The Governance of Regulators

# Equipping Agile and Autonomous Regulators

OECD

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BETTER POLICIES FOR BETTER LIVES

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# Foreword

Economic regulators have an important role to play in the achievement of social, economic and environmental policy objectives in network sectors. They regulate and supervise to ensure smooth-running sectors that deliver essential services efficiently for the benefit of society. They exist to bring stability, predictability and confidence to markets that are constantly evolving. Since they operate from a unique position among consumers, operators and government, their governance is all the more important. Good governance is crucial to ensure effective regulators able to improve sector outcomes and build trust in regulatory systems and public institutions.

The ability of economic regulators to fulfil their functions may be compromised by budgetary pressures or other constraints in their funding and management of financial and human resources. Like other public bodies, they are expected to deliver “value for money” and find the most efficient ways to fulfil their mandates. As the sectors they oversee change, they need to rely on the right staff and funding to respond to new roles and expectations with agility.

This report identifies the main trends, challenges, opportunities and practices with regard to the resources of economic regulators, including in the context of the COVID-19 pandemic. It discusses the implications of funding and staff arrangements for the autonomy, agility, accountability and transparency of regulators and their ability to deliver on their mandates. The report finds that while many regulators are independent bodies, they may face restrictions in how they receive or manage resources. These restrictions can limit their autonomy and agility in practice. Furthermore, while the COVID-19 pandemic prompted fundamental changes to ways of working, it also highlighted some financial vulnerabilities.

The analysis relies on cross-country and cross-sectoral comparative data collected through the OECD Survey on the Resourcing Arrangements of Economic Regulators, conducted in early 2021 among participants of the Network of Economic Regulators. Fifty-seven regulators in energy, e-communications, transport and water sectors across 31 countries responded to the survey.

This report builds on previous OECD work on economic regulators, including the 2016 report *Being an Independent Regulator* and the 2018 *Indicators on the Governance of Sector Regulators*, as well as findings from Performance Assessment Reviews (PAFERs) of regulatory authorities.

This report is part of the OECD work programme on the governance of regulators and regulatory policy, led by the OECD Network of Economic Regulators (NER) and the OECD Regulatory Policy Committee (RPC), with the support of the Regulatory Policy Division of the OECD Directorate for Public Governance. The report was presented to the NER for comments at its 18th meeting in April 2022. The RPC approved the report for publication on 27 July 2022. It was prepared for publication by the Secretariat.

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Regulatory Authority, Portugal, the National Regulatory Authority for Public Services, Romania, the Transport Authority, Slovak Republic, the National Commission of Markets and Competition, Spain, the Energy Markets Inspectorate, Sweden, the Energy Market Regulatory Authority, Turkey, the Office of Communications, United Kingdom, the Office of Rail and Road, United Kingdom and the Water Industry Commission for Scotland, United Kingdom.

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# Abbreviations and acronyms

| | |
|---|---|
| **ACCC** | Australian Competition and Consumer Commission, Australia |
| **AER** | Australian Energy Regulator, Australia |
| **ANA** | National Water and Sanitation Agency (*Agência Nacional de Águas e Saneamento Básico*), Brazil |
| **ANACOM** | National Communications Authority (*Autoridade Nacional de Comunicações*), Portugal |
| **ANATEL** | National Telecommunications Agency (*Agência Nacional de Telecomunicações*), Brazil |
| **ANRSC** | National Regulatory Authority for Public Services (*Autoritatea Națională de Reglementare pentru Serviciile Comunitare de Utilități Publice*), Romania |
| **ANTT** | National Land Transportation Agency (*Agência Nacional de Transportes Terrestres*), Brazil |
| **ARCEP** | Electronic Communications, Postal and Print Media Distribution Regulatory Authority (*Autorité de Régulation des Communications Électroniques, des Postes et de la Distribution de la Presse*), France |
| **ARERA** | Regulatory Authority for Energy, Networks and Environment (*Autorità di Regolazione per Energia Reti e Ambiente*), Italy |
| **ARESEP** | Regulatory Authority of Public Services (*Autoridad Reguladora de Servicios Públicos*), Costa Rica |
| **ART France** | Transport Regulation Authority (*Autorité de Régulation des Transports*), France |
| **ART Italy** | Transport Regulation Authority (*Autorità di Regolazione dei Trasporti*), Italy |
| **BNetzA** | Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway (*Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen*), Germany |
| **CER** | Canada Energy Regulator, Canada |
| **ComCom** | Commerce Commission, New Zealand |
| **ComReg** | Commission for Communications Regulation, Ireland |
| **CNH** | National Hydrocarbons Commission (*Comisión Nacional de Hidrocarburos*), Mexico |
| **CNMC** | National Commission of Markets and Competition (*Comisión Nacional de los Mercados y la Competencia*), Spain |
| **CRA** | Drinking Water and Basic Sanitation Regulation Commission (*Comisión de Regulación de Agua Potable y Saneamiento Basico*), Colombia |

