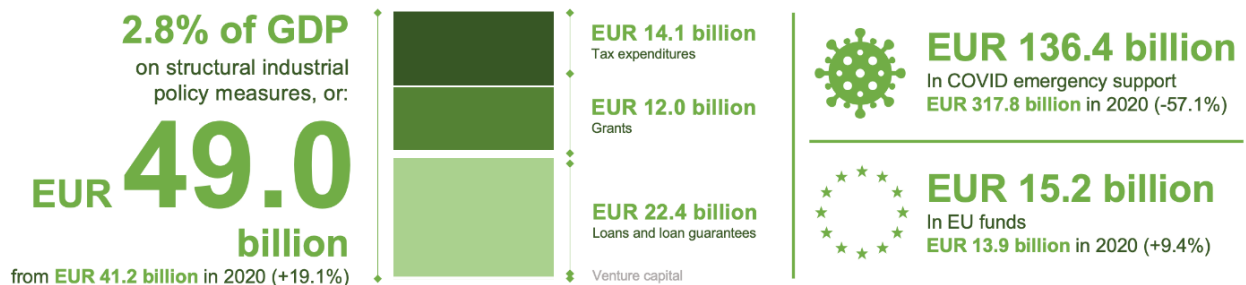


# Italy: Quantifying Industrial Strategy

## Highlights

- Structural industrial policy expenditures are slightly higher in Italy compared to other QuIS participating countries in terms of grants and tax expenditures and a lot higher in terms of non-export financial instruments, though lower in terms of export finance. EU grants and financial instruments are higher than in other EU participating countries.
- Among the countries surveyed, Covid-related expenditures on financial instruments were the highest in Italy in both 2020 and 2021 while grants and tax expenditures in 2021 were also relatively high. Structural industrial policy expenditures increased by 19% in 2021 relative to 2020, partly compensating a large decrease in Covid-related financial instruments.
- Italy devotes a large share of its structural industrial policy expenditures to green, technology and sectoral support, the former mostly through feed-in tariffs to producers of electricity from renewable sources with some instruments focusing on photovoltaic energy. Support to SMEs is higher than in other countries, mainly through tax expenditures and guarantee schemes.
- Like in many other countries, the sectors most targeted by sectoral policies in Italy are energy and transport, the former mainly through feed-in tariffs for renewable electricity production and the latter mainly through tax expenditures for energy use.

## ITALIAN INDUSTRIAL STRATEGY EXPENDITURES - 2021 NUMBERS



*This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.*

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

The QuIS team would like to thank Alessandra Concetti, Paola Martini and Ilaria Sanapo for their feedback and support on this note and the project.

## The QuIS project



The 'Quantifying Industrial Strategies (QuIS)' project measures industrial strategies across OECD countries through harmonised data on industrial policy expenditures, their composition, their mode of delivery, and the characteristics of their beneficiaries. This allows participating countries to benchmark their industrial strategies against each other in terms of industrial policy expenditures, policy priorities, policy instruments and recipients.

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 in a common database. Another relevant delivery of the QuIS project is the report 'Quantifying industrial strategies across nine OECD countries' published as an OECD Science, Technology and Industry Policy Paper, which consists in a cross-country analysis of the industrial strategies of the first nine countries participating in the project. Both the database and the report will be downloadable from <https://www.oecd.org/industry/industrial-policy-and-strategies/>.

## General picture

Italian spending on industrial policy differs in magnitude relative to other countries in the QuIS database. In 2021, grants and tax expenditures on the one hand, and non-export financial instruments on the other hand, were higher compared to the benchmark. This country note focuses on the distribution of industrial spending across criteria and sectors within Italy and its comparison to the benchmark. The overall breakdown of spending is mainly driven by markedly higher green and technology support than the benchmark in the form of grants and tax expenditures, as well as higher support for SMEs, both through tax expenditures and financial instruments. This was even more pronounced in 2020 due to SME support during the Covid-19 crisis. Italy's industrial strategy also has a stronger digital focus than the benchmark, mainly through tax expenditures. Sectoral support is also higher than the benchmark and primarily oriented towards energy and transport, with support for energy exclusively provided through green grants, while Italy's industrial strategy is generally less focused on jobs and skills than in other countries.

### Box 1. QuIS methodology

QuIS gathers publicly available data from many and decentralised sources on industrial policy expenditures. For the case of Ireland, the project focuses on annual industrial policy expenditures higher than EUR 6 million (0.002% of GDP in 2017). The period covered is 2019-2021 and the data track both structural policies and COVID-19 emergency support measures. Instruments targeting agricultural firms are excluded from the database and the analysis. Policy instruments are classified along four dimensions: scope, instrument type, eligibility criteria and selectiveness. The QuIS methodological paper outlines the scope and the definitions in more detail and can be found here: [oe.cd/il/QuIS](https://www.oecd.org/industry/industrial-policy-and-strategies/). Importantly, financial instruments, defined as the provision of loans, loan guarantees or equity investments, are measured through the so-called notional amounts method, which measures expenditures as 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 analyzed separately.

Countries used to define the benchmark are Canada, Denmark, France, Israel, Italy, the Netherlands, Sweden, and the United Kingdom. Country notes are also available for these countries.

