report proceeds as follows. Section 2 describes the size of industrial policy expenditures across countries. Section 3 shows the distribution of industrial policy expenditures across the different eligibility criteria. Section 4 provides a breakdown of sectoral industrial policy expenditures by sector. Section 5

provides an overview of the COVID emergency support packages. Finally, section 6 concludes with the main policy messages.

**Box 1. QulS – Summary of the methodology**

Industrial policy expenditures are defined as direct support extended by the public sector to businesses, aimed at promoting investment (including digitalisation and cleaner production), improving competitiveness, or supporting economic development. The industrial policy instruments covered are a subset of those defined in the taxonomy laid out in Criscuolo et al. (2022<sup>[1]</sup>). These instruments are tax expenditures, grants, government venture capital, loans and guarantees. Support to the private sector granted through the intermediary of public agencies (e.g., innovation agencies or development banks, state-owned energy provider) or local authorities is included in the scope, as soon as this intermediary provides direct support to firms.

Policy instruments targeting agriculture are excluded from the scope of this report as, in some countries, a substantial part of agricultural support takes the form of market price support that are not covered in budgetary spending numbers and could bias the comparisons. The OECD provides measures of agricultural support taking into account the different dimensions of support<sup>4</sup>.

Financial instruments, defined as the provision of loans, loan guarantees or equity investments by government entities, are measured through the so-called notional amounts method, which measures the amount of financing (or guarantees) provided by public entities. This measure was chosen as it is the most widely available across countries. However, amounts obtained with this method are not directly comparable with grants and tax expenditures, so the two types of instruments are recorded and analysed separately.

**Figure 1. Categorisation of industrial policies used in QulS**

Scope	Instrument types	Eligibility criteria	Selectiveness
Horizontal	Grants and Tax Expenditures	Digital	Non-discretionary
Targeted	Grants	Green	Selective
	Tax expenditures	Sectoral	First-come first-served
	<b>Financial Instruments</b>	Technology	
	Loans and loan guarantees	SMEs and young firms	
	Venture capital	R&D	
		Jobs / skills	

*Note:* Eligibility criteria are not mutually exclusive and some policies do not match any of the criteria  
 The project focuses on industrial policy with annual expenditures higher than 0.002% of GDP, as the project aims to compare industrial strategies and main industrial policy orientations across countries, rather than to build an exhaustive compendium of policy instruments. The use of a relative measure allows adapting this threshold to the size, and the level of economic development, of the country. Source: Criscuolo, Lalanne and Diaz (2022<sup>[2]</sup>).

Table A A.3 shows the value of the threshold for the participating countries.

Source: Criscuolo, Lalanne and Diaz (2022<sup>[2]</sup>).

### Box 2. The QuIS database

The QuIS database currently includes nine countries: Canada, Denmark, France, Ireland, Israel, Italy, the Netherlands, Sweden, and the United Kingdom; as well as the EU. It tracks approximately 1 050 policy instruments per year, for a total of 3152 observations across the 2019-2021 period. Going forward, this data collection and harmonisation effort can be expanded by covering new countries willing to join the project and updating the data for 2022.

The data gathered for each country were sent to the member states for additional checks and validation, also with questions regarding the detail of certain instruments as well as gaps in the available data. After countries' validation, the final cross-country data were compiled, and will be downloadable from <https://www.oecd.org/industry/industrial-policy-and-strategies/>.

# 2 The size of industrial policy expenditures

## Key messages

- On average, grants and tax expenditures account for 1.4% of GDP, of which 1.0% of GDP from tax expenditures.
- Overall, there are considerable differences between the countries studied: In the United Kingdom, industrial policy grants and tax expenditures account for 2.3% of GDP, compared with 0.8% of GDP in Canada and 0.6% of GDP in Ireland.
- Industrial policy financial instruments account for 0.7% of GDP on average and reach 1.8% of GDP when export financing is included.
- When export financing is excluded, financial instruments are primarily composed of loans, followed by guarantees and, least of all, venture capital. Loans dominate in France, Denmark and Canada, while Italy and Israel are characterised by the importance of guarantees.

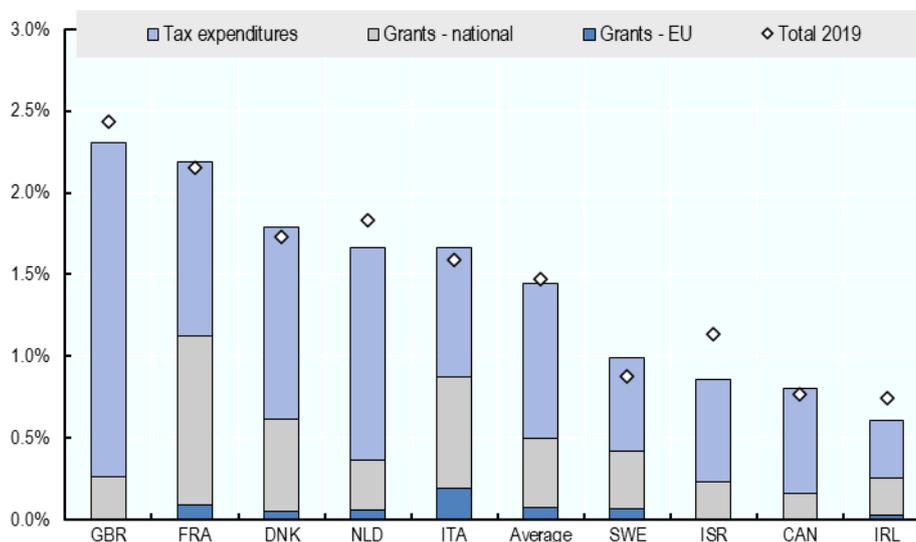
This section provides an overview of industrial policy grants and tax expenditures as well as support through financial instruments in QulS participating countries. This section focuses on structural policies, while COVID-emergency policies are discussed in Section 5. The first subsection focuses on grants and tax expenditures, while the second subsection discusses financial instruments.

### On average, grants and tax expenditures represented 1.4% of GDP in 2021, with significant variation across countries

On average, industrial policy grants and tax expenditures represent 1.4% of GDP (Figure 2). There is a considerable heterogeneity across countries with industrial policy grants and tax expenditures: it represents 2.3% in the United Kingdom and 2.2% in France, whereas it is 0.6% in Ireland and 0.8% of GDP in Canada.

**Figure 2. Tax expenditures as a percentage of GDP are higher than grants in most of the participating countries**

Grants and tax expenditures separated by type in 2021, diamond indicating values for 2019, in % of GDP



Source: OECD calculations based on the QuIS database.

On average, tax expenditures are more than twice as high as domestic grants (almost 1.0% of GDP compared to ~0.4% of GDP for the average), while EU grants represent 0.07% of GDP when considering the whole sample and 0.08% of GDP when considering just EU countries. The United Kingdom and France stand out among the countries considered. France is characterised by a large share of grants such as the ones supporting apprenticeships in the workplace (0.24% of GDP) and renewable energy contracts (0.24% of GDP), while the United Kingdom spends an above-average amount on tax expenditures driven by the horizontal ‘*Capital Allowances*’ tax relief (0.88% of GDP). Similarly, Canada, which spends the least on grants<sup>5</sup>, has a clear preference for tax expenditures<sup>6</sup>.

### Box 3. Interactions between industrial policy tax expenditures and the baseline tax system

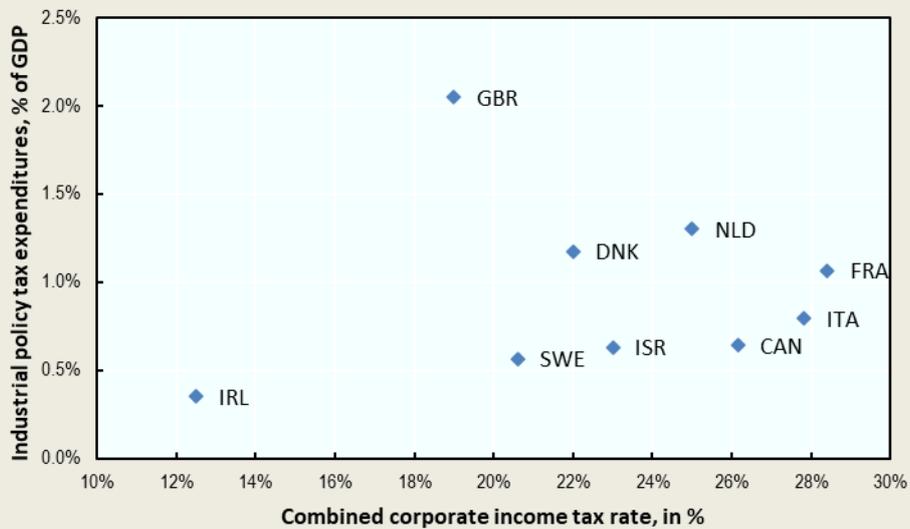
Tax expenditures are defined as provisions of tax law, regulation or practices that reduce or postpone taxation for a comparatively narrow population of taxpayers relative to a benchmark tax (e.g. tax allowances, tax exemptions, tax reliefs and tax credits) (OECD, 2010<sub>[6]</sub>). QuIS’ scope includes tax expenditures geared towards enhancing competitiveness, investment or economic development by providing direct support to firms. Hence, differences in tax rates and tax base across countries are not reflected in industrial policy expenditures but may determine the extent to which countries resort to tax expenditures for industrial policy purposes. Indeed, it might be the case that: 1) countries with lower taxes have less leeway to provide tax expenditures, 2) tax expenditures are mechanically lower with lower taxes, and/or 3) some countries might consider lower baseline taxes and tax expenditures as partial substitutes to support the competitiveness of their business sector.

It is therefore useful to compare industrial policy expenditures with a country-specific measure of the corporate tax rate, such as the ‘*Combined Corporate Income Tax Rate*’ from the OECD Corporate Tax Statistics database. This indicator is defined as the basic combined central and sub-central (statutory) corporate income tax rate given by the central government rate (less deductions for sub-national taxes)

plus the sub-central rate. This indicator can be used to compare the standard corporate tax rate across countries and over time. As a statutory tax rate, this indicator measures the marginal tax that would be paid on an additional unit of income if there were no other provisions in the tax code.

Figure 3 shows that countries with higher combined corporate income tax rates such as Italy and France tend to spend more on tax incentives with industrial policy objectives, while this is the opposite for countries with low corporate income taxes, notably Ireland. The United Kingdom is an outlier since it has a high level of industrial policy tax expenditures (2.0% of GDP) and a medium level of combined corporate income tax rate (18.9%).

**Figure 3. Industrial policy tax expenditures (as a percentage of GDP) vs combined corporate income tax rate (in percentages), 2021**



Note: The combined corporate income tax rate is chosen since it excludes tax expenditures (included in the QuIS scope). This is not the case for other measures such as the forward-looking effective tax rate.

Source: OECD calculations based on the OECD Corporate Tax Statistics database (Fourth Edition, <https://www.oecd.org/tax/tax-policy/corporate-tax-statistics-database.htm>) and the QuIS database.

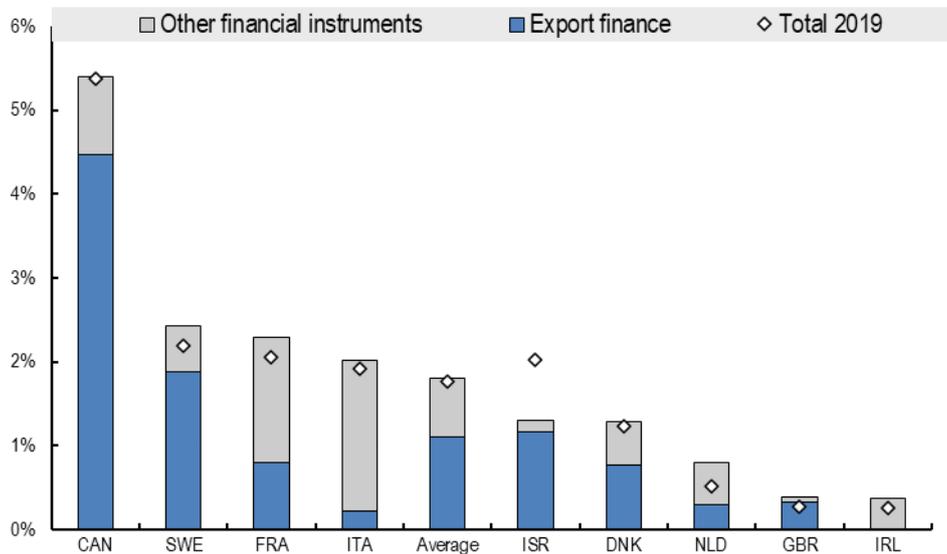
**Industrial policy financial instruments amount to 0.7% of GDP on average, reaching 1.8% if export finance is included**

On average, financial instruments represent 1.8% of GDP, but with considerable variation across countries (Figure 4). This is largely driven by differences in export financing across countries. For example, Canada relies heavily on export financing (4.46% of GDP), while Italy has the smallest export finance scheme (0.22% of GDP), and Ireland does not provide public export finance.

In most countries, export finance accounts for the majority of financial instrument support (Figure 4). The three largest instruments are the guarantee schemes provided by Canada (*‘Export Development Canada - Export Insurance’*, 3.6% of GDP), Sweden (*‘Swedish National Export Credit Guarantee Board (EKN)’*, 1.4% of GDP), and Israel (*‘Credit insurance on export transactions’*, 1.1% of GDP). In contrast, Ireland does not have an export finance agency and provides relatively low financial instrument support (~0.4% of GDP).

**Figure 4. Across the OECD, export finance dominates financial instruments, with a few exceptions, notably in Ireland, Italy and France**

Financial instrument support by export finance and other instruments in 2021 (excl. COVID), diamond indicating values for 2019, % of GDP



Source: OECD calculations based on the QuIS database.