| | |
|---|---|
| **CRC** | Communications Regulation Commission (*Comisión de Regulación de Comunicaciones*), Colombia |
| **CRE** | Energy Regulatory Commission (*Commission de Régulation de l'Énergie*), France |
| **CREG Belgium** | Commission for Electricity and Gas Regulation (*Commissie voor de Regulering van de Elektriciteit en het Gas / Commission de Régulation de l'Électricité et du Gaz*), Belgium |
| **CREG Colombia** | Energy and Gas Regulation Commission (*Comisión de Regulación de Energía y Gas*), Colombia |
| **CRU** | Commission for Regulation of Utilities, Ireland |
| **CTA** | Canadian Transportation Agency, Canada |
| **ECA** | Estonian Competition Authority (*Konkurentsiamet*), Estonia |
| **EETT** | National Telecommunications and Post Commission (*Εθνική Επιτροπή Τηλεπικοινωνιών και Ταχυδρομείων*), Greece |
| **EGC** | Electricity and Gas Market Surveillance Commission (*電力・ガス取引監視等委員会*), Japan |
| **EI** | Energy Markets Inspectorate (*Energimarknadsinspektionen*), Sweden |
| **EMRA** | Energy Market Regulatory Authority (*T.C. Enerji Piyasası Düzenleme Kurumu*), Turkey |
| **ERRU** | Water Regulatory Authority (*Entit Rregullator të Ujit*), Albania |
| **ERSAR** | Water and Waste Services Regulation Authority (*Entidade Reguladora dos Serviços de Águas e Resíduos*), Portugal |
| **ERSE** | Energy Services Regulatory Authority (*Entidade Reguladora dos Serviços Energéticos*), Portugal |
| **ERU** | Energy Regulatory Office (Energetický regulační úřad), Czech Republic |
| **ESCOSA** | Essential Services Commission of South Australia, Australia |
| **EU** | European Union |
| **EUR** | euro |
| **EV** | Energy Authority (*Energiavirasto*), Finland |
| **HR** | Human resources |
| **IFT** | Federal Institute of Telecommunications (*Instituto Federal de Telecomunicaciones*), Mexico |
| **IMF** | International Monetary Fund |
| **ISIC** | International Standard Industrial Classification of All Economic Activities |
| **IT** | Information technology |
| **ITF** | International Transport Forum |
| **MEF** | Ministry of Economy and Finance (*Ministerio de Economía y Finanzas*), Peru |
| **MEKH** | Hungarian Energy and Public Utility Regulatory Authority (*Magyar Energetikai és Közmű-szabályozási Hivatal*), Hungary |
| **NER** | Network of Economic Regulators |
| **Nkom** | National Communications Authority (*Nasjonal kommunikasjonsmyndigheit*), Norway |

| | |
|---|---|
| **NSAT** | Transport Authority (*Dopravný úrad*), Slovak Republic |
| **OECD** | Organisation for Economic Co-operation and Development |
| **Ofcom** | Office of Communications, United Kingdom |
| **ORR** | Office of Rail and Road, United Kingdom |
| **Osinergmin** | Supervisory Agency for Investment in Energy and Mining (*Organismo Supervisor de la Inversión en Energía y Minería*), Peru |
| **OSIPTEL** | Supervisory Agency for Private Investment in Telecommunications (*Organismo Supervisor de Inversión Privada en Telecomunicaciones*), Peru |
| **Ositrán** | Supervisory Agency for Investment in Public Transport Infrastructure (*Organismo Supervisor de la Inversión en Infraestructura de Transporte de Uso Público*), Peru |
| **PAFER** | Performance Assessment Framework for Economic Regulators |
| **PMR** | Product Market Regulation |
| **PUC** | Public Utilities Commission (*Sabiedrisko Pakalpojumu Regulēšanas Komisija*), Latvia |
| **RAE** | Regulatory Authority for Energy (*Ρυθμιστική Αρχή Ενέργειας*), Greece |
| **RAS** | Regulatory Authority for Railways (*Ρυθμιστικής Αρχής Σιδηροδρόμων*), Greece |
| **RPC** | Regulatory Policy Committee |
| **RRT** | Communications Regulatory Authority (*Ryšių reguliavimo tarnyba*), Lithuania |
| **Sunass** | National Superintendence of Sanitation Services (*Superintendencia Nacional de Servicios de Saneamiento*), Peru |
| **SUTEL** | Superintendency for Telecommunications (*Superintendencia de Telecomunicaciones*), Costa Rica |
| **Traficom** | Finnish Transport and Communications Agency (*Liikenne- ja viestintävirasto*), Finland |
| **UN** | United Nations |
| **URE** | Energy Regulatory Office (*Urząd Regulacji Energetyki*), Poland |
| **UTK** | Office of Rail Transport (*Urząd Transportu Kolejowego*), Poland |
| **VERT** | National Energy Regulatory Council (*Valstybinė energetikos reguliavimo taryba*), Lithuania |
| **VMM** | Flanders Environment Agency (*Vlaamse Milieumaatschappij*), Belgium |
| **WICS** | Water Industry Commission for Scotland, United Kingdom |