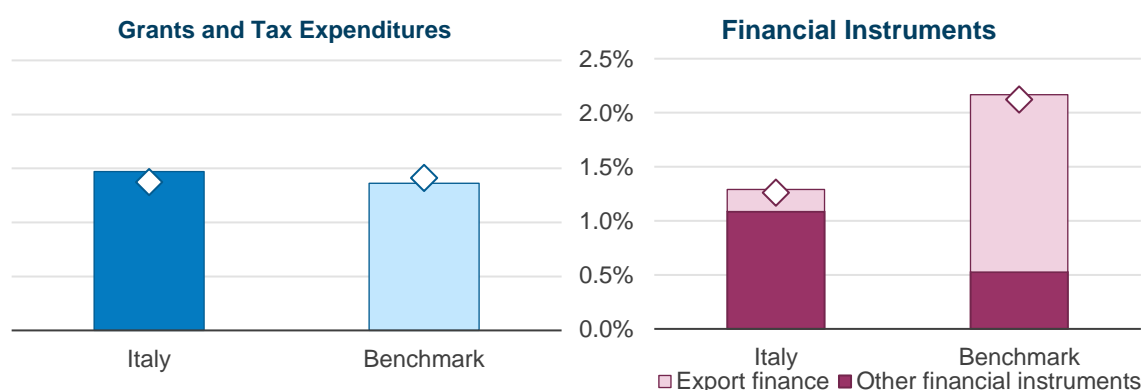
**Figure 1. QuIS Data Categorization**

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

*Note:* Eligibility criteria are not mutually exclusive, and some policies do not match any of the criteria

#### A. Italian industrial policy

**Figure 2. 2021 Industrial policy expenditures, % of GDP (diamonds – in 2019)**



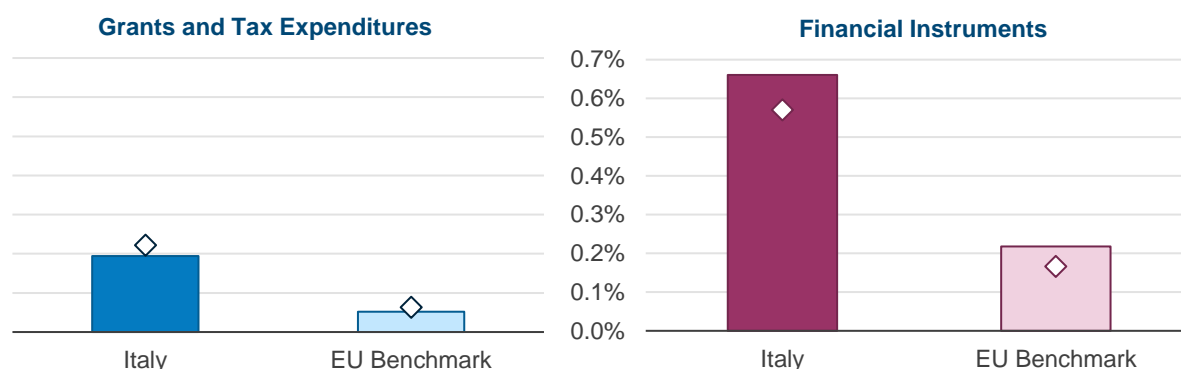
*Note:* Domestic and structural policies (i.e., excluding Covid and EU support).

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

Italy marginally exceeds the benchmark average in terms of domestic structural grants and tax expenditures as a percentage of GDP, at 1.5% vs 1.4% in 2021 (**Figure 2**). In terms of financial instruments, Italy provides less support than the benchmark overall (1.3% vs 2.1%): less support in terms of export finance, but more support than any other benchmark country in terms of non-export finance.

Italy slightly increased total structural spending as a share of GDP in 2020 and again in 2021 compared to 2019. Together with a large increase in GDP (+7% between 2021 and 2020), this implies a large increase in spending in 2021 relative to 2020 (+19%), the second largest increase among benchmark countries after France (+29%). Financial instruments account for most of this increase, both through new instruments and the growth of existing ones.

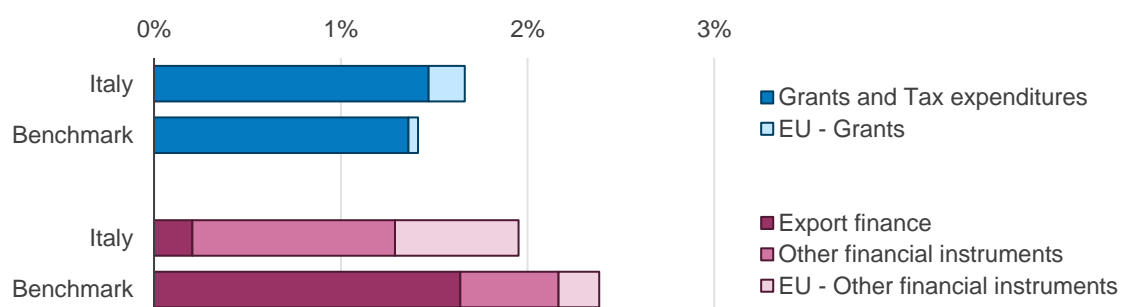
**Figure 3. EU industrial policy support on grants/tax expenditures and financial instruments, 2021, % of GDP (diamonds – in 2019)**



Source: OECD calculations based on the QuIS database.

In 2021, Italy received more support from the EU than the other EU countries in the benchmark. This is true both in terms of grants (0.19% vs 0.05% of GDP, **Figure 3 on the left**) and in terms of financial instruments (0.66% of GDP vs 0.22% of GDP, **Figure 3 on the right**). Regarding grants, one of the largest instruments was the European Regional Development Fund (ERDF), from which Italian firms received 0.18% of GDP. In terms of financial instruments, European Investment Bank (EIB) loans represent the largest single programme at 0.37% of GDP in 2021. Italian firms also benefited from the European Investment Fund (EIF)'s guarantee programme, which increased its support from 0.03% of GDP in 2019 to 0.10% of GDP in 2021.