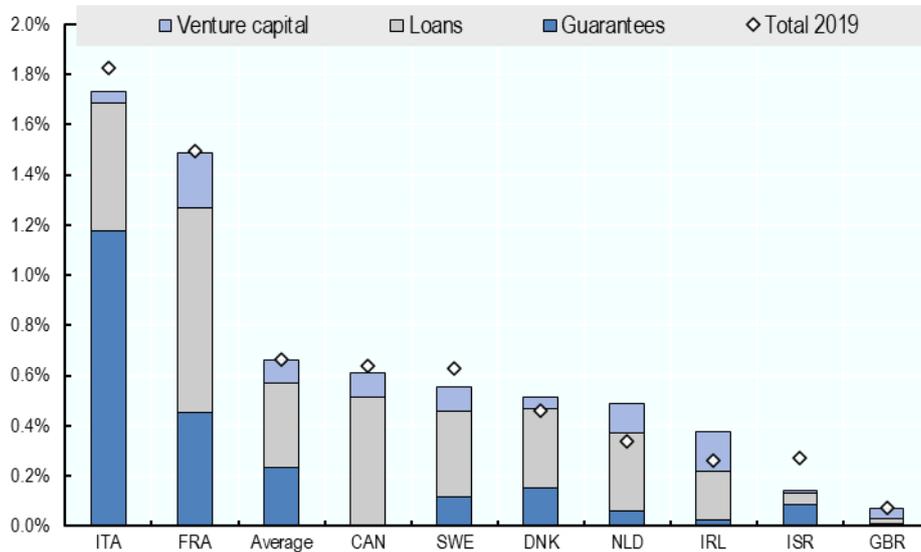
If export financing is excluded, financial instruments account for 0.71% of GDP (Figure 5). While export finance is an important component of industrial policies, these instruments are less comparable with other financial instruments as their typical duration is significantly shorter than, for instance, financial instruments supporting investment. In addition, the role of export finance differs across countries not only because of their openness to trade, but also on the level of risk associated with international trade credit. For instance, for EU member countries risks are perceived as lower for intra-European trade.

Loans are the most prevalent financial instrument across the countries considered, representing 0.33% of GDP, on average. The largest non-export loan scheme is provided by the *European Investment Bank* to Italian firms (0.37% of GDP), while the second largest are the loans provided by Bpifrance to French firms (0.28% of GDP).

Guarantees represent on average 0.23% of GDP. Italy is the only country in the sample where guarantees (1.2% of GDP) is the largest form of financial support (1.7% of GDP), with its largest guarantee being the '*Fondo di Garanzia per le PMI (FGPMI)*' provided to SMEs (0.74% of GDP).<sup>7</sup>

**Figure 5. Excluding export finance, loans dominate financial instruments in participating countries**

Financial instrument support by instrument type in 2021 (excl. export finance and COVID emergency support), diamond indicating values for 2019, % of GDP



Source: OECD calculations based on the QuIS database.

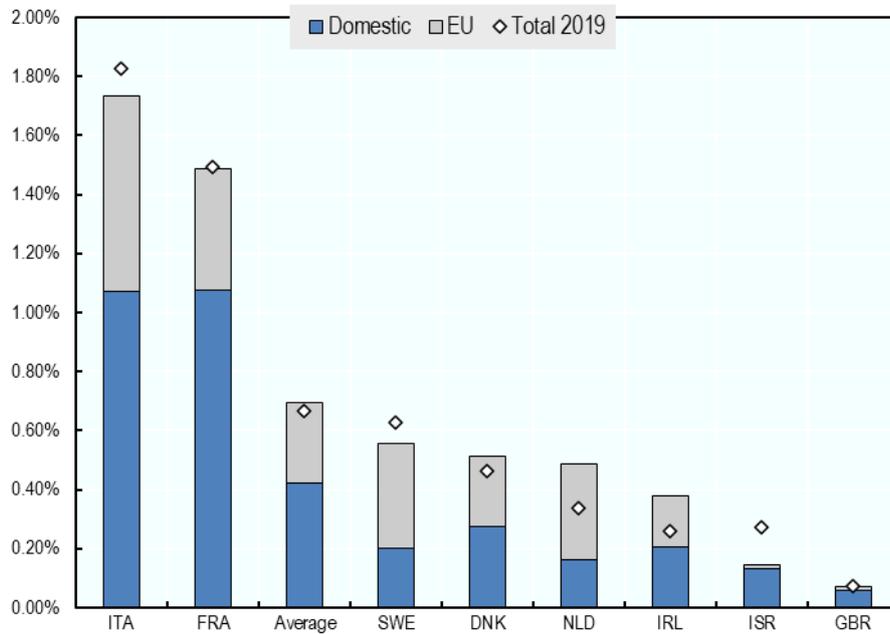
Venture capital accounts for 0.09% of GDP on average. France is the country using these schemes more intensively, with the *'Bpifrance - Investissement hors PIA'* (0.15% of GDP) being the largest programme.

EU funding accounts for about 1/3 of financial support on average across the countries surveyed. In particular, Swedish and Dutch companies receive over 50% of their total financial support from EU instruments (Figure 6). In both countries, this is due to horizontal *European Investment Bank loans* (0.24% vs 0.23% of GDP respectively).

On average, financial instruments remained constant as a share of GDP between 2019 and 2021. In Israel, Italy and Sweden, they **decreased** (by 0.13pp, 0.10pp and 0.07pp, respectively) while they **increased** in the Netherlands and Ireland (by 0.15 pp and 0.12 pp of GDP, respectively).

**Figure 6. Excluding export finance, EU programmes represent an important share of financial instrument support in EU countries**

Financial instrument support without export finance in 2021 (excl. COVID support), diamond indicating values for 2019, % of GDP



*Note:* Israel and the United Kingdom are included since they received EU financial instruments over the period.

*Source:* OECD calculations based on the QuIS database.

# 3 Industrial policy expenditures by eligibility criteria

## Key messages

- On average, sectoral policies represent 29% of industrial policy grants and tax expenditures, much more than R&D, green, 'jobs and skills' and 'SMEs and young firms' industrial policies, which represent between 10 and 20% each.
- These averages hide considerable heterogeneity in priorities across countries. For instance: i) 34% of grants and tax expenditures are green in Italy vs less than 1% in Ireland; ii) 35% are related to jobs and skills in France vs less than 1% in Israel.
- R&D industrial policies range from 0.38% of GDP in the United Kingdom to 0.10% of GDP in Sweden. In most countries, R&D support is mainly channelled through tax expenditures.
- Between 2019 and 2021, green industrial policies grew in six out of nine countries (from 0.22 to 0.24% of GDP on average). They primarily target the energy sector and, to a much lesser extent, manufacturing.
- Even if they represent limited amounts, technology-focused policies are growing and mostly concern green technologies.
- Jobs and skills industrial policies are a cornerstone of industrial strategies in France, the United Kingdom and to a lesser extent Sweden, while almost absent in other countries.
- SMEs and young firms constitute an important priority of industrial policies in a number of countries. Tax expenditures are the preferred channel to support these firms.
- A significant share of financial instruments also focuses on SMEs and young firms, while very few are considered green or sectoral.

This section describes industrial policy expenditures by eligibility criterion, first for grants and tax expenditures and then for financial instruments. QuIS data distinguish sectoral industrial policies, industrial policies supporting R&D, jobs and skills, the green transition, SMEs and young firms, technology-focused policies and industrial policies supporting digital technologies. All these criteria are defined in *Source: Criscuolo, Lalanne and Diaz*.

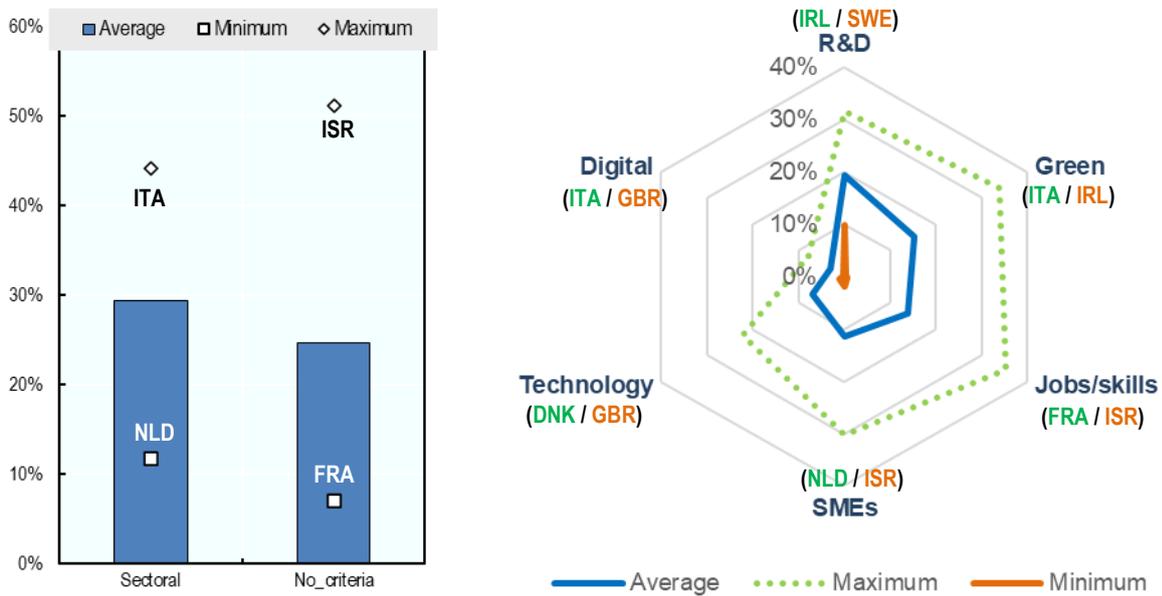
Table A A.2 (Annex A), and more detail can be found in Criscuolo, Lalanne and Díaz (2022<sup>[2]</sup>). Importantly, criteria are not mutually exclusive. For instance, a policy supporting R&D for SMEs will be simultaneously tagged in both categories (R&D and SMEs and young firms).

Sectoral policies are not detailed in this section but are the focus of the next section. Like the previous one, this section focuses on structural policies, while COVID-emergency policies are discussed in Section 0.

### 29% of grants and tax expenditures are sectoral, while 15% focus on the green transition

Figure 7 shows the distribution of grants and tax expenditures by eligibility criteria for the participating countries (as a percentage of total support through grants and tax expenditures in 2021). A number of stylised facts can be observed in this figure. First, countries give an important focus to sectoral support (on average, 29% of support through grants and tax expenditures is sectoral). Second, countries give a relatively high importance to industrial policies focused on R&D, the green transition, jobs and skills and SMEs and young firms, which represent respectively 19.2%, 15.4%, 14.0% and 11.5% of grants and tax expenditures, on average. Other industrial policies such as the ones supporting the digital transition (2.9%) and specific technologies (6.8%) receive less support on average.

**Figure 7. Grants and tax expenditures by eligibility criteria in 2021, as % of total support through grants and tax expenditures**



Note: Structural domestic and EU policies (i.e., excluding COVID emergency measures). Categories are not mutually exclusive, as policies can be tagged in several categories. Additionally, some policies do not fulfil any of these eligibility criteria (see left panel). Numbers for Italian green support are provisional.

Source: OECD calculations based on the QuIS database.

Beyond the overall preference for sectoral policies, industrial strategies are structurally different across countries. Table 1 shows the two criteria (except the sectoral criterion, given its pervasive importance across countries) where each country allocated the most of its industrial grants and tax expenditures. More detail is available in the accompanying country notes.

**Table 1. Criteria with the highest amount of grants and tax expenditures by country, 2021**

Country	R&D	Jobs/skills	Green	SMEs and young firms	Technology	Digital
Canada	◇	◇				
Denmark			◇		◇	
France		◇	◇			
Ireland	◇				◇	
Israel	◇		◇			
Italy			◇		◇	
Netherlands	◇			◇		
Sweden		◇	◇			
United Kingdom		◇		◇		

Note: These are the top two criteria by industrial policy expenditures on grants and tax expenditure instruments in absolute terms at the country level, it is not relative to the benchmark and does not indicate a lack of spending in other criteria.

Source: OECD analysis based on the QuIS database.

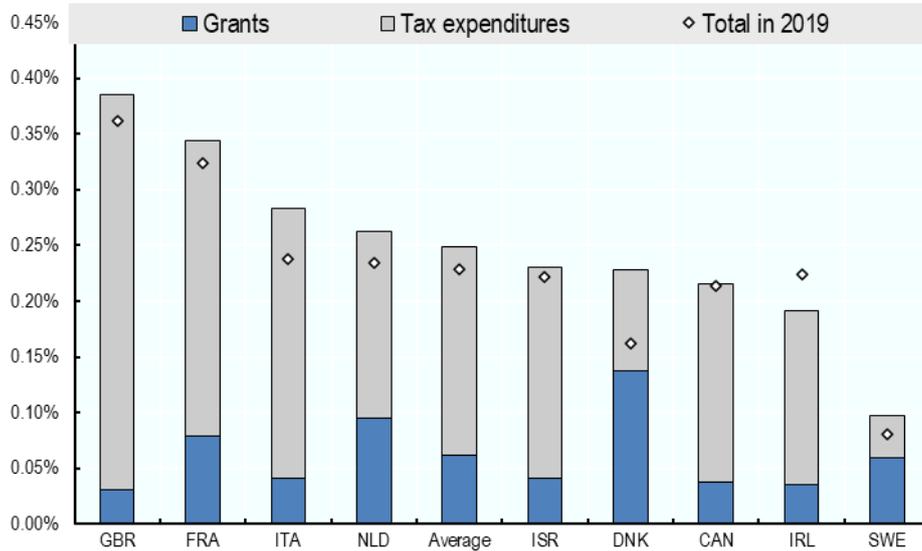
Industrial policies not fulfilling any eligibility criteria are pervasive in the countries of the sample and represent 24.6% of the support through grants and tax expenditures, on average. These policies tend to be tax incentives in the form of reduction and rebates, notably around energy expenditures and capital investment.<sup>8</sup> Countries such as Israel, the United Kingdom and Denmark use these schemes intensively, where they represent 1.0%, 0.9% and 0.7% of GDP, respectively. Some examples are the Danish electricity tax deduction (0.65% of GDP) and the capital allowance scheme in the United Kingdom (0.59% of GDP).