# Executive summary

How an economic regulator receives and manages its human and financial resources affects its ability to deliver on its mandate and support long-term policy goals. A regulator's staff and funding arrangements can have an important bearing on its ability to act independently and remain agile to respond to new roles and expectations. Transparent and accountable mechanisms to fund and staff regulators can bolster trust in public institutions and regulatory systems. Moreover, the capacity and ability of regulators to execute their functions effectively depends on a well-qualified and inclusive workforce and sufficient funding.

Fifty-seven regulators across 31 countries – of which 89% are independent regulatory bodies – responded to the in-depth survey on staffing and funding arrangements that serves as a basis for this report. The report analyses trends and gathers insights on challenges, opportunities and good practices. It discusses the implications of arrangements on a regulator's autonomy and agility, the accountability and transparency of regulatory systems and a regulator's ability and capacity. Additionally, it identifies the impact of COVID-19 on resources.

## Supporting the autonomy and agility of regulators

While the independence of many economic regulators is grounded in legislation, in practice their autonomy and agility can be restricted by how they receive and manage resources. The analysis finds that:

- **A large majority of regulators recruit their staff by publicly advertising positions and select new staff members autonomously, but over a quarter need to obtain approval before hiring.** Requirements to obtain approval before hiring, usually from a ministerial body, can affect the regulator's agility to respond to market developments or evolving mandates if staff numbers are restricted below the required levels or if it cannot fill positions in a timely fashion.
- **Budget predictability is not always ensured.** Budgets are set for a one-year period for 90% of regulators, allowing for more frequent exposure to potential undue influence ("pinch-points") through yearly budget negotiations and, potentially, less predictability. Further, for more than a quarter of regulators, the executive is able to modify the initially approved budget without oversight by the legislature.
- **While all regulators need to adhere to rules on public spending and procurement, many experience additional controls on their spending that might decrease their autonomy.** Fifty-three percent of regulators can experience additional controls on their spending such as spending caps. Eighty-nine percent face restrictions to carry over funds between financial cycles, which can affect their ability to smooth revenues across cycles.

## Strengthening the accountability and transparency of regulatory systems

Mechanisms such as the public substantiation of budget decisions and external evaluations of spending support transparency and accountability for most regulators. The analysis finds that:

- **To provide adequate information regarding funding needs, 91% of regulators submit their costs and resources to the legislature or relevant budget authority for approval.** Regulators that are not required to obtain approval still sometimes proactively share financial information to inform the legislature or government.
- **Regulators are usually involved when discussing national budget appropriations or setting the fee, which could provide a safeguard against "closed door" decision making by the executive.** Only 15% of regulators funded through national budget are not involved in discussions. Regulators funded through fees usually propose the level to government or the legislature (45%) or set the fee levels themselves (43% of regulators).
- **A cost-recovery mechanism can support accountability by ensuring the "right" fee level, and exists for 80% of fee-funded regulators.** Cost-recovery mechanisms can ensure a fair burden on fee-paying entities and prevent a regulator that is underfunded, captured by industry or undermined by the executive.
- **An external evaluation of spending is in place for all regulators, which can support responsible public spending.** The supreme audit institution is the body in charge of the external evaluation for 80% of regulators.

## Enhancing the ability and capacity of regulators

Challenges to attract, develop and retain a well-qualified and inclusive workforce and the sufficiency of financial resources may affect the ability of regulators to execute functions effectively. The analysis finds that:

- **Many regulators report difficulties in hiring well-qualified staff, especially IT and data specialists, which can affect their ability to execute their regulatory activities.** Fifty-one percent of regulators report difficulties to recruit well-qualified staff for specific positions and another 21% indicate wider difficulties to recruit a sufficient head count. Difficulties occur less frequently for regulators overseeing multiple sectors, of which 15% report difficulties to recruit a sufficient head count (compared with 27% for other regulators).
- **Less competitive salaries may be offset by other (non-financial) benefits to employment, such as high job stability.** About three in four regulators follow government salary scales, which correlates with less competitive salaries when compared to the sector. In particular, salaries for energy and e-communication regulators compare unfavourably. However, job stability is high, with on average four in five staff members employed on a permanent contract.
- **There is scope for regulators to improve gender equality as a means to enhance overall diversity and support performance.** On average, regulators employ an equal share of men and women in their organisations, but women make up only 43% of senior management.
- **Regulators funded through a mix of national budget and fees more frequently report a lack of funding than do other regulators.** There are differences across types of regulators, with lacking funds being reported more frequently by transport regulators, and less frequently by regulators overseeing multiple sectors.

