



### Computer Services 2021

#### Key findings

- The average 2021 STRI in the computer services sector is 0.22 out of a maximum of 1 (most trade restricted) indicating a relatively low overall level of restrictiveness. However, individual country scores diverge considerably, ranging between 0.11 and 0.45.
- The best performing countries in the sector are Japan, Korea, and the Czech Republic. Most reforms in 2021 were recorded in the United Kingdom, the Czech Republic and Viet Nam.
- Restrictions on foreign entry are the main drivers of trade restrictiveness in the sector, with contributions to the total index values being 31% in OECD economies and 46% in non-OECD economies.
- OECD estimates suggest that halving the distance to best practice in this sector is associated with a reduction in the costs of cross-border trade in computer services between 6% and 12% for the average country included in the STRI database.

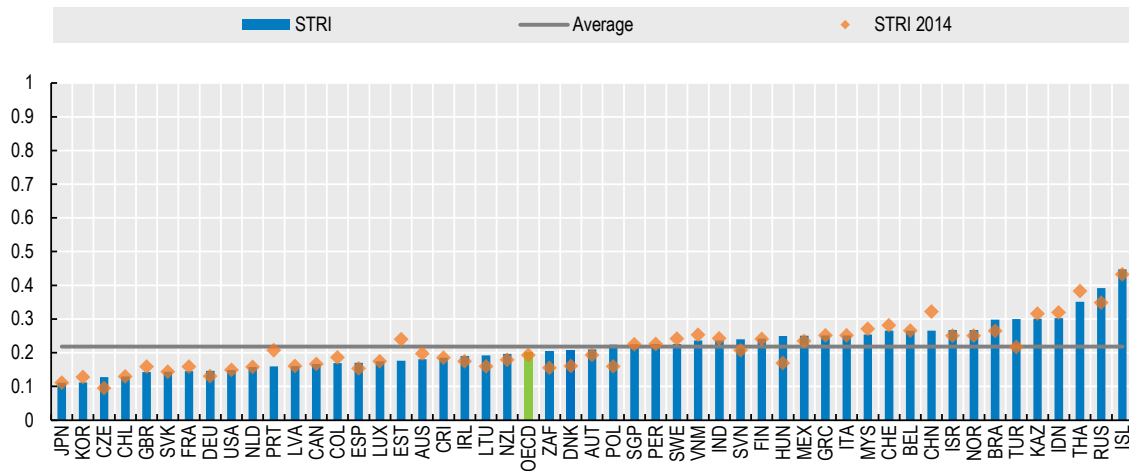
The importance of computer services has grown significantly in the past decades driving the development of a data-driven global economy. Computer services are mainly traded business to business. Supply of services across borders are prominent in this sector, especially as the quality of the communication infrastructure improves worldwide. Nonetheless, cross-border supplies are often complemented with technical expertise for installation, use and maintenance requiring travel for computer engineers and other technical experts.

Computer services are defined as computer programming, consultancy and related activities and information service activities (ISIC Rev 4 code 62 and 63). Major exporters are the European Union, India and the United States.

The 2021 STRIs in the computer services sector range between 0.11 and 0.45, with a sample average of 0.22 (Figure 1). There are 25 countries below and 25 countries above the average. The best performing countries in the sector are Japan, Korea, and the Czech Republic.