### ***In most countries, R&D support is mainly channelled through tax expenditures***

Overall R&D support is particularly high in the United Kingdom (0.38% of GDP), France (0.34% of GDP), Italy (0.28% of GDP) and the Netherlands (0.26% of GDP) (Figure 8). The largest R&D tax expenditure instruments are the French R&D tax credit (0.26% of GDP) and the R&D tax relief to SMEs provided by the United Kingdom (0.22% of GDP). The largest R&D grants are the Danish '*Strategic and challenge-driven research*' (*Strategisk og udfordringsdrevet forskning* - 0.05% of GDP) and the R&D grants targeted to the aeronautic sector in France (0.04% of GDP). Denmark and Sweden are the only countries relying more on grants than on tax expenditures for R&D support.

**Figure 8. R&D industrial policies are particularly high in the United Kingdom, France, the Netherlands and Canada, with an overall preference for R&D tax credits**

R&D grants and tax expenditures by instrument type in 2021, % of GDP

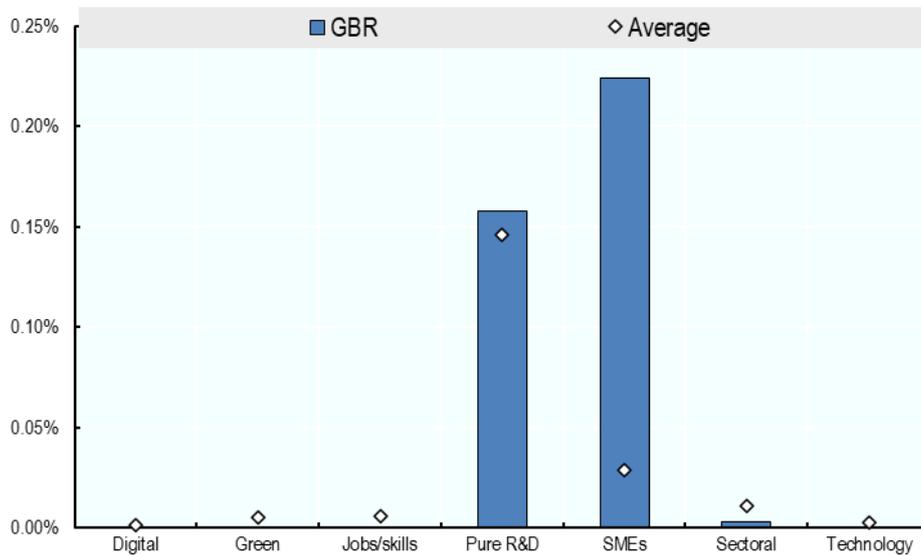


Source: OECD calculations based on the QuIS database.

R&D industrial policies only marginally overlap with other eligibility criteria, with the main exception being the United Kingdom (Figure 9), where most of the R&D support through grants and tax expenditures is focused on SMEs (0.22% of GDP). This is driven by the above-mentioned R&D tax relief for SMEs, the only scheme of this type and scale in the sample. The United Kingdom also has another R&D tax credit open to all firms (0.12% of GDP).

**Figure 9. R&D industrial policies are generally not subject to any other eligibility criteria, except in the United Kingdom, where they are mostly targeting SMEs**

Co-occurrence of the R&D criterion with other eligibility criteria in the United Kingdom and in the sample average, as a % of GDP, 2021



Source: OECD calculations based on the QuIS database.

**Green industrial policies are growing, and primarily target the energy sector**

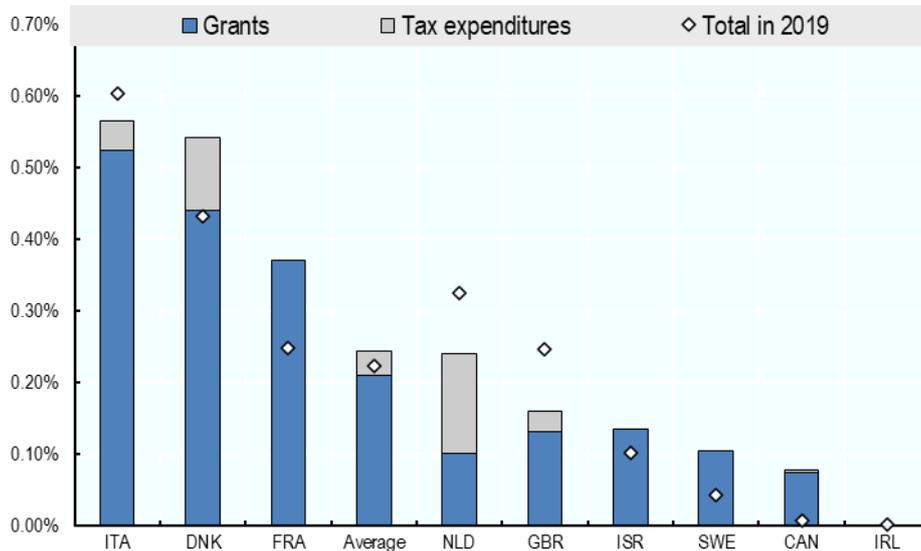
The countries that resort most to these policies are Italy, Denmark and France, where they represent 0.56%, 0.54% and 0.37% of GDP, respectively. Other countries such as Canada and Ireland<sup>9</sup> spend less than the rest on green instruments (0.077% and 0.002% of GDP, respectively).

On average, countries rely more on green grants while green tax expenditures are important in the Netherlands, where they represent 0.10% of GDP (vs 0.17% of GDP in grants). This predominance of grants is coherent with the targeted nature of green industrial policy, which tend to support the green transition in specific sectors such as energy<sup>10</sup> (but also manufacturing and transport) and through specific technologies (e.g., wind turbines, technologies to upgrade biogas, green hydrogen, etc). Some of the largest grants are the Italian feed-in-tariff scheme for energy produced with photovoltaic technologies (0.18% of GDP), French grants financing purchase contracts of renewable electricity<sup>11</sup> (0.23% of GDP) and Danish grants supporting wind turbine electricity<sup>12</sup> (0.16% of GDP). The largest tax expenditures are the Dutch tax deduction on zero-emission cars used in businesses (0.06% of GDP) and the Danish electricity tax exemption for renewable energy from biomass<sup>13</sup> (0.06% of GDP).

High spending on green grants and tax expenditures does not preclude high spending on ‘brown’ grants and tax expenditure – e.g., Italy, Denmark and France provide several grants and tax expenditures for fossil fuel use in the transport sector, as shown in Section 4.

**Figure 10. Green industrial support is primarily provided through grants and is high in countries like Italy, Denmark and France**

Green grants and tax expenditures by instrument type in 2021, % of GDP



Source: OECD calculations based on the QuIS database.

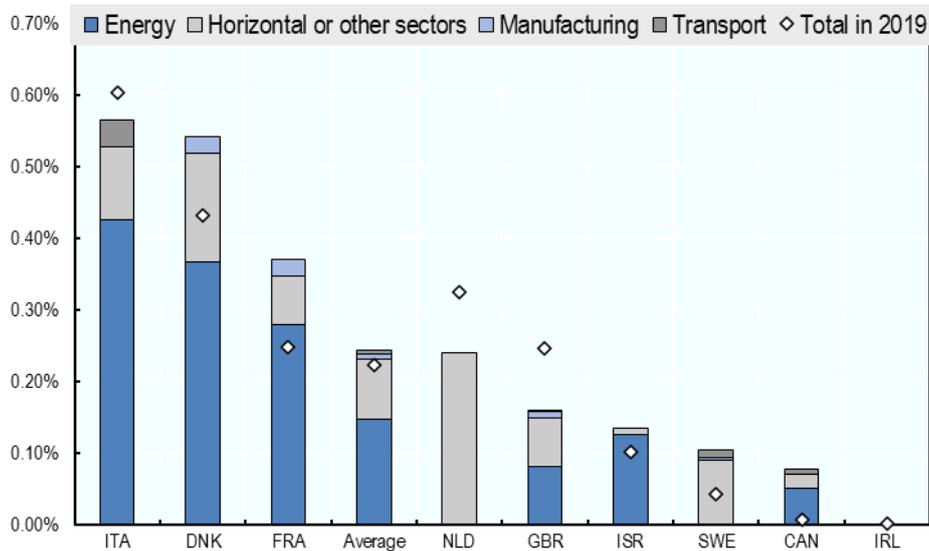
Some countries rely on sectoral green strategies. For instance, Italy, Denmark and France focus their green support on the decarbonisation of the energy sector (0.42%, 0.37% and 0.28% of GDP, respectively), by promoting the production and distribution of renewable energy; while other countries like the Netherlands and Sweden rely on horizontal green support for the whole business sector. The United Kingdom uses a mixed strategy by providing to a similar extent green support to the energy sector and through non-sectoral instruments.

Some important green instruments targeted to the energy sector are the Italian feed-in-tariff schemes for energy produced with photovoltaic technologies (*'Conto Energia I, II, III, IV, V'*) (0.18% of GDP) and other renewable energy sources (*'Impianti FER qualificati IAFR – TO & RD'*) (0.10% of GDP); Danish grants supporting wind turbine electricity (*'Tilskud til vindmølleelektricitet'*, 0.16% of GDP) and renewable energy plants (*'Tilskud til VE-anlæg, decentrale kraftvarmeværker mv.'*, 0.10% of GDP); and the French grants financing purchase contracts of renewable electricity (*'Soutien aux énergies renouvelables électriques en métropole continentale'*, 0.23% of GDP) and energy savings through natural gas cogeneration (*'Soutien à la cogénération au gaz naturel et autres moyens thermiques'*, 0.03% of GDP).

The largest instruments supporting the whole business sector are a tax deduction on zero-emission cars used by businesses (*'IB/LB Korting op de bijtelling voor nulmissieauto's'*, 0.58% of GDP) and the new *Stimulation of sustainable energy production and climate transition policy* (*'SDE++'*, 0.55% of GDP), both in the Netherlands. It is worth noting that the *SDE++* programme was originally focused on the energy sector (*SDE+* at that time) and was expanded to manufacturing in 2021, following the 2019 Climate Agreement.

**Figure 11. Most green industrial policies are either targeting the energy sector or non-sectoral**

Green grants and tax expenditures by sector in 2021, % of GDP



Note: 'Non-sectoral and others' includes support that is not targeted to a given sector or targets a sector, which is not energy nor manufacturing or transport.

Source: OECD calculations based on the QuIS database.

Some green industrial policies also target transport and manufacturing. Green support to transport is more common in Italy and Sweden, with the main programme being the Italian grants supporting the use of biomethane in transport (*'Promozione dell'uso del biometano e degli altri biocarburanti avanzati nel settore dei trasporti'*) (0.04% of GDP). Policies supporting the decarbonisation of manufacturing are more common in Denmark and France, with the main programmes being the grants based on energy savings in Denmark (0.02% of GDP) and the French grants supporting the adoption of biofuels to produce heat in manufacturing processes (0.01% of GDP).

In recent years, industrial policy support to the green transition has increased, on average, from 0.22% to 0.24% of GDP between 2019 and 2021 in the participating countries.

The only exceptions to the increasing trend of green support are Italy, the Netherlands and the United Kingdom. In Italy, the slight decrease in green support over the years can be attributed to the increase in energy prices, which led to a lower support share of the feed-in-tariff schemes for renewable energy production<sup>14</sup>. In the Netherlands, the temporary reduction due to the aforementioned change from the SDE+ grants to the new SDE++ format<sup>15</sup> (from 0.16% of GDP to 0.06%), was partly compensated by the increased expenditure in some schemes, such as the tax deduction on zero-emission cars used by businesses (from 0.04% of GDP to 0.06%) and the *Sustainable energy investment subsidy ('ISDE')* (from 0.01% of GDP to 0.02%). In the United Kingdom, two large instruments decreased from 2019 to 2021 due to rising energy prices: the *Contracts for Difference* scheme that provide grants to renewable energy contracts (from 0.08% to 0.01% of GDP)<sup>16</sup> and the *Feed-In Tariffs* scheme for renewable electricity (from 0.07% to 0.05% of GDP).