## The impact of COVID-19

The COVID-19 pandemic prompted new ways of working that may continue beyond the pandemic but also highlighted potential financial vulnerabilities. The analysis finds that:

- **All regulators rapidly adjusted their ways of working to new conditions during the COVID-19 pandemic, resulting in fundamental changes to their working arrangements.** Sixty-two percent of regulators indicated plans to permanently increase their use of teleworking after the crisis.
- **Differences in the impact of the pandemic on their revenues might underline different levels of risk exposure in funding across regulators.** For national budget-funded regulators, budgets were sometimes cut to fund national crisis responses, whereas others received additional funding for new COVID-19 related tasks. Revenues of fee-funded regulators could drop due to a decrease in fee payments or a weakened financial position of entities in the sector.

# 1 Equipping agile and autonomous regulators: main findings and conclusions

This chapter presents the main findings and conclusions of the report, based on the 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators. The chapter first discusses why arrangements for regulators’ staffing and funding are such a crucial aspect of their overall governance. It then lays out the report’s findings for three major areas for which resourcing arrangements can have significant implications, namely: the autonomy and agility of regulators; the accountability and transparency of the regulatory system; and the ability and capacity of regulators to deliver on their mandates. The chapter also presents findings on the impact of the COVID-19 pandemic on regulators’ resourcing arrangements. The chapter concludes by highlighting potential areas for further research.

## Purpose

Economic regulators are key to the performance of network sectors, providing evidence-based and objective decision making (Box 1.1). Resourcing arrangements can make or break their effectiveness. In practice, regulators may experience constraints in their funding or their autonomy in managing resources that limit their agility or capacity to act. Where constraints are significant, they may pose a threat to the regulator's ability to steer sector outcomes towards objectives. Therefore, how a regulator is resourced is an important element in the overall effectiveness of regulation (OECD, 2014[1]).

Where arrangements regarding funding and staff are transparent and appropriate, they can bolster public confidence in regulatory systems and public institutions. Transparency in the allocation and use of resources can bring confidence that regulators and governments deliver value for money for society. The OECD *Recommendation on Budgetary Governance* recognises that "budget transparency is a key element in underpinning the overall agenda of transparency, accountability and trust in government" (OECD, 2015[2]).

The purpose of this report is to take a deep dive into the resourcing arrangements of regulators – i.e. their funding and management of human and financial resources – to identify and analyse trends and gather insights on the main challenges, opportunities and practices. To this end, the report draws cross-country and cross-sector comparisons of arrangements and highlights individual examples. Additionally, it discusses the impact of the COVID-19 pandemic on the resourcing of regulators.

The report builds on data collected through the OECD Survey on the Resourcing Arrangements of Economic Regulators, carried out by the Network of Economic Regulators (NER) to gain more in-depth insights into the funding and management of resources of economic regulators (Box 1.2). It builds on earlier data collection on the governance of regulators through the *2015 Survey on the Independence of Economic Regulators* (OECD, 2016[3]) and the *2018 Indicators on the Governance of Sector Regulators* survey (Casullo, Durand and Cavassini, 2019[4]).

The report examines key elements currently impacting the resourcing of economic regulators, including:

- Human resources
    - Staff characteristics
    - Contracts and salaries
    - Recruitment
    - Training and career development
    - Integrity
    - The impact of COVID-19
- Financial resources
    - Source of funding
    - Funding procedures
    - Funding through national budget
    - Funding through fees
    - Financial management
    - Audit
    - The impact of COVID-19

### Box 1.1. Economic regulators and their functions

The OECD *Best Practice Principles on the Governance of Regulators* defines regulators as "entities authorised by statute to use legal tools to achieve policy objectives, imposing obligations or burdens through functions such as licensing, permitting, accrediting, approvals, inspection and enforcement". While regulators can use complementary tools such as information campaigns to achieve policy objectives, "it is the exercise of control through legal powers that makes the integrity of their decision-making processes, and thus their governance, very important" (OECD, 2014[1]).

There are a number of different types of regulators with different roles and responsibilities – among others, economic, financial, overseeing competition and/or consumer protection, setting technical standards and/or a mix of some of these roles. This report focuses on *economic regulators*, including regulators with both economic and competition/consumer protection responsibilities.

Economic regulators serve a critical role in network sectors. They oversee the functioning of these sectors, acting as rule-setters as well as market referees. Interacting with consumers, operators and government, economic regulators occupy a unique position in their sectors. They perform functions such as regulating prices, licensing of operators and settling of disputes, which makes them instrumental to the efficient delivery of essential services. Their work has an impact on the major social, economic, technological and environmental challenges of the time (OECD, 2021[5]).