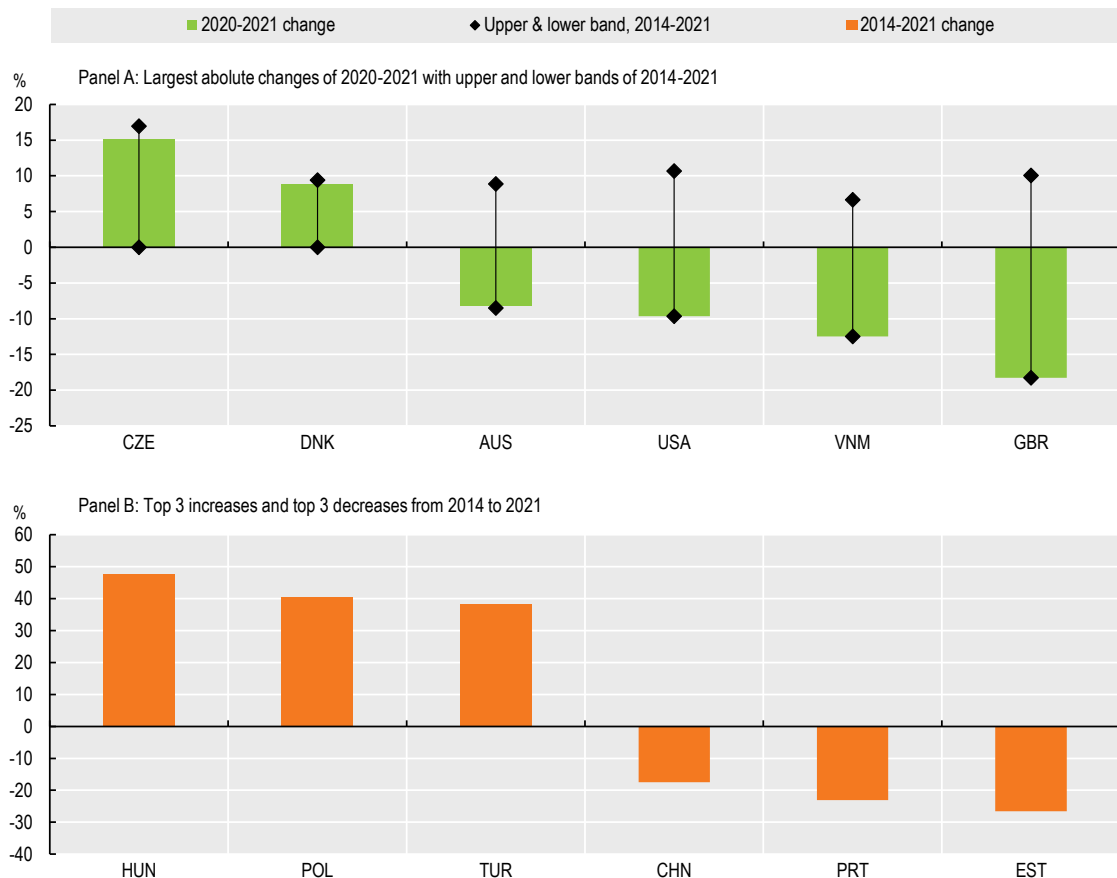
Several countries introduced regulatory changes affecting the STRIs in 2021 and more so since 2014 (Figure 2). In 2021, the STRIs in this sector saw the biggest changes in the Czech Republic (15%), Denmark (9%), Australia (-8%), the United States of America (-10%), Viet Nam (-12%), and the United Kingdom (-18%). Since 2014, on the one hand, we observed countries that became more restrictive over the years such as Hungary (48%), Poland (41%) and Turkey (38%). On the other hand, progressive liberalisations over the years were identified in countries such as China (-17%), Portugal (-23%), and Estonia (-27%).

Figure 1. STRI in computer services, 2021



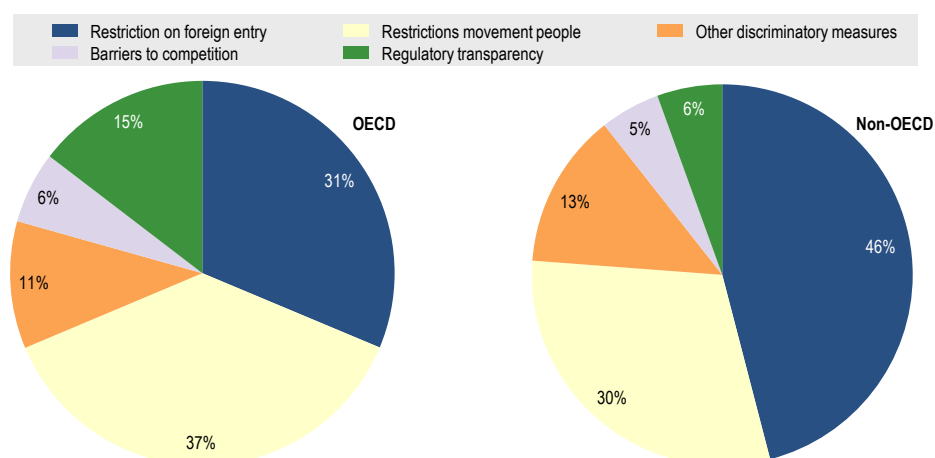
Note: The STRI indices take values between zero and one, one being the most restrictive. The indices are based on laws and regulations in force on 31 October 2021. The STRI regulatory database covers the 38 OECD countries, Brazil, China, India, Indonesia, Kazakhstan, Malaysia, Peru, Russian Federation, Singapore, South Africa, Thailand, and Viet Nam. 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. Source: OECD STRI database (2021).

Figure 2. Change since 2014 and change in the last year, by country



Note: Selection criteria for Panel A was based on largest absolute changes since 2020. Panel B selection is the three largest increases, and the three largest decreases in the STRI since 2014. Source: OECD STRI database (2021).

**Figure 3. STRI policy areas for computer services by OECD and non-OECD economies, 2021**



Source: OECD STRI database (2021).