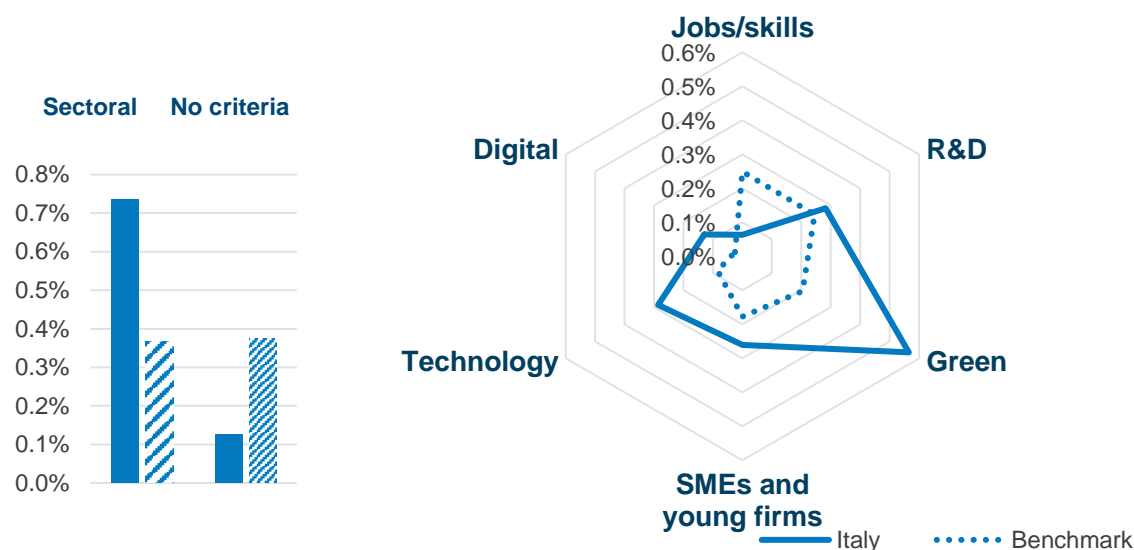
### Summary Figure. Industrial policy expenditures by instrument type in 2021 as a % of GDP



Note: Includes EU support.

Source: OECD calculations based on the QuIS database.

**Figure 4. Industrial policy expenditures (grants and tax expenditures) by eligibility criteria in 2021, % of GDP**



Source: OECD calculations based on QuIS database.

Regarding **grants and tax expenditures**, the priorities of the Italian industrial strategy are slightly different from those of the benchmark (**Figure 4**): there is more focus on the green, sectoral and technology criteria, and to a lesser extent on the SMEs and young firms and the digital criteria, though less on jobs and skills. Italy resorts less to broad horizontal grants/tax expenditure schemes than other countries: only 13% of policy expenditure relates to none of these criteria, compared to 38% in the benchmark.

Italy spends more than other benchmark countries on the green criterion (34% of grants and tax expenditures compared to 13% for the benchmark). Most of this spending takes the form of grants for producers of electricity from renewable sources. The oldest and largest scheme, *Conto Energia*, started in 2005. It has been revised several times and no longer provides new contracts, having reached its legal limit<sup>1</sup>. However, the grants paid on the basis of the previously concluded contracts (which usually have a duration of 15 or 20 years) still represented 0.18% of GDP in 2021<sup>2</sup>, which is comparable to the French *Soutien aux énergies renouvelables électriques en métropole continentale - Contrats d'achat* (0.23% of GDP). *Conto Energia* only serves photovoltaic energy plants, explaining why Italy's industrial strategy has a more technologically focused expenditures than other countries (17% of grants and tax expenditures compared to 6% for the benchmark). However, Italy has other large renewable energy grant schemes which do not have a technology criterion (*Tariffa Fissa Omnicomprensiva e Ritiro Dedicato*, *GRIN* are other examples, worth more than 0.11% of GDP each). Beyond renewable energy instruments, several other non-energy green instruments exist, such as a grant for the use of biomethane and other biofuels in the transport sector (*Promozione dell'uso del biometano e degli altri biocarburanti avanzati nel settore dei trasporti*, 0.04% of GDP).

<sup>1</sup> [Feed-in premium for photovoltaic systems \(Conto Energia V\) – Policies - IEA](#)

<sup>2</sup> The source of the expenditures on *Conto Energia* and similar schemes is the annual reports of the Italian agency *Gestore Servizi Energetici* (GSE). Many beneficiaries of the schemes are households or public administrations and payments made towards them do not count as industrial policy expenditure. Based on recipient-level information, it is possible to estimate the average share of payments going to enterprises for each scheme, and only this share is recorded as expenditure in the QuIS database. Moreover, part of what GSE considers a "payment" corresponds to the market price of electricity and only what is above the market price is an industrial policy expenditure according to the QuIS methodology. Therefore, the market value of the electricity purchased by GSE is subtracted from the value of the payments to businesses producing renewable electricity to estimate the number recorded as an industrial policy expenditure in the QuIS database.

Italy targets SMEs (including microenterprises) and young firms more than the benchmark (16% of grants and tax expenditures relative to 11% for the benchmark). The largest instrument is a tax credit meant to encourage investment by SMEs in the South worth 0.07% of GDP in 2021 (*Credito d'imposta per nuovi investimenti in beni strumentali ZES Mezzogiorno*). There also exists a large grant programme to encourage investment by exporting SMEs worth 0.03% of GDP in 2021 (*Sostegno per la Patrimonializzazione delle PMI esportatrici (finanziamenti a fondo perduto) - Fondo per la Promozione Integrata*).

Italy's industrial strategy also has a strong digitalisation component: 8% of Italy's industrial policy grants and tax expenditures include a digital criterion, against 2% for the benchmark. This is likely a policy response to the generally low rate of adoption of ICT technologies in Italy (Calvino et al. 2022). Many digital schemes also include a technology criterion. The largest instruments are a tax credit for investment in ICT technologies representing 0.06% of GDP in 2021 (*Credito d'imposta per investimenti in beni strumentali nuovi*) and the hyper-amortisation schemes for investment in ICT-related capital totalling 0.05% of GDP in 2021 (*Iperammortamento per investimenti altamente tecnologici in chiave industria 4.0 ; super ammortamento per i relativi software applicativi interconnessi*). Introduced in 2021, the former was one of the largest contributors to the increase in structural, domestic industrial policy between 2020 and 2021 in Italy.