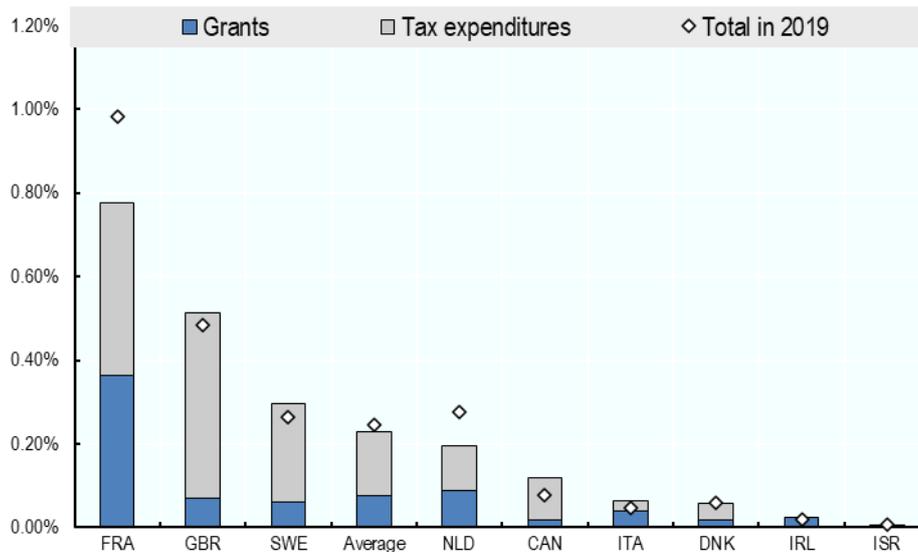
**Jobs and skills industrial policies are a cornerstone of industrial strategies in France, the United Kingdom and to a lesser extent Sweden, while almost absent in other countries**

Jobs and skills industrial policies represent 0.23% of GDP on average in participating countries, with a majority of tax expenditures (Figure 12). Jobs and skills industrial policies are particularly important in France, the United Kingdom and Sweden, where they represent 0.8%, 0.5% and 0.3% of GDP, respectively. Most of these policies are intended to reduce labour costs, while others support training programmes. Among tax expenditures, the largest jobs and skills industrial policies are the ‘CICE tax credit for competitiveness and employment’ for salaries below 2.5 times the minimum salary in France (0.28% of GDP), the ‘Reduced social contributions for the self-employed’ in the United Kingdom (0.20% of GDP) and a payroll tax exemption on the wage of senior employees over 65 years of age in Sweden (0.12% of GDP).

Besides tax expenditures, the largest programmes are a grant supporting apprenticeships for young workers in France (0.24% of GDP), a grant for the creation of additional jobs for young workers in the United Kingdom (0.07% of GDP) and a Swedish grant for companies hiring employees who have been out of the labour market for some time (0.06% of GDP).

**Figure 12. Jobs and skills industrial policies are mainly provided through tax expenditures and are important in France, the United Kingdom and Sweden**

Jobs/skills grants and tax expenditures by instrument type in 2021, % of GDP



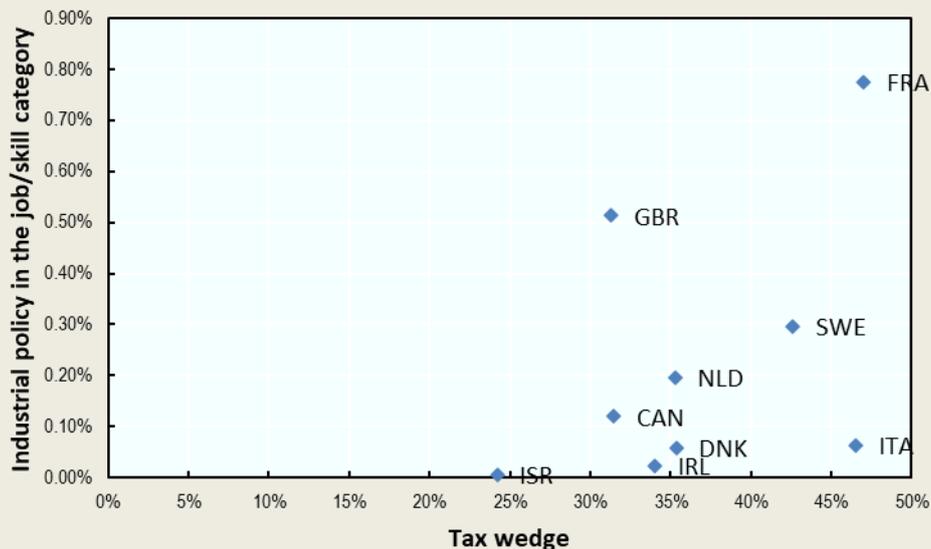
Source: OECD calculations based on the QuIS database.

**Box 4. Interactions of industrial policies in the job/skill category with labour market institutions**

QuIS’ scope includes labour policies geared towards enhancing competitiveness, investment or economic development by providing direct support to firms, linked to their wage bill, employment, hiring or training expenditures. QuIS excludes active labour market policies that are directly provided to workers, such as public employment services, institutional training, ‘sheltered and supported employment and rehabilitation’ and direct job creation. Hence, two axes of analysis are relevant here. First, countries vary widely in how much they tax labour income, either through social security contributions, payroll taxes or income tax. It is expected that industrial policy expenditures in the job/skill category are complementary with higher labour taxes. Second, labour market programmes provided to workers might be complementary or substitutes to industrial policy expenditures on the job/skill category given that the ultimate objectives (e.g., enhancing employment and human capital development of the workforce) are the same across the two.

Figure 13 shows that countries with a higher tax wedge (higher ratio of taxes to the cost paid by the employer) also tend to spend more on industrial policy measures targeted at jobs/skills. France is in the upper-right corner of the graph, with the highest tax wedge (47%) and the highest spending (0.8% of GDP) while Israel has the lowest tax wedge (24%) and the lowest spending (0.01% of GDP). Interestingly, the French programme CICE is currently being phased out and replaced by a long-term decrease in the social security contributions taxed on wages, which corresponds to a move to the bottom left on the scatter plot. Italy stands out, with a high tax wedge (46%) and low industrial policy expenditure on jobs/skills (0.06% of GDP).

**Figure 13. Expenditures on industrial policies in the job/skill category against labour tax wedge, 2021**



Note: The tax wedge is defined as the ratio between the amount of taxes paid by an average single worker (a single person at 100% of average earnings) without children and the corresponding total labour cost for the employer. The average tax wedge measures the extent to which tax on labour income discourages employment. This indicator is measured in percentage of labour cost. Source: OECD calculations based on the OECD Tax wedge indicator and the QuIS database.

The message is more contrasted regarding spending on worker-centred labour market programmes (Figure 14). For example, Denmark relies on low spending on industrial policies in the job/skill category (0.06% of GDP) and high spending on active labour market programmes provided to workers (1.5% of GDP). In contrast, France's labour policy mix consists of high spending on industrial policies in the job/skill category (0.56% of GDP) and low spending on labour market programmes provided to workers (0.3% of GDP). Other countries such as Sweden and the Netherlands rely on a combination of moderate spending on both types of policies, while countries such as Canada, Italy, Israel and Ireland provide low labour market support in general.

**Figure 14. Expenditures on industrial policies in the job/skill category against labour market programmes provided to workers, 2020**



Note: 2020 is the last available year of data on Labour Market Programmes. Data for Labour Market Programmes of Israel are for 2019 (last available year). The labour market programmes considered are “Public employment services”, “institutional training”, “Sheltered and supported employment and rehabilitation” and “Direct job creation”, which are the ones directly provided to workers.

Source: OECD calculations based on the OECD Labour Market Programmes database and the QulS database.

### ***Even if they represent limited amounts, technology-focused policies are growing and mostly green***

The amount devoted to technology-focused policies grew from 0.09% to 0.13% of GDP between 2019 and 2021, on average, with 80% of this expenditure being green in 2021 (Figure 15). This increase was more pronounced in France, Italy and Denmark, where technology-focused policies grew by 0.09, 0.05 and 0.05 pp of GDP, respectively.

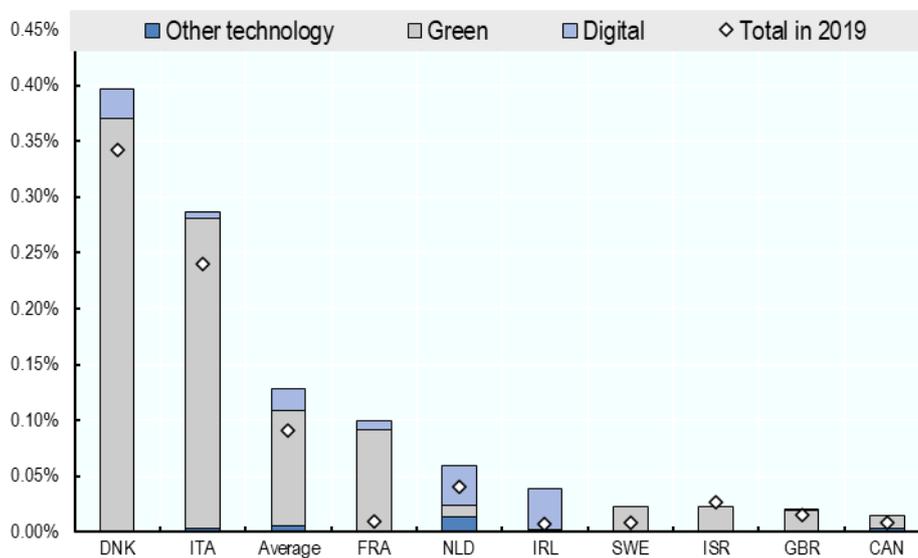
The countries spending the most on technology-focused industrial policies in 2021 are Denmark and Italy (0.40% and 0.29% of GDP, respectively), with most of those schemes being green (0.37% of GDP in Denmark and 0.28% in Italy). In this regard, Denmark relies on instruments such as grants for wind turbine electricity (0.16% of GDP) and upgrading or purification of biogas (0.10% of GDP), and tax exemptions for renewable energy from biomass (0.06% of GDP); while Italy relies on schemes such as the feed-in-tariff for energy produced with photovoltaic technologies (0.18% of GDP), grants supporting the use of

biomethane in transport (0.04% of GDP) and the *Important Project of Common European Interest (IPCEI)* grants supporting investment in batteries to store renewable energy<sup>17</sup> (0.06% of GDP).

Technology-focused policies are also linked to digital technologies in countries such as Denmark, the Netherlands and Ireland, with relatively small instruments, however. In the Netherlands, the largest instruments are the IPCEI grants for the development of microelectronic (0.03% of GDP) and cloud infrastructure (0.01% of GDP) technologies. In Ireland, the largest instrument is the ‘*National Broadband Plan*’ grant (0.04% of GDP), which supports investment in telecommunication infrastructure. In Denmark, the only technology-focused instrument linked to digital technologies is the immediate amortisation of computer software used in businesses (‘*Straksafskrivning af udgifter til computersoftware og driftsmidler til forskning og forsøg*’) (0.03% of GDP).

**Figure 15. Technology-focused policies of OECD countries are largely green**

Technology-focused grants and tax expenditures by broad technology in 2021, % of GDP



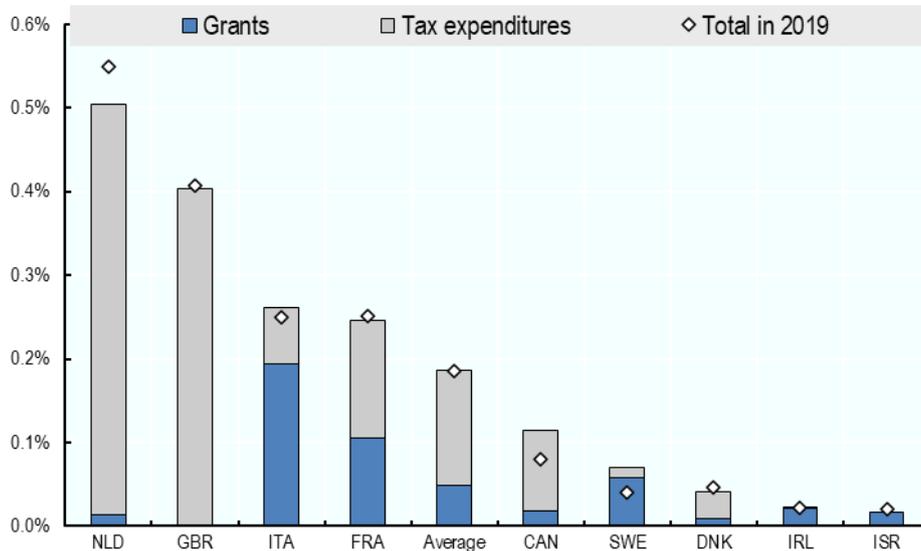
Source: OECD calculations based on the QuIS database.

**Industrial policies for ‘SMEs and young firms’ are significant in a number of countries and mainly channel through tax expenditures**

Grants and tax expenditures for SMEs (including microenterprises) and young firms represent 0.19% of GDP on average across the countries in the sample, with a dominance of tax expenditures (Figure 16). The countries providing more support to SMEs and young firms are the Netherlands (0.50% of GDP), the United Kingdom (0.40% of GDP) and Italy (0.26% of GDP). The Netherlands and the United Kingdom mostly rely on tax expenditures, such as self-employment tax deductions in the Netherlands (0.19% of GDP) and the R&D tax relief for SMEs in the United Kingdom (0.22% of GDP). On the other hand, Italy mostly relies on grants, such as the ‘*European Regional Development Fund*’ (0.18% of GDP), which is also the main SME grant scheme in Sweden and Ireland.

**Figure 16. Grants and tax expenditures for SMEs and young firms are the highest in the Netherlands and the United Kingdom**

Grants and tax expenditures for SMEs and young firms by instrument type in 2021, % of GDP



Source: OECD calculations based on the QuIS database.