Source: (OECD, 2014[1]), The Governance of Regulators, OECD Best Practice Principles for Regulatory Policy, OECD Publishing, Paris; (OECD, 2021[5]), OECD Regulatory Policy Outlook 2021, OECD Publishing, Paris.

### Box 1.2. The OECD Network of Economic Regulators

What makes a "world-class regulator"? The OECD Network of Economic Regulators (NER) has been addressing this question through objective data, rigorous analysis and dialogue. Established in 2013, the NER provides a unique forum for more than 70 regulators across a range of network sectors such as e-communications, energy, transport and water from across the world (including regulators from OECD and non-OECD member countries). The network allows participants to exchange first-hand experiences and good practices, discuss challenges and identify innovative solutions.

The NER and the Regulatory Policy Committee developed the **Best Practice Principles on the Governance of Regulators** in 2014. The seven principles provide guidance on institutional arrangements, processes and practices for regulators (OECD, 2014[1]). Other publications have delved deeper into the governance of regulators. For example, the publications "Being an Independent Regulator" and "Creating a Culture of Independence" explore *de facto* and *de jure* elements of independence and the publication "Governance of Regulators' Practices: Accountability, Transparency and Co-ordination" examines accountability frameworks and co-ordination mechanisms (OECD, 2016[3]) (OECD, 2017[6]) (OECD, 2016[7]).

The principles provided the basis for the development of the **Indicators on the Governance of Sector Regulators**. These indicators complement the OECD Product Market Regulation survey and map the governance arrangements of economic regulators along three components: independence, accountability and scope of action. The 2018 edition of the indicators includes data on 163 distinct regulators in 47 countries and 5 network sectors (energy, e-communications, rail and air transport and water).

In the framework of the NER, the OECD carries out **in-depth peer reviews** that assess and strengthen regulators' performance assessment and governance frameworks. The Performance Assessment Framework for Economic Regulators (PAFER) provides the methodology for these reviews, informed by the normative framework above and built on lessons learnt from the NER. To date, the NER carried out performance assessment reviews of 13 regulators in Brazil, Colombia, Ireland, Latvia, Mexico, Peru and Portugal.

Source: OECD (n.d.), "Performance of Regulators", www.oecd.org/gov/regulatory-policy/performance-of-regulators.htm (accessed 16 February 2022); OECD (n.d.), "Publications of the Network of Economic Regulators", www.oecd.org/gov/regulatory-policy/publications-of-the-network-of-economic-regulators.htm (accessed 16 February 2022).

## Why resourcing is a crucial element of the governance of regulators

The governance of economic regulators matters. How a regulator is established, directed, controlled, resourced and held to account is crucial to the overall effectiveness of regulatory frameworks. To enable a regulator to succeed in its efforts of combining effective regulation with high standards of integrity and trust, its governance arrangements should all be carefully designed (OECD, 2014[1]). A well-governed regulator is better positioned to provide confidence to stakeholders that decisions are fair and consistent.

Resourcing arrangements are an important aspect of the governance of economic regulators and matter to a regulator's ability to contribute to long-term policy goals. Appropriate resourcing is essential to determine the extent to which regulators, many of them independent bodies, can carry out their mandate and act independently (OECD, 2017[6]). Moreover, how regulators are resourced will determine their organisation and operations. These arrangements should be designed in a way that does not influence the regulatory decisions and enables a regulator to be impartial and achieve its objectives efficiently (OECD, 2014[1]).

How regulators attract, retain and motivate staff is a key determinant of their ability to take decisions that are objective and evidence based (OECD, 2017[6]). Regulators rely on the knowledge and expertise of their staff to bring the relevant information and analysis into the decision-making process. Therefore, staff capacity, in terms of both number and skills, directly affects the quality of a regulator's work and its impact on outcomes for consumers.

Funding arrangements should be adequate to allow a regulator, operating efficiently, to execute all its regulatory activities. Importantly, funding processes should be transparent, efficient and as simple as possible (OECD, 2014[1]). These overarching considerations should be taken into account when deciding upon funding arrangements, while acknowledging that the exact funding mechanisms may differ across regulators depending on the sector(s) and institutional context in which they operate – there is no one-size-fits-all.

Because of changes to their circumstances, what is expected of regulators and how they are expected to deliver may evolve. In light of the dynamism of the sectors overseen by regulators, as well as the availability of new tools (such as data-driven regulation), the design of funding mechanisms and the regulator's ability to manage resources will be important. These factors will contribute to the agility of the regulator to respond to new roles, expectations and ways of working, and the ability to continue to fulfil its mandate. This agility will not only be important when dealing with more abrupt shocks to markets, such as during the COVID-19 pandemic, but also in light of the growing influence of emerging technologies on societies and global challenges such as climate change (OECD, 2021[8]).