Italy's industrial strategy is less targeted towards the jobs/skills (4% vs 15%) and slightly less towards R&D (17% vs 20%) criteria than the benchmark countries. Regarding jobs/skills, Italy distinguishes itself as a country with a high labour tax wedge but low industrial policy spending on labour and skills. Existing programmes are mostly aimed at improving skills. Regarding R&D, Italy introduced in 2015 an incremental R&D tax credit, which was replaced by a volume-based R&D tax credit in 2020. In addition to the volume-based R&D tax credit, Italy offers a tax allowance for R&D expenses related to eligible intangible assets since 2021, replacing the previous income-based patent box regime with a cost-based incentive. Since Italy spends more on grants and tax expenditures overall, the cost of R&D tax support in Italy was worth 0.28% of GDP in 2021, slightly more than other countries' average spending in 2021<sup>3</sup> (0.25%).

Finally, 44% of Italy's industrial policy grants and tax expenditures are sectoral, which is higher than the average in the benchmark countries (27%). The most targeted sectors are energy and transport, in line with other countries. Energy is promoted through the extensive green grants for renewable electricity producers mentioned above. The largest instrument supporting transport firms, amounting to 0.05% of GDP, is a tax break on diesel (*Riduzione di accisa sul gasolio impiegato come carburante per l'autotrasporto merci ed altre categorie di trasporto passeggeri*).

Regarding financial instruments, an important difference is that in other countries, on average, more than 75% of spending on financial instruments takes the form of export finance. For instance, export finance represents 4.46% of GDP in Canada and 1.88% in Sweden in 2021.

The largest single guarantee programme is the SME guarantee fund (*Fondo di Garanzia per le PMI*). Its structural component represents 0.74% of GDP in 2021. The fund also played a key role in the Covid-19 policy toolkit of Italy.<sup>4</sup> The second largest financial instrument is the Guarantee Fund for the securitisation of non-performing loans, with 0.16% of GDP in 2021 (*Fondo di garanzia sulla cartolarizzazione delle sofferenze*). The value of this scheme doubled between 2020 and 2021, contributing to the increase in structural, domestic industrial policy spending in 2021 relative to 2020 together with the growth of the *Sostegno per la Patrimonializzazione delle PMI esportatrici – Fondo 294/81* (guarantee to support the capitalisation of exporting SMEs, 0.08% of GDP in 2021 vs 0.03% in 2020).

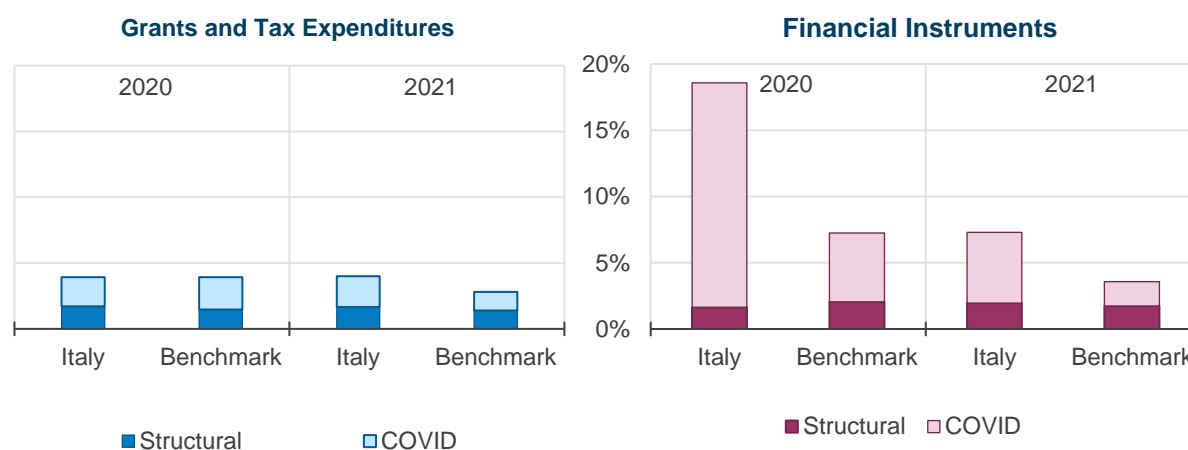
<sup>3</sup> Regarding the incremental R&D tax credit, [Resolution No. 4/2021/G of the Court of Auditors](#) showed important differences between the budgeted amounts and the amounts disbursed to beneficiary enterprises in each of the years between 2016 and 2019. QuIS therefore takes the disbursed amount for 2019 and impute it to 2020 and 2021, correcting for inflation. For additional details on country-specific R&D tax relief provisions, please see <https://stip-pp.oecd.org/innotax/countries/>. See also the Italy country note <https://www.oecd.org/sti/rd-tax-stats-italy.pdf>

<sup>4</sup> In 2019, the scheme was worth 0.74% of GDP. In this note, 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.

In the context of the post-Covid-19 recovery, a new guarantee scheme called the “Green New Deal” was introduced by the Italian export agency SACE, which manages the export finance programmes as well as other financial instruments that are not focused on export transaction. Worth 0.09% of GDP, this new scheme is devoted to financing the energy transition and contributes to the 2020-2021 expenditure increase.

## B. Italy used more financial instruments for COVID support to businesses than the benchmark

**Figure 5. COVID emergency support through grants/tax expenditures (left) and financial instruments (right), % of GDP**



Source: OECD calculations based on the QuIS database.

In the context of Covid-19, all the countries in the benchmark increased industrial policy expenditures. In terms of grants and tax expenditures, Italy spent an additional 2.23% of GDP on Covid-19 emergency support in 2020, compared to 2.46% of GDP for benchmark countries (**Figure 5**). Overall, Italy spent slightly less than other countries in terms of grants and tax expenditures in 2020. This changed in 2021: Covid-related grants and tax expenditures increased slightly to 2.33% of GDP in 2021, while other countries decreased their Covid-specific grants and tax expenditures to 1.41% of GDP on average. This meant that, aggregating both structural and Covid-specific spending, Italy spent 1% of GDP more than the benchmark countries average on industrial grants and tax expenditures in 2021.