### Financial instruments are mostly horizontal, and a significant share focuses on SMEs and young firms

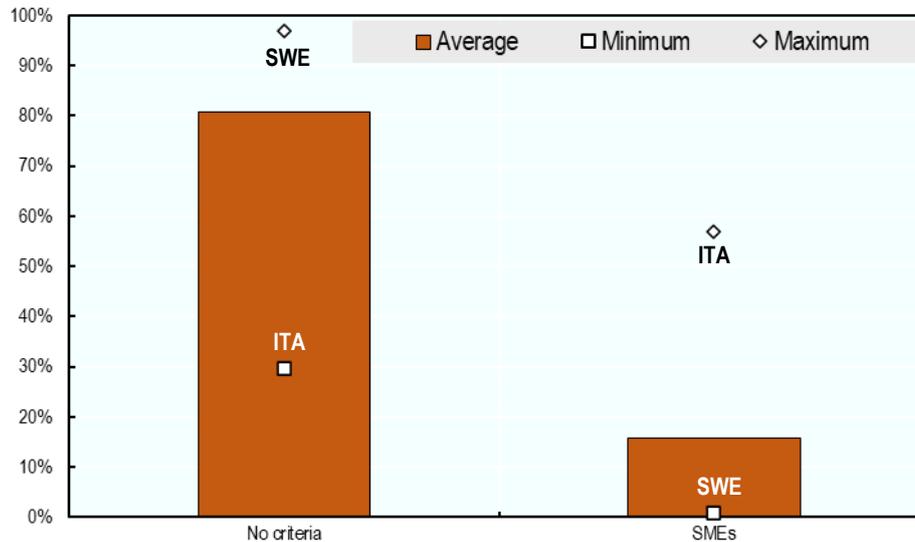
The distribution among eligibility criteria is different for financial instruments when compared to grants and tax expenditures. For financial instruments, the main particularity is the dominance of instruments not following any of the eligibility criteria retained in this project (80% of support through financial instruments in 2021, on average - Figure 17). Sweden is the country with the highest share of financial instrument support not following any eligibility criteria (97%), while the country with the lowest share is Italy (29%).

Among financial instruments not following any QuIS eligibility criterion, the highest amounts are provided by export finance agencies, such as export insurances provided by *Export Development Canada* (3.57% of GDP) and the Swedish *National Export Credit Guarantee Board* (1.41% of GDP).

Across the non-export finance instruments not following any QuIS eligibility criterion, the largest ones are provided by supra-national institutions. For instance, the loans granted by the *European Investment Bank* to Italian firms (0.37% of GDP in 2021), the guarantees provided by the *European Investment Fund* to French firms (0.13% of GDP in 2021) and the loans given by the *Nordic Investment Bank* to Danish companies (0.13% of GDP in 2021). The largest domestic non-export finance instruments in this category are the loans and equity funding provided by *BPIFrance* (0.29% and 0.15% of GDP in 2021, respectively); the loans provided by Canada's *Fonds du développement économique* of *Investissement Québec* (0.10% of GDP in 2021) and the equity support provided by the *Ireland Strategic Investment Fund* (0.09% of GDP).

**Figure 17. Financial instruments are mostly horizontal or focused on SMEs and young firms**

Financial instruments by eligibility criteria, % of total support through financial instruments, 2021



Source: OECD calculations based on the QuIS database.

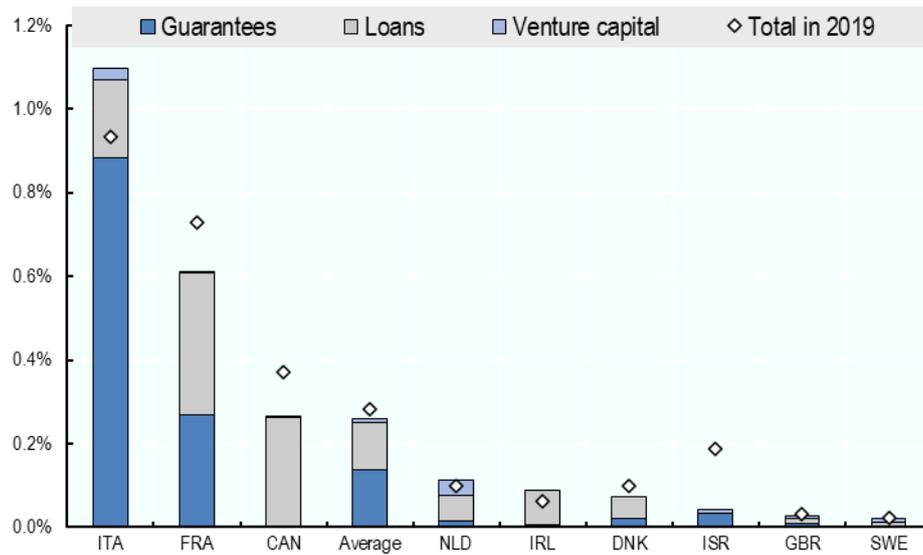
Financial instruments are also used to support SMEs and young firms, with 16% of financial support restricted to these firms, on average (Figure 17). Italy provides the highest share of financial instrument support focusing on SMEs and young firms (57%) and Sweden the lowest (1%).

An important part of industrial policy support through financial instruments is focused on SMEs and young firms (0.26% of GDP, on average) (Figure 18). The countries providing the highest amounts of SME-focused financial instrument support are Italy (1.1% of GDP), France (0.6% of GDP) and Canada (0.3% of GDP). Each of them relies on a different distribution of financial instruments: Italy relies mainly on guarantees (0.88% of GDP), with the ‘*SMEs guarantee fund*’ (0.76% of GDP) being the largest instrument; France relies slightly more on loans than guarantees (0.34% vs 0.25% of GDP) with almost all of this amount provided by ‘*BPI France*’ under different instruments (e.g. unclassified SME loans, SME loans for innovation and SME loans for R&D, among others); and Canada uses mostly loans, with the main SME-focused loan programme being the one provided by ‘*Business Development Bank Canada*’ (0.21% of GDP).

The most noticeable change over time is for Israel, whose SME-focused financial support decreased from 0.19% to 0.04% of GDP between 2019 and 2021. This reduction was driven by the guarantee for SMEs provided by the *Israeli Agency for Small and Medium Businesses*, which decreased from 0.15% to 0.03% of GDP over the period.

**Figure 18. Financial instruments for SMEs and young firms are the highest in Italy**

SME-focused financial instruments by instrument type in 2021, % of GDP



Source: OECD calculations based on the QuIS database.

# 4 Sectoral industrial policy expenditures

## Key messages

- Sectoral support is predominantly based on grants and is higher in France, Italy and Denmark.
- Across participating countries, the most supported sectors are energy, transport and manufacturing, whereas service sectors may largely benefit from non-sectoral support as they represent a large share of value added in participating countries.
- Support to the energy sector is mostly provided through green grants, representing a key instrument in the industrial strategies of Italy, Denmark and France.
- Support to the manufacturing sector is the highest in France, which mainly relies on grants covering energy costs.
- The transport sector is primarily supported through tax expenditures, notably by reductions in fuel taxes.
- Sectoral financial instruments are important in Italy and Canada, where they mostly support the financial sector and manufacturing, respectively.

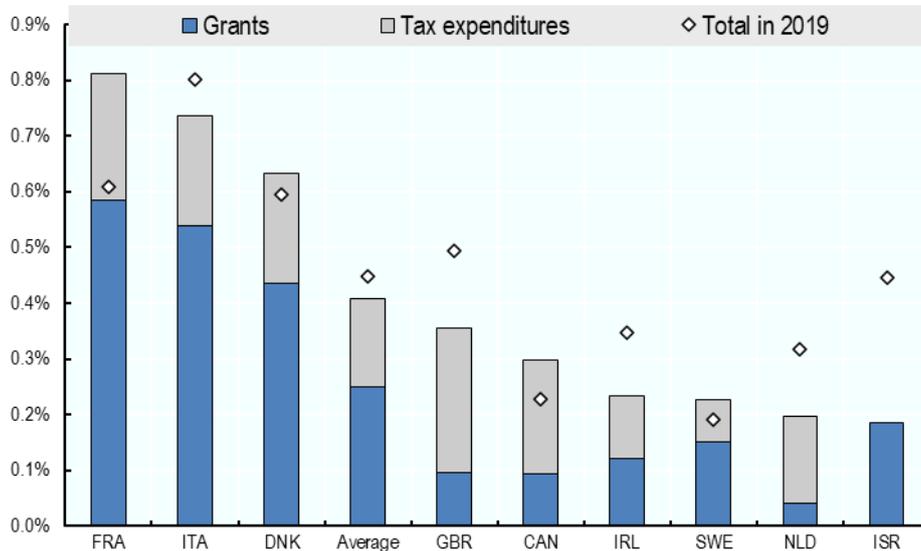
This section describes the distribution of targeted sectoral support across sectors. It focuses on structural policies, while COVID emergency policies are discussed in Section 5.

Sectoral support is not necessarily representative of the overall sectoral distribution of industrial policy expenditures across sectors. For instance, whereas services sectors are rarely targeted by sectoral support, they may largely benefit from horizontal expenditures, as these sectors represent a large share of value added in many OECD countries. In addition, policy instruments targeting agriculture are excluded from the scope of the report.

Sectoral focus is the most frequent criterion for industrial policy instruments in QulS participating countries (representing 29% of total support through grants and tax expenditures, see section 3). As a percentage of GDP, sectoral support through grants and tax expenditures accounts for 0.41% of GDP on average (Figure 19) The countries using these instruments more intensively are France, Italy and Denmark. In France, the main sectoral instruments are the '*Soutien aux énergies renouvelables électriques*' (0.23% of GDP) and the '*Soutien à la production d'électricité dans les zones non interconnectées au réseau métropolitain*' (0.09% of GDP), both consisting in subsidised contracts for renewable energy production, the former provided to mainland France and the latter to the French overseas territories. In Italy, the main sectoral schemes are the feed-in-tariffs for energy produced with photovoltaic technologies (0.18% of GDP) and for other renewable energy sources ('*Impianti FER qualificati IAFR – TO & RD*') (0.10% of GDP). In Denmark, the two largest sectoral schemes are grants for wind turbine electricity (0.16% of GDP) and for renewable energy plants (0.10% of GDP), both supporting the energy sector.

**Figure 19. Sectoral support is predominantly based on grants and is higher in France, the United Kingdom and Denmark**

Sectoral grants and tax expenditures by instrument type in 2021, % of GDP

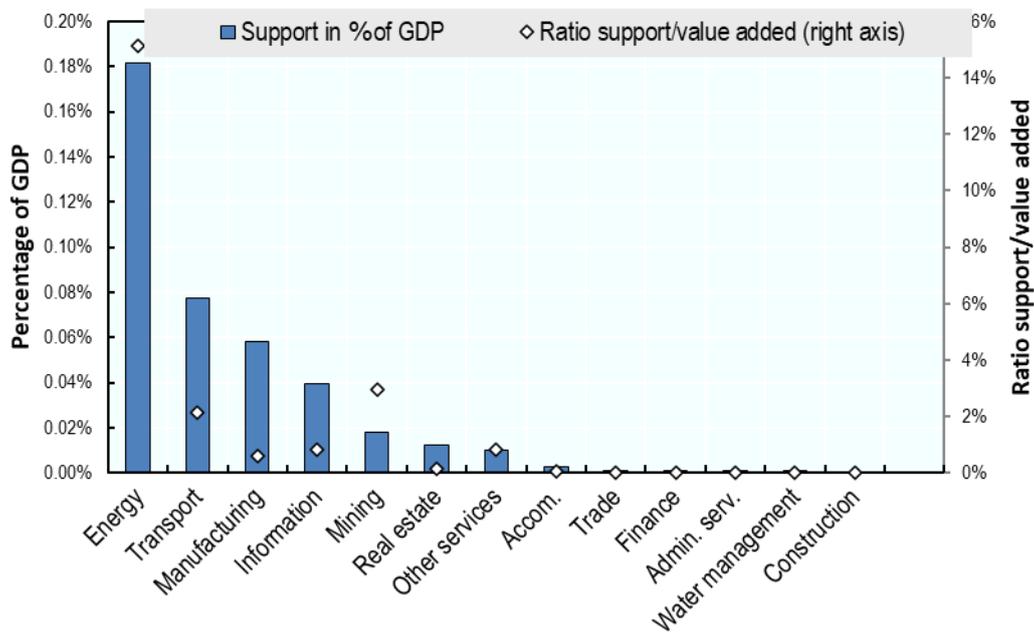


Source: OECD calculations based on the QuIS database.

Countries focus their sectoral support on three specific sectors (Figure 20): Energy (0.18% of GDP), Transport (0.08% of GDP) and Manufacturing (0.06% of GDP). When considering sector size by calculating the ratio of support to sectoral value added, the difference between the support to those sectors and all others, as well as the difference among these same sectors, are magnified, with Energy receiving support equivalent to 15.4% of its value added, way higher than for Transport (2.16% of GDP) and Manufacturing (0.60% of GDP).

**Figure 20. The most supported sectors are energy, transport and manufacturing**

Sectoral grants and tax expenditures by sector in 2021, average across countries.



Note: Policy instruments targeting agriculture are excluded from the scope of the report.  
 Source: OECD calculations based on the Quls and STAN databases.

The energy sector, which has a pivotal role in the green transition and in the overall cost competitiveness of the economy, receives large amounts of support (0.18% of GDP on average in 2021, mainly through grants, Figure 21).

Italy, Denmark and France are the three countries that most intensively support their energy sector, mainly through green grants. Specifically, Italian, Danish and French grants to the energy sector represent 0.43%, 0.37% and 0.37% of GDP and mostly support the green transition (100% of energy grant support is green in Italy, 99% in Denmark and 77% in France). While an important share of the energy grants of Denmark and Italy are technology-focused, this is not the case in France (70% and 43% of energy support is technology-focused in Denmark and Italy, respectively; compared with 6% in France). For instance, Denmark provides an important part of energy grants to renewable energy produced with wind turbines and biogas upgrading technologies, while Italy mostly relies on grants to energy produced with photovoltaic technologies. In contrast, France supports renewable energy production more broadly (e.g., subsidised contracts not restricted to any specific technology).