## Main findings

The findings and practical implications presented in this report draw upon the answers provided by NER members to the OECD Survey on the Resourcing Arrangements of Economic Regulators, distributed by the NER Secretariat in January 2021. The in-depth analysis of resourcing arrangements, as presented in Chapters 2 and 3, identifies both *de jure* legal requirements and *de facto* arrangements, to provide a more comprehensive overview of how regulators are funded and manage their resources in practice. The findings reveal the current state of play and point to insights on the implications of existing arrangements on regulators' autonomy, agility, accountability, transparency, ability and capacity. They also shed light on the impact of COVID-19 on resourcing frameworks.

The findings are based on survey responses from 57 economic regulators across 31 countries, out of which 27 OECD member countries and 4 non-members (Albania, Brazil, Peru and Romania).[1] Responses cover regulators across four network sectors: energy, e-communications, transport and water. A large majority of survey respondents – 51 regulators – are independent regulatory bodies (89%), whereas the remaining six regulators are located within ministerial departments or agencies.

A further discussion of the methodology and data coverage can be found in Annex A. A list of participants is included in Annex B and an overview of functions and resources for each regulator in Annex C.

### *Autonomy and agility*

**Main finding: While the independence of many economic regulators is grounded in legislation, in practice their autonomy and agility can be restricted by how they receive and manage resources.**

Establishing a regulator with a degree of independence both from those it regulates and from government can provide greater confidence that decisions are impartial and will enhance regulatory certainty and stability (OECD, 2014[1]). The delegation of regulatory functions to an independent body can signal a commitment to long-term goals beyond policy cycles. The degree of *de facto* independence not only depends on the regulator's legal status, but on a combination of *de jure* legal arrangements and their practical implications, staff behaviour and culture of independence (OECD, 2017[6]).

A regulator's funding and its ability to manage its resources can have an impact on the autonomy and agility with which it can execute its functions and the number of "pinch-points" where there is greater potential for undue influence, such as around budget decisions. Inherent to the independence from politics that many regulators enjoy is the possibility that some regulatory decisions will not align with short-term political or electoral imperatives. This could create a conflict of interest between the regulator and the executive, and consequently a risk that resources may be restricted as a means to limit the regulator's ability to act. In some cases governments have made substantial changes to a regulator's resources, which could illustrate an ambition to modify the agency's ability to organise itself effectively or keep some control over the agency (Jordana and Ramió, 2010[9]). Regulators should be protected from politically motivated resourcing constraints, such as budget cuts in reaction to unpopular decisions (Kelley and Tenenbaum, 2004[10]).

The ability of regulators to deliver under changing circumstances depends in large part on their resourcing models to match expectations with resources and to allow the regulator to reorganise itself. Predictability of resources and the autonomy to manage these resources can enhance the agility of regulators to respond to changing demands and dynamic sectors. Recent developments and global challenges make flexible resourcing models all the more important. Technological innovations affect the role and tools of the regulator, while at the same time climate change policies are changing economies and the operations of network sectors (OECD, 2021[5]). More recently, the global health crisis brought about by COVID-19 disrupted network sectors, with unprecedented changes in economic activity and network usage (OECD, 2020[11]). In light of dynamic and uncertain contexts, the 2021 *Recommendation for Agile Regulatory*

*Governance to Harness Innovation* urges countries to develop or adapt “governance frameworks and regulatory approaches so that they are forward-looking by developing institutional capacity and assigning clear mandates” (OECD, 2021[8]).

The survey finds that:

- **A large majority of regulators recruit their staff by publicly advertising positions and are able to select new staff members autonomously. However, over a quarter need to obtain approval before hiring, usually from a ministerial body.** This could affect the regulator’s agility to respond to market developments, or evolving mandates, if staff numbers are restricted below the required levels or if it is not able to fill positions in a timely fashion.
- **For over a quarter of regulators budget predictability is not ensured – a yearly budget that has already been approved can be modified by the executive without approval by the legislature.** In practice, the extent to which changes to the regulator’s budget will take place depends on the existence of clear criteria and procedures for modifications during the year as well as the scope for political discretion in budget allocations. The predictability of the regulator’s budget is weaker when changes can take place more frequently, there is less certainty under what circumstances changes may happen or when the exact impact is unknown. The predictability of resources is an important element to support the regulator’s capability to develop longer-term activity plans. For nearly three-quarters of the regulators, changes after initial approval are not allowed or require the approval of parliament or congress.
- **Fee revenues can be used for other purposes than the regulator’s budget – usually towards the central government budget – for 38% of fee-funded regulators, which may harm budgetary autonomy.** For many of these regulators, fee revenues were used for other purposes than the regulator’s budget multiple times during the last five years. Fee revenues are diverted away more frequently when fees are not set according to a cost-recovery principle. Only 28% of regulators for which there is a cost-recovery principle report the possibility of fee revenues being used for other purposes, compared with 75% of regulators for which a cost-recovery principle is absent.
- **While all regulators need to adhere to rules on public spending and procurement, 53% of regulators can experience additional controls on their spending that might decrease their autonomy.** Restrictions can include spending caps for specific cost categories as well as restrictions on costs related to travelling abroad. Where spending restrictions exist, there should be transparent and accountable processes to determine the necessity of such measures. However, for 35% of regulators, additional controls can be imposed without a need for approval by the legislature.
- **Regulators usually face restrictions to carry over funds from one financial cycle to the next, which can affect their ability to smooth revenues across cycles and the stability of funding.** Eleven percent of regulators is allowed to carry over funds without restrictions, whereas another 49% can only do so within restrictions. The remaining regulators are unable to carry over funds between financial cycles.
- **Budgets are set for a one-year period for 90% of regulators, allowing for more exposure to undue influence (“pinch-points”) through yearly budget negotiations and, potentially, less predictability.** Annual budget appropriations can make it easier for the executive to exert undue influence than multi-annual appropriations, which are less affected by short-term fluctuations due to for example political or electoral priorities. Furthermore, annual appropriations can reduce the stability or predictability of funding, making it more difficult for the regulator to plan ahead. Appropriate safeguards such as clear criteria and procedures for budgetary decision making and multiannual forecasts may reduce these risks.

### *Accountability and transparency*

**Main finding: Mechanisms such as the public substantiation of budget decisions and an external evaluation of spending support transparency and accountability for most regulators.**

Accountability and transparency can be seen as the other – necessary – side of the coin of independence, and there should exist a balance between the two (OECD, 2014[1]). Resourcing arrangements can strengthen the accountability and transparency of the regulatory system as a whole. In particular, transparency should be embedded in both the allocation of resources and their use, empowering society with adequate information to hold regulators and decision makers to account.

The survey finds that:

- **To provide adequate information regarding funding needs, 91% of regulators submit their costs and resources to the legislature or relevant budget authority for approval.** The small share of regulators who are not required to obtain approval on their costs and resources by the legislature or budget authority still sometimes proactively share financial information to inform the legislature or government.
- **Regulators are usually involved in the discussion of their national budget appropriation or in the fee setting process, which could provide a safeguard against "closed door" decision making by the executive.** For regulators funded through national budget appropriations, there are only few cases (15% of regulators) where the regulator is not involved in discussions on its budget, although this happens more frequently for water regulators (33%). Regulators funded through fees usually propose the level to government or the legislature (45%) or set the fee levels themselves (43% of regulators). Only for one in eight is the fee level set without involvement of the regulator, which could be more problematic where the government holds a significant share in the sector.
- **Decisions by budget authorities are publicly substantiated for 62% of regulators, enhancing transparency of budget decisions.** The public substantiation of budget decisions can provide a safeguard for an evidence-based assessment of the financial needs of the regulator and allow for public scrutiny. For those regulators whose budget decisions are not publicly substantiated, the responsible body either does not substantiate its decision or this explanation is not published. A lack of publicly available information on budget decisions may weaken public trust in decision making.
- **A cost-recovery mechanism exists for 80% of regulators funded through fees, an important safeguard to support accountability by ensuring fees are set at the "right" level.** For fee-funded regulators, cost-recovery principles can ensure a fair burden on fee-paying entities, as they will be required to pay towards the costs of the regulator and nothing more. Cost-recovery mechanisms can help to prevent a regulator that is underfunded, captured by industry or undermined by the executive.
- **An external evaluation of spending is in place for all regulators, an important mechanism to support responsible public spending.** In 80% of cases, the national supreme audit institution is in charge of the external evaluation. In other cases, another external body or a mix of multiple bodies can scrutinise the regulator's spending.
- **Regulators have specific arrangements to ensure the integrity of staff, which could strengthen public trust in impartial regulatory decisions.** Regulators either do not allow staff to hold shares in the sectors they oversee, or allow it only where certain conflict of interest provisions are met. Forty-eight percent of regulators have post-employment restrictions such as cooling-off periods in place for senior management (excluding agency head/board members) and 27% for middle and junior level staff. While it is important to avoid the risk of a "revolving door", some back and forth between industry and regulator for more junior staff could be beneficial for the exchange of knowledge and skills.

### *Ability and capacity*

**Main finding: Challenges to attract, develop and retain a well-qualified and inclusive workforce and the sufficiency of financial resources may affect a regulator's ability to execute functions effectively.**

Resourcing arrangements will determine a regulator's overall capacity to act. In this regard, a number of different aspects are important. Arrangements affect the sufficiency of resources at the regulator's disposal. Importantly, the appropriate level of resources depends on the circumstances and the characteristics of the sector. Among others, the level of funding will be affected by the number of functions a regulator performs, the size of the sector in terms of companies and consumers and the complexity of the sector structure (Kelley and Tenenbaum, 2004[10]).