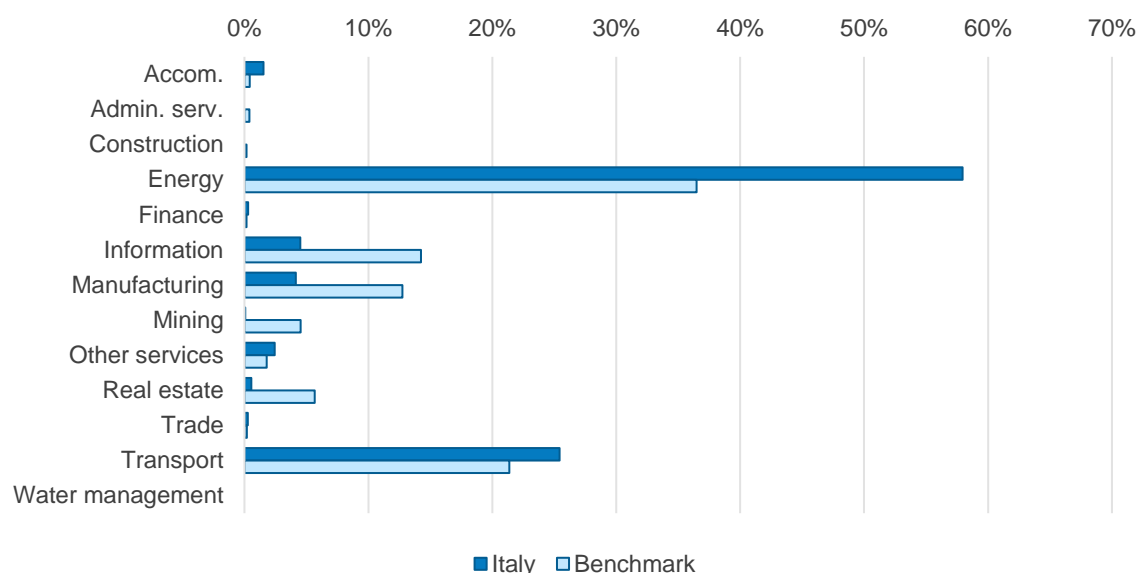
More importantly, Italy ramped up existing financial instruments and set up new large financial instruments to support firms in the context of the Covid-19 pandemic, which amounted to 17% of GDP in 2020, against about 5% for the benchmark (**Figure 5**). The bulk of the financial instruments were managed by the agency SACE to reinsure short-term credit insurance issued by private firms (art. 35 “Relaunch” Decree). The volume insured reached 166 billion euros or 10% of GDP in 2020. Though managed by the export agency, 71% of the credit insurances issued under art. 35 covered trade within Italy. In addition, a pre-existing guarantee scheme for SMEs increased to 6.4% of GDP in 2020, compared to just 0.7% in 2019 (*Fondo di Garanzia per le PMI*). Italy is the only country that relied this heavily on an existing programme to support firms in the context of the Covid-19 pandemic and ensuing lockdowns. Finally, SACE also introduced a Covid-specific guarantee programme called *Garanzia Italia* (art 1 of the “Liquidity” decree), which amounted to over 1.1% of GDP in 2020.

In 2021, the volume of new guarantees issued by the short-term guarantee program was divided by 6, bringing Italy’s financial instruments closer to those of other countries: Covid-related financial instruments amount to 5.4% of GDP (vs 1.8% for the benchmark) and structural programmes amount to 1.4% of GDP (vs 1.6%). However, structural spending increased by 19% in 2021 relative to 2020, especially through structural financial instruments as explained above. This was the second highest growth rate among the benchmark countries after France (+29%).

## Deep dive on Italian industrial strategy

### A. Italian sectoral policies are targeted to energy and transport

**Figure 6. Sectoral Grants and tax expenditures as % of total sectoral support by sector, 2021**



*Reading example:* In Italy 58% of sectoral grants and tax expenditures is devoted to energy, against 37% in the benchmark countries.

*Note:* Includes EU support. Instruments targeting agricultural firms are excluded from the QuIS database and analysis.

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

A sectoral breakdown shows that industrial policy in Italy prioritises the energy and transport sectors (**Figure 6**). Most countries also support the energy sector more than other sectors, but Italy has a particularly high support, representing almost 58% of sectoral support (vs 37% for the benchmark countries), and 0.42% of GDP (vs 0.16%) and 26% of sectoral value added (vs 15%).

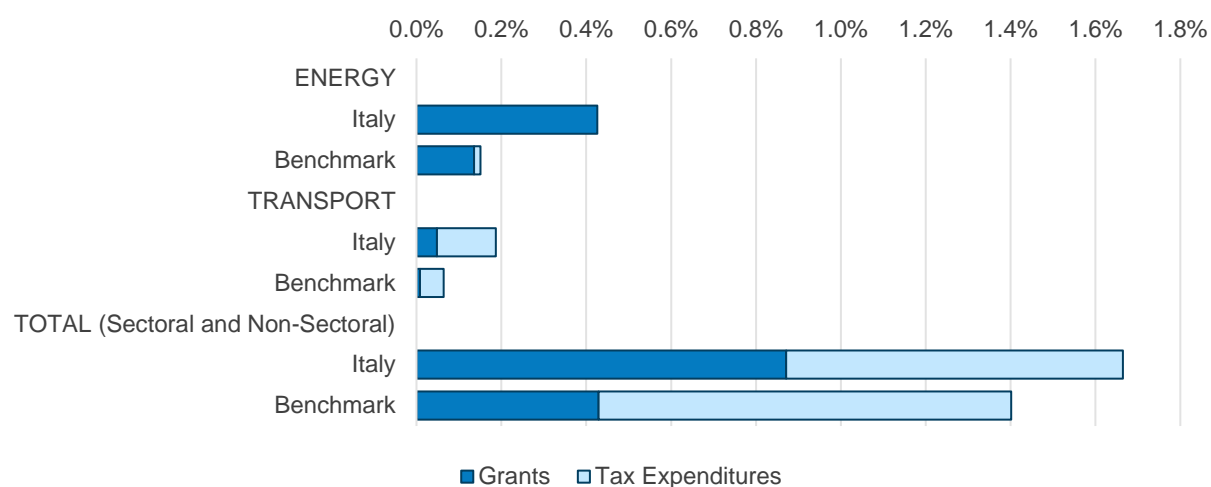
The second most supported sector in Italy is Transport, which receives 25% of sectoral support (vs 21% on average for the benchmark), equivalent to 0.19% of GDP (vs 0.08% on average for the benchmark). Italy's sectoral grants and tax expenditures represent 3.7% of the sector's value added as opposed to 2.4% on average for the benchmark.