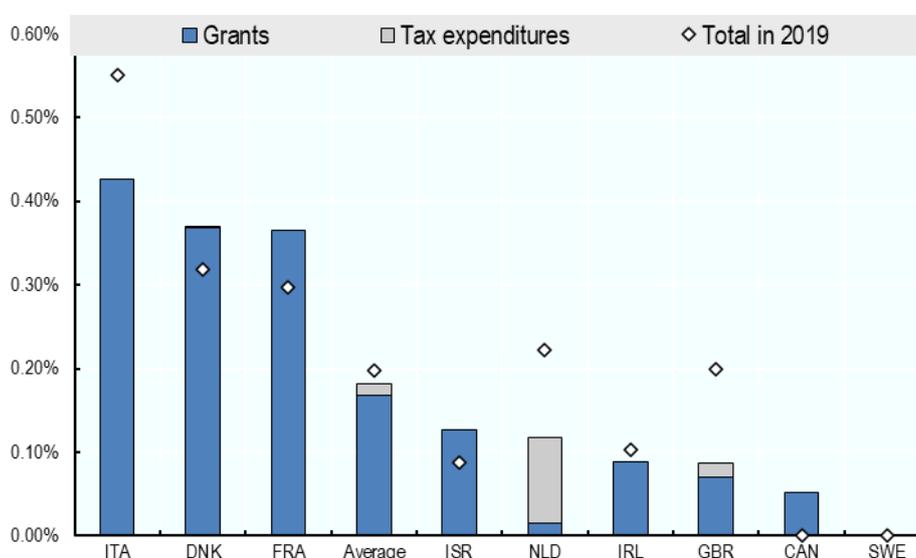
Other countries supporting their energy sector are Israel, the Netherlands, Ireland and the United Kingdom, with support ranging from 0.13% of GDP in Israel to 0.09% of GDP in the United Kingdom. In Israel, the energy sector is supported through a grant for renewable energy contracts (0.1% of GDP). The Netherlands is the only country that relies more on tax expenditures, with energy tax exemptions for power plants (*'Inputvrijstelling energiebelasting voor elektriciteitsopwekking'*, 0.09% of GDP).

Support targeting the energy sector decreased between 2019 and 2021 in the Netherlands and the United Kingdom. In the Netherlands, this is driven by the *SDE+* programme (0.22% of GDP in 2020), which has been converted into the *SDE++* scheme in 2021 (0.06% of GDP) and is now open to other sectors. Following the methodology defined in Criscuolo, Lalanne and Díaz (2022<sup>[21]</sup>), it is no longer considered as sectoral. In the United Kingdom, the change is due to the reduction of support provided through the

'Contracts for Difference' and 'Feed in Tariffs' schemes, which dropped massively in 2021 due to the rise in energy prices.

### Figure 21. Italy, Denmark and France are the countries providing the greatest support to the energy sector

Grants and tax expenditures provided to the energy sector in 2021, % of GDP



Source: OECD calculations based on the QuIS database.

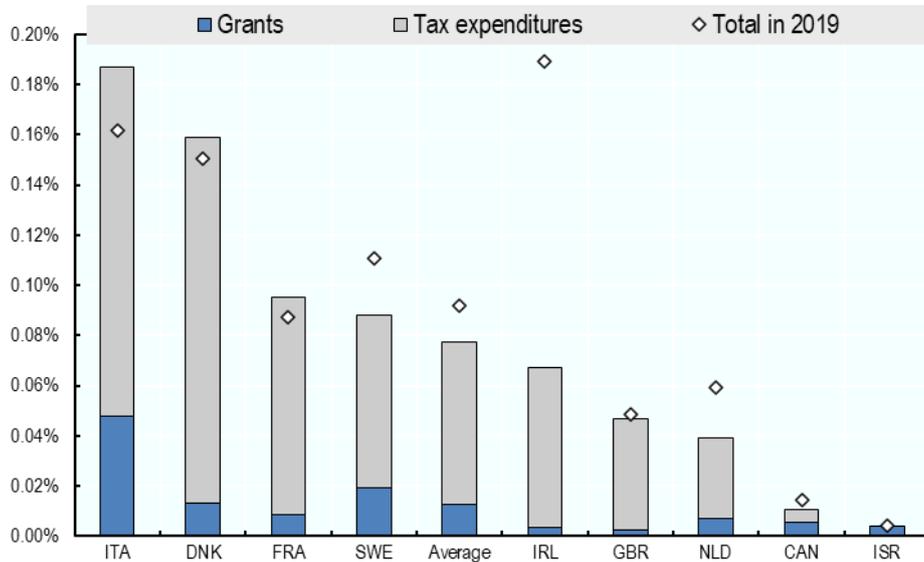
On average, support for transport amounts to 0.08% of GDP, mainly through tax expenditures (Figure 22). The countries that support transport most intensively are Italy, Denmark, France and Sweden. These results should be taken with caution since the QuIS database only covers support to private firms and countries rely to different degrees on public transport services and infrastructure.

A significant share of support to transport is provided to brown energy sources through tax incentives on fuel taxes. For instance, Italy provides tax incentives on excise duty of diesel for land transport (0.08% of GDP) and on fuel taxes for shipping (0.03% of GDP). Denmark grants tax exemptions on fuels used by ships and ferries (0.04% of GDP) and trains (0.02% of GDP); and France relies on tax deductions for fuels used by land transport (0.06% of GDP). Besides fuel tax breaks, the largest instruments are tax exemptions on labour costs in the shipping industry provided by Denmark and Sweden (0.04% and 0.02% of GDP, respectively), followed by schemes that replace corporate income tax by a tonnage tax for shipping companies provided by France and Denmark (0.01% and 0.03% of GDP).

Support to transport decreased on average from 0.09% to 0.08% of GDP between 2019 and 2021, partly related to travel restrictions. This reduction has been mainly driven by Ireland, which importantly decreased the resources devoted to the 'Jet Kerosene Exemption' from 0.18% to 0.06% of GDP in the period. Other countries such as the Netherlands have also reduced their support to transport to a lesser extent through the discontinuation of a tax incentive scheme for land transport of passengers (0.02% of GDP in 2019).

**Figure 22. Italy and Denmark are the countries providing the highest support to transport**

Grants and tax expenditures provided to the transport sector in 2021, % of GDP



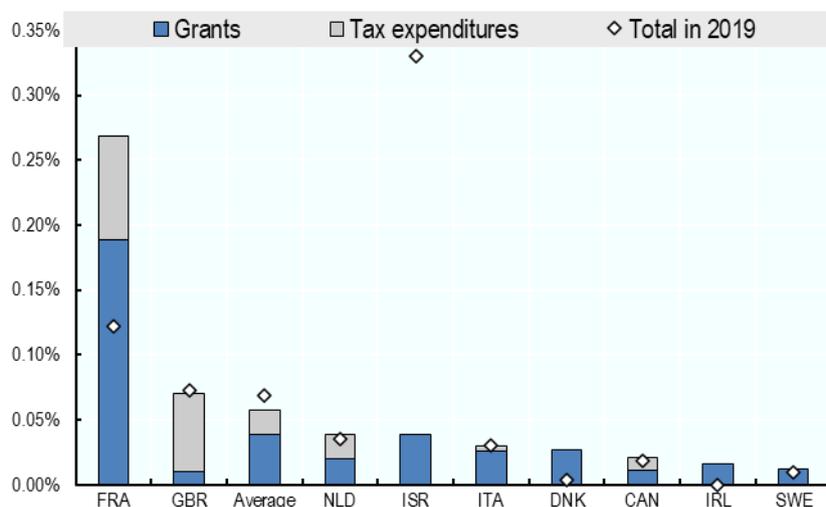
Source: OECD calculations based on the QuIS database.

France is the country providing the highest support to manufacturing (0.27% of GDP, Figure 23). The most significant instruments supporting manufacturing in France include grants and tax expenditures subsidising energy costs<sup>18</sup> (0.10% of GDP) and a mix of instruments targeting specific sub-sectors<sup>19</sup> (0.07% of GDP). With much less support to manufacturing, the United Kingdom is the second country in the list (0.07% of GDP), with tax expenditures such as the ‘*Industrial Relief Scheme*’ (0.05% of GDP) for excise duty on oil used in manufacturing (e.g., solvents, lubricants, in the production of products such as paints) and tax exemptions for inputs used in metallurgical processes (0.01% of GDP).

The most striking evolution over the period concerns Israel and France. Israel decreased its support to manufacturing from 0.33% to 0.04% of GDP between 2019 and 2021. This change is entirely driven by the ‘*Intel grant*’ scheme (0.28% of GDP) which was an extraordinary grant provided in 2019. The objective of this scheme was to complement an investment plan of the company Intel, which expanded its chip manufacturing operations in Israel.<sup>20</sup> In France the large increase in support for manufacturing was driven by the introduction of the French recovery plan, ‘*Plan de Relance*’, in 2021, totalling 0.12% of GDP for manufacturing with, for instance, instruments to support manufacturing investment in the regions and support for industries of the future (‘*Fonds d’accélération des investissements industriels dans les territoires*’ and ‘*Industrie du future*’, 0.04% and 0.03% of GDP respectively) as well as a large jump in support for R&D in the civil aerospace sector (‘*Recherche et développement dans le domaine de l’aéronautique civile*’, 0.04% of GDP in 2021 from less than 0.01% in 2019).

**Figure 23. Support to the manufacturing sector is the highest in France, which mainly relies on grants covering energy costs**

Grants and tax expenditures provided to the manufacturing sector in 2021, % of GDP

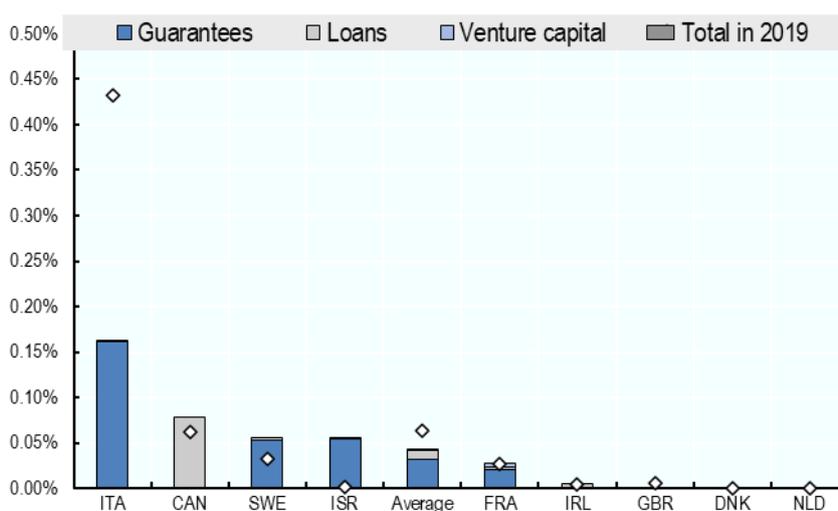


Source: OECD calculations based on the QuIS database.

Although sectoral industrial policies are usually provided through grants and tax expenditures, some of them are provided through financial instruments. Italy and Canada, for example, provide important sectoral support through financial instruments, representing 0.16% and 0.08% of GDP in 2021, respectively (Figure 24).

**Figure 24. Sectoral financial instruments are important in Italy and Canada, driven by guarantees and loans respectively**

Sectoral financial instruments by instrument type in 2021, % of GDP



Source: OECD calculations based on the QuIS database.

Italy's sectoral support through financial instruments almost exclusively targets the financial sector. This support consists in a government guarantee for the securitisation of non-performing loans to help private banks sell the latter (0.16% of GDP). The flow of new guarantees decreased significantly during the period of study (from 0.25% to 0.16% of GDP between 2019 and 2021), which together with a one-off state guarantee on bond issuances of Banca Carige in 2019 (0.17% of GDP), lead Italy's financial support to halve as a share of GDP between 2019 and 2021.

Canada allocates 79% of its sectoral support through financial instruments supporting the manufacturing sector (0.07% of GDP). This can be explained by the fact that Canada is one of the countries that provides less support to manufacturing through grants and tax expenditures (0.02% of GDP, Figure 23). Canada provides financial support to manufacturing through loans, primarily through the federal '*Farm Credit Canada program*'<sup>21</sup> (0.06% of GDP), which is directed to food processing. Other sectors supported through financial instruments in Canada are Information and Mining.

# 5 COVID emergency support

## Key messages

- On average in 2020, the countries analysed provided 7% of GDP on COVID emergency support in the form of financial instruments (including tax deferrals). While many instruments are similar across countries, there is substantial heterogeneity in terms of amounts between countries.
- On average in 2020, 2.5% of GDP was spent on grants and tax expenditures for COVID emergency support, again through similar types of instruments but substantial heterogeneity in terms of spending amounts between countries.
- Given these magnitudes, COVID emergency support dwarfed structural support in most of the countries.
- In most countries, COVID emergency support through financial instruments was rapidly phased out in 2021, while emergency grants and tax expenditures remained sizeable.