The measures in the STRI database are organised under five policy areas (Figure 3). Restrictions on foreign entry include barriers related to establishing and operating companies such as foreign equity limits or requirements on board of directors and cross-border data flows. Restrictions on the movement of people cover barriers that affect the temporary entry of foreign services providers through quotas, labour market tests and short durations of stay. Other discriminatory measures include discrimination of foreign services suppliers as far as taxes, subsidies and public procurement are concerned. Barriers to competition include information on anti-trust policy, government ownership of major firms and the extent to which government-owned enterprises are exempt from competition laws. Regulatory transparency includes information on consultations and dissemination prior to laws and regulations entering into force. It also records information obtaining a license or a visa. In this sector, barriers related to restriction on foreign entry are most prominent and amount to 31% in OECD economies and 46% in non-OECD economies.

Table 1 lists the most common restrictions identified in each policy area. Under restrictions on foreign entry, common impediments relate to cross-border data flows, acquisition and use of land and real estate, and screening requirements for foreign investments. Demonstrating a local presence in the country (e.g. through a local representative) is required in 18 countries, while at least one manager must also be resident in 17 countries. Computer services can easily be traded across borders through electronic networks. However, cross-border trade needs to be supported by visits to the premises of the customer, both through business travel for technical support and for longer visits to work with clients, for instance on organisational reforms to maximise the benefit of new software. Restrictions to the movement of people, however, remain a significant impediment in this sector with short permitted durations of initial stay and conditioning entry based on labour market tests for contractual and independent services providers in 36 out of the 50 countries covered. Entry conditions for intra-corporate transferees are generally more open across most countries. A license to practice for professionals in this sector (e.g. computer engineers) is required in 12 countries. Under other discriminatory measures, barriers related to accessing public procurement markets for foreign tenderers remain the most common challenge. Barriers to competition do not appear widespread in computer services. Apart from general requirements related to minimum capital for new companies, six countries record state owned enterprises among the major services suppliers in the sector and four apply stringent conditions on advertising. Under barriers related to regulatory transparency, lengthy, costly and complex regulatory procedures related to obtaining a business visa contribute to the index for a large number of countries. In addition, the public consultation process for new legislative instruments falls short of best practice in 11 countries and the time prior to the entry into force of new laws is considered short in eight countries.

**Table 1. Top 5 most relevant measures by policy area, 2021**

Policy area	Measure	Countries having a restriction <sup>1</sup>
Restrictions on foreign entry	Cross-border data flows: cross-border transfer of personal data is possible to countries with substantially similar privacy protection laws	42
	Acquisition and use of land and real estate by foreigners is restricted	34
	Screening exists without exclusion of economic interests	29
	Local presence is required for cross-border supply	18
	Board of directors: at least one must be resident	17
Restrictions to movement of people	Limitation on duration of stay for contractual services suppliers	37
	Labour market tests: intra-corporate transferees	37
	Labour market tests: contractual services suppliers	36
	Limitation on duration of stay for independent services suppliers	34
	Memo: Licence or authorisation is required to practice	12
Other discriminatory measures	Public procurement: Procurement regulation explicitly prohibits discrimination of foreign suppliers	43
	Public procurement: Explicit preferences for local suppliers	24
	Public procurement: The procurement process affects the conditions of competition in favour of local firms	24
	Memo: The procurement process below the value thresholds affects the conditions of competition in favour of local firms	20
	Foreign suppliers are treated less favourably regarding taxes and eligibility to subsidies	4
Barriers to competition	Minimum capital requirements	27
	National, state or provincial government control at least one major firm in the sector	6
	Restrictions on advertising	4
	Prices or fees are regulated	1
	Publicly-controlled firms are exempted from the application of the general competition law	1
Regulatory transparency	Range of visa processing time	28
	Number of documents needed to obtain a business visa	26
	Cost to obtain a business visa	11
	There is an adequate public comment procedure open to interested persons, including foreign suppliers	11
	There is a legal obligation to communicate regulations to the public within a reasonable time prior to entry into force	8

**Notes**

1. The count for "memo" type of measures, which are not scored in the STRI, indicate the number of positive answers recorded for that measure across the 50 countries covered.

Top most relevant measures are selected on the basis of the following criteria: (1) most restricted horizontal measures (i.e. same answer across sectors), (2) most restricted sector-specific measures, (3) key measures or (4) memos affecting the score of other measures through hierarchy rules.

Source: OECD STRI database (2021).

**More information**

- » Access all country notes, sector notes, and interactive STRI tools at <http://oe.cd/stri>.
- » Read more about services trade policies and their impacts in [Services Trade Policies and the Global Economy](#).
- » Benz, S. and A. Jaax (2020), "The costs of regulatory barriers to trade in services: New estimates of *ad valorem* tariff equivalents", *OECD Trade Policy Papers*, No. 238, OECD Publishing, Paris, <https://doi.org/10.1787/bae97f98-en>.
- » Contact the OECD Trade and Agriculture Directorate with your questions at [stri.contact@oecd.org](mailto:stri.contact@oecd.org).