### B. Italian sectoral support mostly consists of domestic grants, EU grants and some domestic tax expenditures, with few financial instruments

In line with other countries that strongly support the energy sector, such as France and Denmark, almost all industrial policy spending in Italy for the energy sector takes the form of grants, more than in Italian industrial policy in general (**Figure 7**). All these grants also include the green criterion, since they support producers of electricity from renewable sources. Several schemes exist, with the largest one representing 0.18% of GDP in 2021 (*Conto Energia*).

By contrast, Italy's support for the transport sector relies almost entirely on tax expenditures. The single largest instrument is a tax break for the use of diesel amounting to 0.08% of GDP (*Riduzione di accisa sul gasolio impiegato come carburante per l'autotrasporto merci ed altre categorie di trasporto passeggeri*). Spending decreased sharply between 2019 and 2020 (0.04% of GDP), rising back to the same level in 2021, probably due to the restriction of movement related to the Covid-19 pandemic.



**Figure 7. Tax expenditures vs grants by sector as % of GDP, 2021**

*Reading example:* In Italy the amount of support, in the form of tax expenditures, specifically directed to the transport sector represents 0.14% of GDP, and 0.05% of GDP for the benchmark.

*Note:* Includes EU support.

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

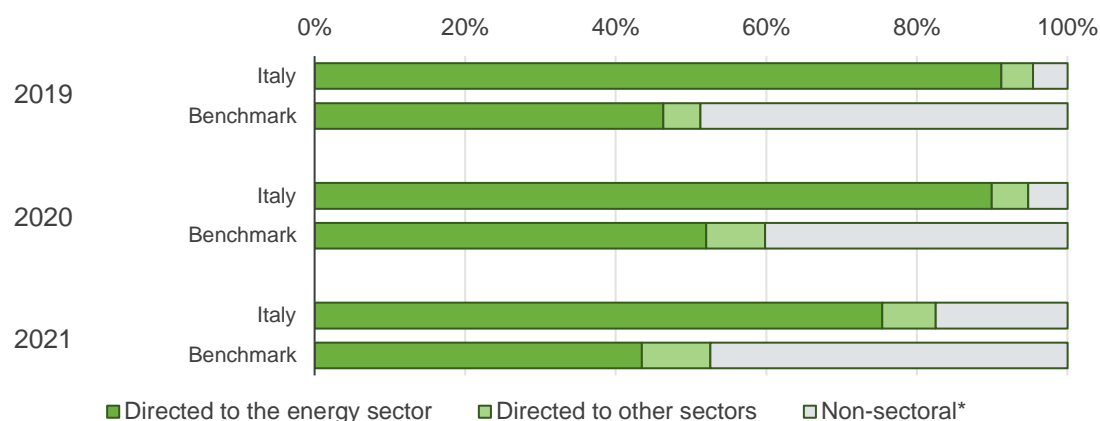
There are no financial instruments specifically targeting the energy sector or the transportation sector. Italy's sectoral support through financial instruments is provided almost exclusively to the financial sector (0.16% of GDP). This support consists of a government guarantee for the securities issued from non-performing loans to help private banks sell the latter (*Fondo di garanzia sulla cartolarizzazione delle sofferenze (Gacs)*). The size of this guarantee decreased significantly between 2019 and 2021 (from 0.25% to 0.16% of GDP), which, together with the discontinuation of a state guarantee on bond issuances of Banca Carige (0.17% of GDP in 2019), led to the halving of the financial support to the financial sector between 2019 and 2021.

### C. Italy's green support is concentrated on the energy sector

Green industrial policies in Italy focus almost exclusively on the energy sector. In other countries, they are more balanced, albeit lower in terms of total spending (**Figure 8**): in 2019, 91% of Italy's green policies were directed to the energy sector against 47% for the benchmark countries. Non-energy instruments include a grant for the use of biomethane and other biofuels in the transport sector (*Promozione dell'uso del biometano e degli altri biocarburanti avanzati nel settore dei trasporti*, 0.04% of GDP). This sectoral focus has decreased between 2019 and 2021, due to both the slight decrease in green grants for renewable electricity producers and the slight increase in energy efficiency and building renovation programs, as well as the creation of two IPCEIs (Important Project of Common European Interest) on batteries, each worth 0.03% of GDP.

In addition to these grants and tax expenditures, Italy introduced the Green New Deal cross-sector guarantee scheme at the end of 2020, which increased by 0.08 percentage points of GDP in 2021.