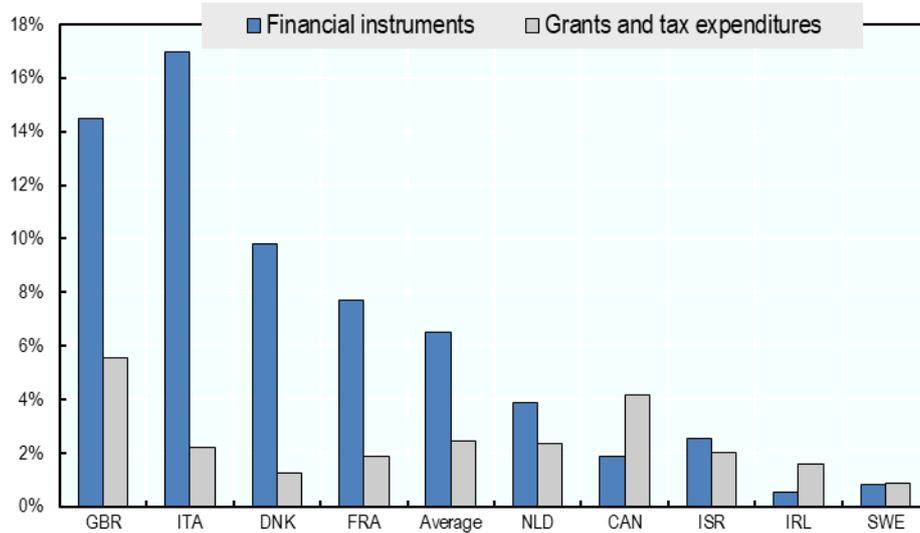
Whereas previous sections focused on structural support, this section describes COVID emergency support provided by countries in the form of grants, tax expenditures and financial instruments. This section starts by describing the extent of the support in 2020, at the height of the crisis, and its composition. It then describes the evolution of the support between 2020 and 2021.

### **COVID emergency support has been financed mainly through financial instruments rather than grants and tax expenditures.**

On average, 9% of GDP was devoted to COVID emergency support in 2020 in the OECD countries considered, considering both financial instruments and grants/tax expenditures (Figure 25). The United Kingdom was the country that provided most COVID support as a percentage of GDP (20.0% of GDP), followed by Italy and Denmark, who provided 19.6% and 11.0% of GDP, respectively. In contrast, Sweden and Ireland provided just 1.7% and 2.1% of GDP of COVID emergency support, respectively.

**Figure 25. Countries relied more on financial instruments than on grants and tax expenditures for COVID emergency support in 2020**

COVID emergency support as grants/ tax expenditures and financial instruments in 2020, % of GDP



Note: The graph is ordered by the sum of both expenditure types (grants and tax expenditures + financial instruments).  
 Source: OECD calculations based on the QuIS database.

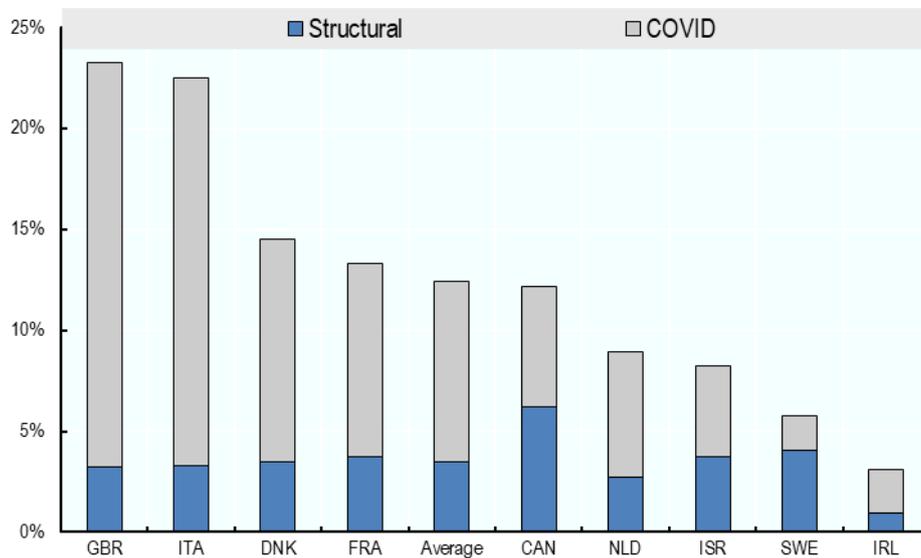
COVID emergency support was mainly delivered through financial instruments in 2020 (7% of GDP on average, Figure 25). The largest amount of COVID emergency relief through financial instruments was provided by Italy (close to 17% of GDP). The short-term credit insurance programme managed by the Italian export agency ‘*Servizi assicurativi e finanziari per le imprese (SACE)*’ was Italy’s largest instrument, amounting to 166 billion EUR of guarantee (10% of GDP) in 2020. After Italy, the United Kingdom was the country providing the second largest support through COVID-emergency financial instruments, which accounted for 14.5% of GDP. The largest instrument was the ‘*Trade Credit Reinsurance Scheme (TCRS)*’ (7.8% of GDP). A similar reinsurance scheme can also be found, for example, in the Netherlands with the ‘*Supplier Credit Reinsurance*’, which has a smaller yet still considerable size of 1.5% of GDP.

Another popular instrument type used during the COVID crisis were loans. The largest of these programmes was the Danish tax deferral<sup>22</sup> ‘*Deferral of payment deadlines for income tax, VAT, payroll tax and other taxes*’, which accounted for 7.16% of GDP in 2020. Similarly, in France, COVID support was to a large extent driven by the state-guaranteed loan programme *Prêts garantis par l’État* provided by BPIFrance (5.9% of GDP in 2020).

In 2020, COVID-specific support through financial instruments was higher than its structural counterpart in the countries considered (Figure 26).

**Figure 26. In 2020, COVID emergency financial instruments were significantly higher than structural financial instruments**

Structural and COVID emergency financial instruments in 2020, % of GDP



Source: OECD calculations based on the QuIS database.

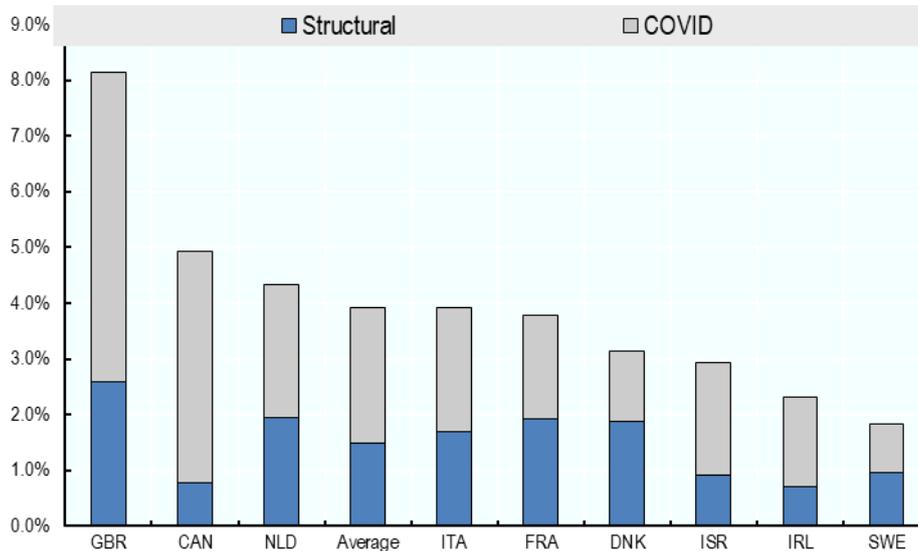
The two countries providing the most COVID-emergency grants and tax expenditures were the United Kingdom and Canada. The two largest instruments across the sample were Canada's '*Emergency Wage Grant*' (3.8% of GDP) and the United Kingdom grant '*Coronavirus Job Retention Scheme*' (2.6% of GDP). The largest Dutch wage grant was a similar '*Emergency Bridging Measure to Maintain Employment (NOW)*' at 1.7% of GDP in 2020.

Only Canada and Ireland relied more on grants and tax expenditures than financial instruments to provide COVID emergency support in 2020. Wage grants were an important tool to support companies in OECD countries during the COVID crisis (CBS, 2020<sup>[7]</sup>). The goal was, among others, to bridge the loss in revenues resulting from the pandemic, reduce the amount of layoffs within a country allowing to retain financial security for employees, and to avoid paying the 'matching cost' of re-matching employees to firms after the crisis. Ireland's COVID-specific grants focused on promoting jobs with grants for jobs and skills, such as the '*Temporary COVID-19 Wage Grant Scheme (TWSS)*' (0.73% of GDP) and the '*Employment Wage Grant Scheme (EWSS)*' (0.37% of GDP). At the other end of the spectrum, Denmark barely used grants. The largest Danish grant in 2020 was the '*Wage Compensation Scheme*' at 0.55% of GDP.

Across participating countries, in 2020 COVID emergency support accounted for a large share of grants/tax expenditures relative to structural expenditures (Figure 27).

**Figure 27. In 2020, expenditure was higher for COVID emergency support than for structural grants and tax expenditures**

Structural and COVID emergency grants and tax expenditures in 2020, % of GDP



Source: OECD calculations based on the QuIS database.

**COVID emergency support through financial instruments was rapidly phased out in 2021, while emergency grants and tax expenditures remained sizeable**

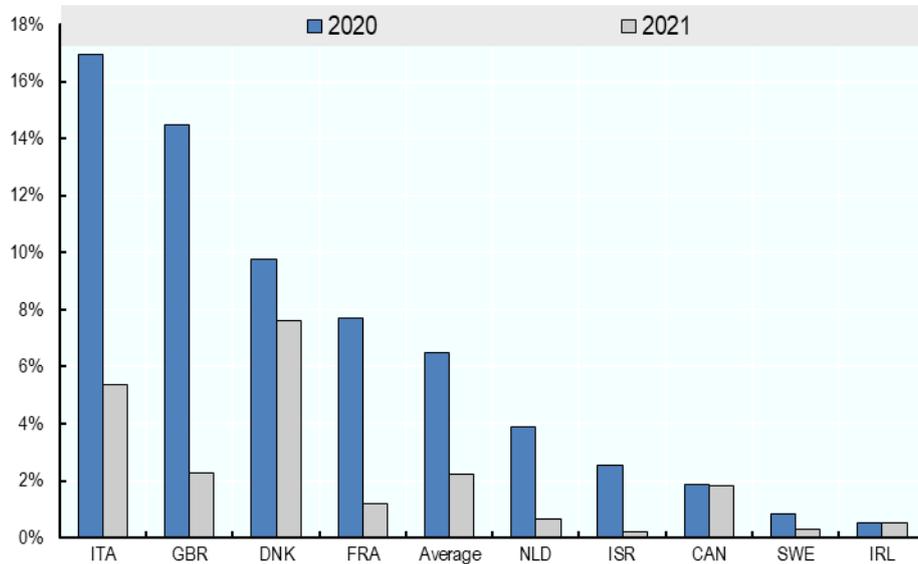
COVID emergency financial instruments fell on average in 2021 compared to 2020 (Figure 28), most notably in the United Kingdom<sup>23</sup> (-81%), France (-70%), and Italy (-60%). For example, the ‘VAT deferral’ loan in the United Kingdom, which accounted for 1.4% of GDP in 2020, was completely phased out after 2020, while the French government guaranteed loan programme (*Prêts garantis par l’État* - 5.9% of GDP in 2020) was almost completely phased out after 2020 with a decrease of ~96% and the ‘Reports de cotisations sociales’ (social contribution deferral) for jobs and skills in France declined by 71%.

Similarly, in Italy, the ‘Short-term credit insurance’ loan declined by 85% from 10% to 1.5% of GDP, while the volume of new guarantees issued through the short-term guarantee programme in 2021 was divided by 6 compared with 2020. However, Italy’s financial support programmes were still larger than average, with COVID-related financial instruments amounting to 6% of GDP (versus 2% on average).

In Canada and Ireland, COVID emergency support through financial instruments slightly increased in 2021 compared to 2020, contrasting with the trend in other countries. In Canada, many COVID support schemes only came into effect in 2021, such as ‘PACTE and PAUPME’ (which aimed to support SMEs by providing access to financing to maintain or restart their activities) at a relatively low level of 0.006% of GDP, while schemes already active in 2020, such as the ‘Canada Emergency Business Account (CEBA)’, increased fourfold. Similarly, in Ireland, large horizontal COVID support schemes such as the ‘Sustaining Enterprise Fund - Repayable Advances (or Concessionary Loans)’ loan increased by 15%.

**Figure 28. COVID emergency financial instruments declined in most countries between 2020 and 2021**

COVID emergency financial instrument support in 2020 vs 2021, % of GDP



Source: OECD calculations based on the QuIS database.

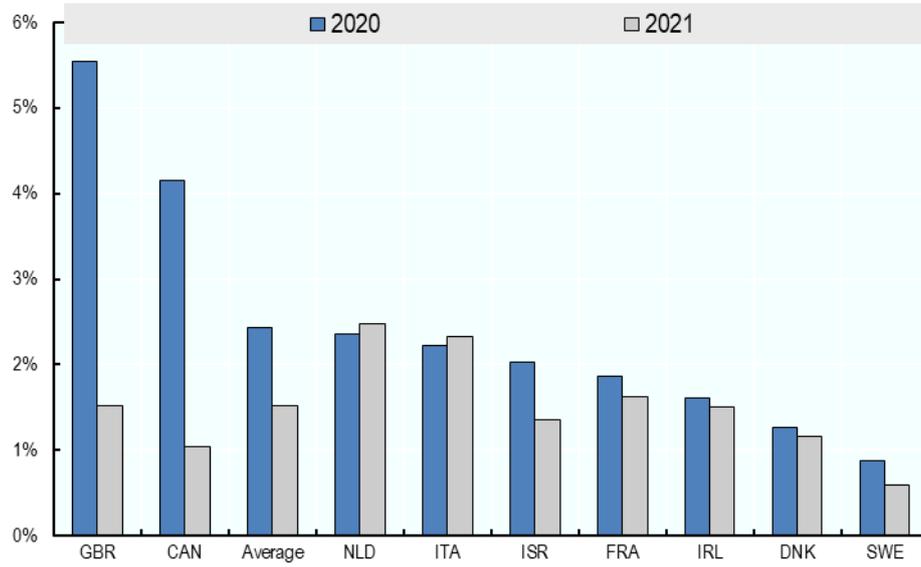
COVID emergency grants and tax expenditures as a share of GDP decreased across most participating countries in 2021 (Figure 29). Most significantly, the two countries with the highest amounts of support (the United Kingdom and Canada) experienced the largest decrease compared to other countries in the sample. This is reflected in the large decrease (-72%) of United Kingdom's largest COVID support grant (the 'Coronavirus Job Retention Scheme'). The fast decline of 'Emergency Wage Grant', Canada's largest COVID emergency grant or tax expenditure instrument (3.8% of GDP in 2020, and 0.7% of GDP in 2021), accounts for the decrease experienced in Canada.