**Figure 8. Sectoral composition of green support in Italy, % of total green industrial support in grants and tax expenditures**



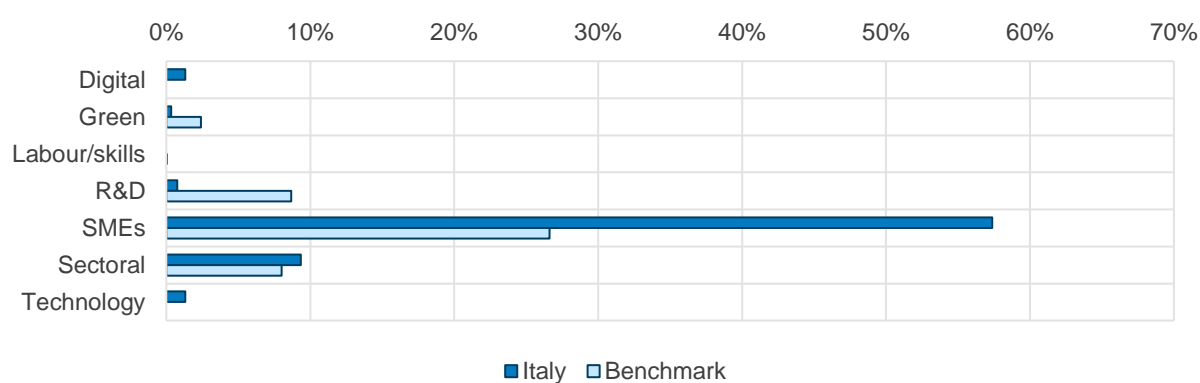
*Note:* Includes EU support. \*\*Non-sectoral” refers to policies that are not targeted to a specific sector. Nevertheless, some beneficiaries of these policies may belong to the energy sector.

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

#### D. Italy’s industrial policy benefits SMEs more than the benchmark

One aspect of the Italian industrial policy is its support to SMEs (including microenterprises). As mentioned above, 16% of grants and tax expenditures target SMEs, vs 11% on average for the benchmark countries. Moreover, 57% of non-export financial instruments target SMEs, relative to 27% on average for the benchmark countries. **Figure 9** shows that the focus on SMEs outperforms by far any other criterion of interest in the QuIS project for structural, non-export financial instruments in Italy. The largest instrument is again the SME Guarantee fund mentioned above, but several other programmes support SMEs, such as the one supporting exporting SMEs with 0.09% of GDP in 2021 (*Sostegno per la Patrimonializzazione delle PMI esportatrici - Fondo 394/81*).

**Figure 9. Distribution of non-export financial instruments in 2021, as a % of total expenditure in financial instruments**



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

## Box 2. The problematic access to capital for Italian (small) firms

The Italian government's heavy use of financial instruments in industrial policy is a response to the difficult access to finance for companies, especially SMEs.

Italian capital markets are relatively smaller than that of comparable economies. For example, while Italy generates 11% of the EU's GDP in 2018, it represents just 6% of the EU's stock market capitalisation, 6% of non-financial corporate bond issuance, and 5% of private equity investment (OECD 2020). As a result, firms in Italy have historically relied on bank loans more than other countries: bank loans to non-financial firms amounted to almost 40% of GDP in 2018. This is 1.5 times higher than in Germany for example (OECD 2020).

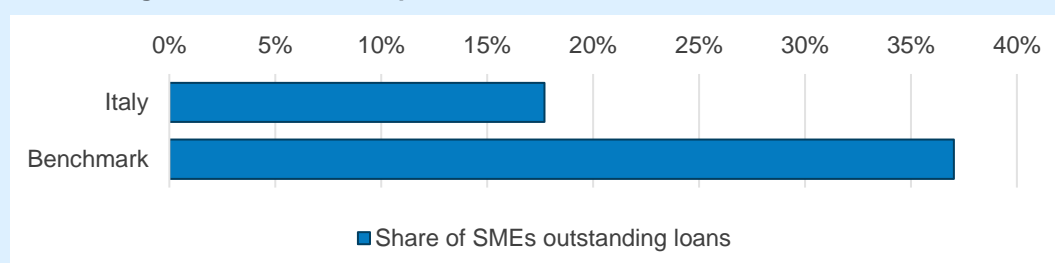
Since the 2008 financial crisis, there has been a steady decrease in total bank lending to non-financial firms in Italy. This credit crunch has been heterogeneous: lending has grown for "safe" and "solvent" firms, and it has decreased for "vulnerable" and "risky" companies (Banca d'Italia, 2018).

Small firms are vulnerable to credit crunch and high financing cost. **Figure 10** shows that, over the 2015-2019 period, the share of total outstanding loans that are held by SMEs is lower in Italy than in other countries. SMEs in Italy also face a higher interest rate spread compared to large firms than in similar countries: about 1.5 percentage points during the 2015-2019 period compared to 1.1 for the benchmark countries (OECD Scoreboard on SME and entrepreneurship finance database).

The need for public intervention is reinforced by the historical reliance of the Italian business sector on short-term financing, which includes short-term debt, trade credit and other current liabilities (OECD 2020). This dependence may hurt long-term planning and investment and make companies more vulnerable to changes in credit conditions. SMEs are particularly at risk: in 2018, half of Italian SMEs' debt was due within one year.

Besides bank loans, other financial instruments such as venture capital, direct borrowing, etc. are growing in Italy but they do not compensate for the overall credit crunch and are often less available to SMEs. Therefore, public support for SMEs to access finance may help the entire economy increase its performance.

**Figure 10. Access to capital for Italian SMEs and benchmark countries**



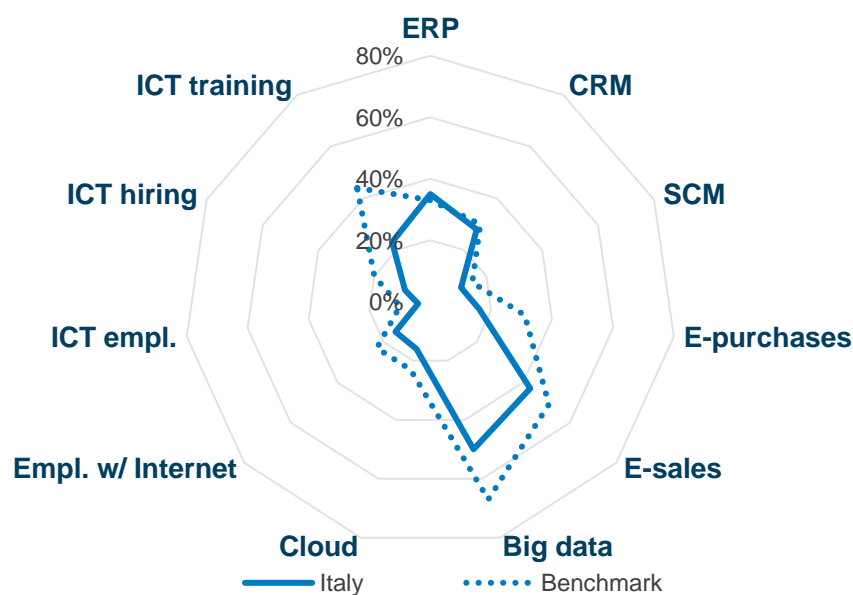
Source: OECD calculations based on the OECD Scoreboard on SME and entrepreneurship finance database.

Note: The number shown is the ratio of Outstanding loans to SMEs / Total outstanding loans. The reported values are averages for the period 2015-2019.

### E. Italy's industrial policy has a large digital component

In Italy, 8% of industrial grants and tax expenditures target the digital transition, vs 2% on average for the benchmark countries. Moreover, 1.2% of financial instruments have a digital criterion while no other country in the benchmark uses digital as a criterion to access financial instruments (**Figure 9**). This comes in the context of a generally low adoption of digital technologies compared to the OECD average (see **Figure 11** and Calvino et al., 2022). The data also show that Italian firms generally accumulate less complementary intangible assets than their OECD peers. Two important components of these intangible assets are IT-related human capital and R&D. These gaps are more important when comparing small Italian firms to small firms in other OECD countries.

**Figure 11. Information and Communication Technology Adoption by firms in 2019**



Source: OECD calculations based on the OECD Telecommunications and Internet Statistics. 2019 data when available, latest available if 2019 is not available. All the benchmark countries included when available. (OECD, 2023<sup>[11]</sup>)

The two largest digital policy instruments are tax expenditures. Hyper depreciation, an instrument worth 0.08% of GDP in 2019 and 0.03% of GDP in 2021, introduced a total tax depreciation of 150 to 250% of the cost of new “smart” and interconnected equipment (*Iperammortamento per investimenti altamente tecnologici in chiave industria 4.0; super ammortamento per i relativi software applicativi interconnessi*). Calvino et al. (2022) estimate that it supported up to EUR 30 billion worth of private investment in 2018, with the 22 000 or so beneficiary firms being larger, older, and more productive than non-beneficiaries. In 2021, a tax break was introduced to gradually replace the hyper depreciation scheme, amounting to 0.06% of GDP (*Credito d'imposta per investimenti in beni strumentali materiali 4.0*). Only new and technologically advanced capital goods are eligible.

The digitalisation of firms relies not just on digital policies but on an array of factors, including R&D, access to finance and infrastructure. R&D is often seen as complementary to the digital savviness of firms. It has already been highlighted that R&D is not the top priority of Italy's industrial strategy, although R&D spending is slightly higher than the benchmark. One of the largest instruments throughout the period of study is the incremental R&D tax credit. Calvino et al. (2022) show that this instrument did increase spending for less productive firms, but the effect slowed down (see also (OECD, 2021<sup>[2]</sup>)). The measure was replaced with a volume-based R&D tax credit in 2020, while the income-based patent box regime was replaced with a cost-based tax allowance in 2021, which may lead to an increased performance of R&D support in the future.

Access to finance is also complementary with investment in tangible and intangible assets. Calvino et al. (2022) show that a negative credit shock can reduce technology adoption, especially those that require high initial investment. This is particularly important for small firms, which in general have more difficulties accessing funding. The financial instruments mentioned above may therefore play an important role in supporting the digitalisation of Italian SMEs, even if they do not directly target it.

Beyond the scope of our work, Italy has also invested in high-speed broadband infrastructure (so called “Next Generation Access” broadband) which has been shown to be highly complementary with digital technology adoption (Aksoy et al. 2022).

## References

Aksoy, C., B. Demir and B. Javorcik (2022), "Breaking invisible barriers: Does fast internet increase competition in input markets?", Working Paper.

Banca d'Italia (2018), Financial Stability Report, Nr. 1/2018, April, [https://www.bancaditalia.it/pubblicazioni/rapporto-stabilita/2018-1/en-FSR-1-2018.pdf?language\\_id=1](https://www.bancaditalia.it/pubblicazioni/rapporto-stabilita/2018-1/en-FSR-1-2018.pdf?language_id=1).

Calvino, F., et al. (2018), "A taxonomy of digital intensive sectors", OECD Science, Technology and Industry Working Papers, No. 2018/14, OECD Publishing, Paris, <https://doi.org/10.1787/f404736a-en>.

Calvino, F., C. Criscuolo and R. Verlhac (2020), "Declining business dynamism: Structural and policy determinants", *OECD Science, Technology and Industry Policy Papers*, No. 94, OECD Publishing, Paris, <https://doi.org/10.1787/77b92072-en>.

Calvino, F., et al. (2022), "Closing the Italian digital gap: The role of skills, intangibles and policies", *OECD Science, Technology and Industry Policy Papers*, No. 126, OECD Publishing, Paris, <https://doi.org/10.1787/e33c281e-en>.

OECD (2020), "OECD Capital Market Review of Italy 2020: Creating Growth Opportunities for Italian Companies and Savers", *OECD Capital Market Series*, <https://www.oecd.org/corporate/ca/OECD-Capital-Market-Review-Italy.pdf>.

OECD (2021). "R&D Tax Incentives: Italy, 2021", [www.oecd.org/sti/rd-tax-stats-italy.pdf](http://www.oecd.org/sti/rd-tax-stats-italy.pdf), Directorate for Science, Technology and Innovation, December 2021

OECD (2022), "Interest rate spreads between loans to SMEs and to large firms: Nominal rates, percentage points", in *Financing SMEs and Entrepreneurs 2022: An OECD Scoreboard*, OECD Publishing, Paris, <https://doi.org/10.1787/92e9f2e6-en>.