In other countries, spending on similar programmes has not declined as much as in Canada or the United Kingdom. For example, the Dutch labour cost grant '*Emergency Bridging Measure to Maintain Employment (NOW)*' was 1.7% of GDP in 2020 and still 1.2% in 2021. Similarly, the Danish '*Wage Compensation Scheme*' accounted for 0.4% of GDP in 2020 and 0.3% in 2021.

Grants and tax expenditures for COVID emergency support did not decrease in 2021 compared to 2020 in Italy and the Netherlands, contrasting with the trend in other countries (OECD, 2021<sup>[8]</sup>). In 2021, the Netherlands's large wage grant scheme (*Noodmaatregel overbrugging voor behoud werkgelegenheid (NOW)/ Tijdelijke Noodmaatregel Overbrugging voor Werkbehoud*, 1.6% of GDP), did not decrease. The next three largest Dutch measures, focused on self-employed and entrepreneurs, remained at similar levels in 2021: income support for the self-employed and support for entrepreneurs fixed costs and overheads (*Tijdelijke overbruggingsregeling zelfstandig ondernemers (TOZO)*), *Tegemoetkoming Vaste Lasten (TVL)*, *Tegemoetkoming schade COVID-19 (TOGS)* – totalling 0.6% of GDP).

**Figure 29. COVID emergency grants and tax expenditures declined in most countries between 2020 and 2021, with the notable exception of the Netherlands and Italy**

COVID emergency grants and tax expenditures in 2020 vs 2021, % of GDP



Source: OECD calculations based on the QuIS database.

## 6 Next steps

Going forward, this data collection and harmonisation effort can be expanded by covering new countries willing to join the project and updating the data for 2022. This will allow the monitoring of the changes at play in industrial policies throughout OECD countries. A salient example of a recent industrial strategy is the new Inflation Reduction Act (IRA) enacted by the United States (2022), which represents an unprecedented step towards a more active industrial policy targeting the green transition and domestic manufacturing capacity. The IRA aims to mobilise USD 500 billion to support renewable energy production, green-related manufacturing and R&D while encouraging the procurement of critical supplies domestically or from free-trade partners (McKinsey, 2022<sup>[9]</sup>). The EU Green Deal Industrial Plan (2023) is its European counterpart, which promotes the transition to a net-zero industry and renewable energy production through loosening state aid rules until the end of 2025 and providing EUR 225 billion in EU loans and 20 billion EUR in EU grants (Reuters, 2023<sup>[10]</sup>). Other important industrial strategies have been announced specifically for semiconductors. Overall, these recent developments confirm that industrial policy is not slowing down, calling for further work in terms of data collection and analysis.

# Endnotes

<sup>1</sup> Israel (Horizon 2020 / Horizon Europe) and the United Kingdom (as a former member of the EU until 31 January 2020) also benefit from EU-level industrial policy expenditures, which are taken into account in this report.

<sup>2</sup> See for instance France Stratégie (2020<sub>[12]</sub>).

<sup>3</sup> Country comparable data and analytical studies are available at [www.oecd.org/subsidies](http://www.oecd.org/subsidies).

<sup>4</sup> <https://www.oecd.org/agriculture/topics/agricultural-policy-monitoring-and-evaluation/>.

<sup>5</sup> The QuIS database includes sub-federal expenditures (by provinces in the case of Canada), which represent close to half of the recorded industrial policy expenditures in Canada. QuIS only covers policy instruments whose annual expenditures exceed 0.002% of national GDP. Even if in principle a higher share of expenditures could fall below the threshold for Canada since they are administered at the provincial rather than at the national level, and QuIS could therefore underestimate expenditures compared to more centralised countries, this bias is likely to remain limited. For instance, the gap between Sweden and Canada in Figure 2 is 0.2% of GDP. For Canada to overtake Sweden, it would require 241 policy instruments bunched just below the 0.002% of GDP threshold in Canada (and none in Sweden). As a comparison, Canada has currently 148 instruments recorded in the QuIS database and above the threshold for 2021 while Sweden has 104 instruments.

<sup>6</sup> The largest programme in Canada is the ‘*Scientific Research and Experimental Development Investment Tax Credit*’ (0.14% of GDP, considering both the refundable and non-refundable portion).

<sup>7</sup> The fund also played a key role in the COVID-19 policy toolkit of Italy. In 2019, the scheme was worth 0.74% of GDP. In the database, the same share of GDP is attributed to the structural component in 2020 and 2021, while the rest of the expenditure is attributed to COVID-related support.

<sup>8</sup> They sometimes have sectoral requirements, but do not qualify as ‘sectoral’ according to the methodology defined in Criscuolo, Lalanne and Díaz (2022<sub>[2]</sub>), since their cover too many sectors.

<sup>9</sup> For Ireland, although green industrial policy expenditures are lower than in the benchmark in 2021 (0.002% vs 0.28% of GDP), it might significantly increase in upcoming years due to the new “*Renewable Electricity Support Scheme (RESS)*”, which provides a price-premium to renewable electricity producers if the strike price settled in auctions is consistently higher than the market price, and generates an obligation to pay if the opposite holds. This instrument has the potential for becoming key in the Irish green transition, given the high amount of support budgeted (0.5% of GDP).

<sup>10</sup> This corresponds to section D of the ISIC classification. Mining and extraction activities are recorded separately (section B of the ISIC classification).

<sup>11</sup> Electricity providers have an obligation to purchase from selected renewable electricity producers and are compensated for the extra cost it represents.

<sup>12</sup> The support is given in the form of a price supplement to wind electricity providers, which is either a fixed amount per produced kWh or the difference between a fixed amount and the market price.

<sup>13</sup> Fuels produced from biomass are exempted from the energy taxes typically paid by businesses for the use of fossil fuels.

<sup>14</sup> In those schemes, the support share is proportional to the difference between a pre-determined strike price and the market price.

<sup>15</sup> SDE++, once fully in place, should be larger than SDE+.

<sup>16</sup> With Contracts for Difference, firms may also pay public bodies when energy prices are high enough. For instance, the Irish "Renewable Electricity Support Scheme (RESS)" has the potential to become the largest industrial policy instrument in Ireland, with a budget of EUR 2 billion per year (the first RESS projects were approved in 2020). However, in 2021, RESS payments were negative (companies had to pay the Public Service Obligation (PSO) fund) because the market price for energy in 2021 was higher than the project's strike price. In this paper, policy instruments are only considered when they provide support to firms, and not when companies repay the government.

<sup>17</sup> 'Fondo IPCEI Batterie 1' and 'Fondo IPCEI Batterie 2'. This is an instrument provided by the Italian government, without EU funding.

<sup>18</sup> The main instrument being a reduced tax rate on electricity for energy-intensive industries (0.04% of GDP).

<sup>19</sup> The main instrument being a grant for R&D in the civil aerospace sector (*R&D dans le domaine de l'aéronautique civile – CORAC – 0.04% of GDP*).

<sup>20</sup> 'Intel to get \$1 billion state grant for \$11 billion Israel chip plant expansion': <https://www.reuters.com/article/us-israel-intel-idUSKCN1PM2GT>.

<sup>21</sup> Only the share directed to food processing is considered, while the share directed to agriculture is not considered. The breakdown of the support granted to manufacturing was obtained from the official description of the scheme. Link: <https://www.fcc-fac.ca/fcc/about-fcc/reports/ar-ra-2021-22-e.pdf>.

<sup>22</sup> Throughout this paper, tax deferrals are considered as loans granted by the tax administration to the beneficiaries. The amount of deferred taxes cannot be compared with other tax expenditures or grants and is therefore recorded together with loans (see Criscuolo, Lalanne and Díaz (2022<sup>[21]</sup>) for a more detailed discussion).

<sup>23</sup> The fiscal year 2020-2021 in the United Kingdom started around the same time as the first COVID restrictions (April 6 of 2020). This might affect the comparability of its COVID support with other countries such as Italy and France, whose fiscal year 2020-2021 started on January 1.

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## Annex A. Additional figures and tables

**Table A A.1. Composition of the advisory group**

Country	First name	Last name	Position
	Carolyn	Fischer	Professor, VU Amsterdam
	Susan	Helper	Senior Economist, White House Council of Economic Advisers
	Hiroshi	Ohashi	Professor, University of Tokyo
Canada	Dany	Brouillette	Senior Director, Economic Research and Analysis Unit, Strategy, Research and Results Branch, Innovation, Science and Economic Development
Denmark	Lone	Ank	Business Economics Director at the Ministry of Business
France	Alexis	Loublier	Project Director – Economic and Sectoral Studies, Directorate-General for Enterprise
Ireland	Rory	Mulholland	Assistant Principal, Data and Evaluation Unit, Department of Enterprise, Trade and Employment
Israel	Gilad	Be'ery	Director, Strategic Analysis at Ministry of Economy and Industry
Italy	Maria-Benedetta	Francesconi	Manager, Directorate for Industrial Policy, Ministry of Economic Development
Netherlands	Henry	Van der Wiel	Economic advisor at Netherlands Ministry of Economic Affairs
Sweden	Andreas	Halvarsson	Ministry of Economic Affairs, Analysis Unit
United Kingdom	Nick	Blayney	Economic Adviser at Department for Business, Energy and Industrial Strategy (BEIS)

Source: Criscuolo, Lalanne and Diaz (2022<sup>[2]</sup>).

**Table A A.2. Main information collected on policy instruments – Summary**

Variables	Categories	Description of the categories
Yearly expenditures		
Scope	Horizontal policies	Interventions available to all firms, irrespective of their activity, technology and location.
	Targeted policies	Interventions restricted to a subset of eligible firms based on their activity, technology or location.
Instrument type	Tax expenditures	Provisions of tax law, regulation or practices that reduce or postpone tax revenue for a comparatively narrow population of taxpayers relative to a benchmark tax. These exceptions are often viewed as alternatives to other policy instruments, such as spending or regulatory programmes. Tax expenditures consist of allowances, exemptions, rate relief and credits. See OECD (2010 <sup>[6]</sup> ) and the U.S. Department of the Treasury (2021 <sup>[11]</sup> ). Relevant tax expenditures are not only those related to corporate income tax but also include those associated to e.g., property tax, energy tax or social contributions.
	Grants	Transfer of funds to the private sector supporting investment projects or any other kind of activity, resulting in direct budgetary expenditure without expected repayment or any rights attached.
	Loans or Loan Guarantees	Provision of loans by the public sector, either by the government or through intermediaries (e.g., public or development banks). Loan guarantees are schemes through which the government covers (part of) the risk of default associated with a private loan. Loans and guarantees can be provided on preferential or commercial terms.
	Venture Capital	Government equity investments in private companies, often with risky business models. Including public investment through funds of funds.

Eligibility criteria (categories are not mutually exclusive)	Digital	Instruments whose main focus is to support the adoption or development of digital technologies, to promote investment in digital inputs, digital services or data.
	Green	Instruments whose main focus is to support the adoption or development of environment-friendly technologies, to promote investment in environmentally sustainable inputs, and more generally to accompany firms' ecological transition.
	Sectoral	Instruments which are geared towards a small number of economic activities. Instruments targeting industrial ecosystems (e.g., interrelated sectors in terms of input-output, knowledge or financial flows) are also considered sectoral. Instruments geared towards a technology that can be applied in a wide range of sectors (see next row) cannot be considered as sectoral.
	Technology-focused	Instruments geared towards the adoption or development of a particular technology (e.g., support for artificial intelligence or carbon capture and storage), or a small number of technologies.
	SMEs and young firms	Instruments that are dedicated to firms below a certain size or age. The size threshold can be based on employment, assets, turnover or a combination of these variables. The threshold need not correspond to any official definition of SMEs or start-ups.
	R&D	Instruments supporting R&D expenditures or projects.
	Jobs/skills policies	Instruments geared towards enhancing competitiveness, investment or economic development by providing direct support to firms, linked to their wage bill, employment, hiring or training expenditures.
Selectiveness of the process	Non-discretionary	Support is automatically granted as soon as the applicant meets the eligibility criteria.
	Selective	Support is not automatically granted. Applicants are selected based on the relative quality of their project compared to other applicants.
	1st come 1st served	Support is not automatically granted. Applicants are supported until the budget is exhausted or a preset number of beneficiaries is reached.

Source: Criscuolo, Lalanne and Diaz (2022<sup>[2]</sup>).

**Table A A.3. Nominal GDP and industrial policy threshold of countries that confirmed participation on the project, millions of national currency, current prices**

Country	Canada	Denmark	France	Netherlands	Sweden	Ireland	Israel	Italy	United Kingdom
GDP (Lowest value since 2017)	CAD 2 140 641	DKK 2 192 960	EUR 2 297 242	EUR 738 146	SEK 4 625 094	EUR 296 925	ILS 1 278 840	EUR 1 653 577	GBP 2 097 143
Threshold (0.002% of GDP)	CAD 43	DKK 44	EUR 46	EUR 15	SEK 93	EUR 6	ILS 26	EUR 33	GBP 42

Note: The lowest value since 2017 is reported. This corresponds to the year 2020 for Italy, and 2017 for Canada, Denmark, France, the Netherlands, Sweden, Ireland, Israel, and the United Kingdom.

Source: OECD National Accounts Database.