Not just the number of staff matters, but also the ability of a regulator to attract and retain staff members with the right competences. The quality of its staff affects a regulator's ability to design evidence-based and objective regulatory decisions, to remain agile and to stay abreast of developments in the sector. Moreover, how well a regulator is able to retain talent determines how long it can benefit from investments in the capacity of its staff through training and career development initiatives. The public service is increasingly competing for talent, especially for candidates such as data professionals, technical professionals and in IT (OECD, 2021[12]). Regulators are no exception in this regard, in a context where emerging technologies disrupt and transform utility sectors (OECD, 2020[13]).

The survey finds that:

- **Given the technical knowledge and expertise required for their work, regulators rely mostly on highly educated staff members with university level qualifications.** Eighty-six percent of staff members at regulators hold at least a bachelor's degree or equivalent, whereas half of staff members hold a master's degree (or equivalent) or higher.
- **About three in four regulators follow government salary scales, which tends to correlate with less competitive salaries; this may be offset by other factors such as high stability of employment or other benefits.** Regulators have little autonomy in the way they set their salaries. Most regulators (73%) follow government remuneration policy, a requirement that correlates with less competitive salaries when compared to the sector they oversee. In particular, salaries for energy and e-communication regulators compare unfavourably with the sector. However, besides remuneration, employment at the regulator offers other (non-financial) benefits, such as a high level of job stability. The survey finds that on average four in five staff members at regulators are employed on a permanent contract.
- **Many regulators report difficulties in hiring well-qualified staff to execute regulatory activities.** While 51% of regulators report difficulties related to the recruitment of staff only for specific staff categories, 21% report wider difficulties in recruiting a sufficient head count for the organisation. Difficulties to attract the right staff seem to occur less frequently for multisector regulators, of which 15% report being unable to recruit a sufficient head count (compared with 27% of single sector regulators).
- **Difficulties to recruit staff with IT skills and data scientists can affect the regulator's ability to absorb the impact of technological innovations on its work and the sector.** Where regulators reported difficulties to recruit sufficient well-qualified staff members, IT and data skills were some of the key skills that were mentioned, in line with broader findings across the public sector in OECD countries. Obtaining staff with these necessary skills can support a regulator in its capacity to oversee developments in the sector as well as its ability to use new tools to innovate its regulatory approaches.

- **Most regulators actively support staff to obtain additional skills and exchange knowledge.** Eighty-six percent of regulators support their staff to obtain external qualifications. Forty-four percent of regulators exchange staff with other bodies at the domestic level and 41% exchange staff internationally (such as secondments to EU organisations), a practice that could facilitate the sharing of knowledge and good practices across organisations. Where multisector regulators have technical departments dedicated to specific sectors, nearly all (91%) promote knowledge sharing across the different sector-specific departments and 55% also promote staff mobility.
- **There is scope for regulators to improve gender equality within their organisations, as a means to enhance overall diversity and support performance.** At present, regulators see an underrepresentation of women at senior management level in their organisations (43% of senior management is female), in line with broader findings across central governments in OECD countries. The findings at senior management level differ from findings for the organisation of regulators as a whole, where on average an equal share of men and women are employed.
- **The source of funding can be linked to the share of regulators reporting a lack of funds, and there appear to be differences across sectors.** Regulators funded through a mix of national budget and fees more frequently report a lack of funding than do other regulators. Among the different sectors, transport regulators most frequently report a lack of funding. Multisector regulators less frequently report lacking financial resources, with only 8% identifying funding gaps (compared with 27% of single sector regulators).

### *The impact of COVID-19*

**Main finding: Stress-testing existing arrangements of regulators, the COVID-19 crisis inspired new ways of working but also highlighted potential financial vulnerabilities.**

The flexibility and robustness of a regulator's resourcing arrangements impacts its capacity to absorb shocks and changes such as the COVID-19 pandemic. The COVID-19 crisis affected the work of economic regulators in many ways. The downturn in economic activity and the shifting usage patterns in network sectors required regulators to take decisive action within short timeframes. Regulators took part in the design of emergency measures to ensure the delivery of essential services and alleviated regulatory burdens on market actors. At the same time, the crisis affected their operations and governance, including also their financial and human resources (OECD, 2020[11]).

The survey finds that:

- **All regulators rapidly adjusted their ways of working to new conditions during the COVID-19 pandemic, resulting in fundamental changes to their working arrangements.** They showed agility in the way they moved almost entire organisations (92% of staff) to remote working during the height of the pandemic and took measures to support the well-being of staff. Sixty-two percent of regulators reported plans to increase their use of remote working arrangements beyond the pandemic, which could permanently change the way regulators operate (for another 30%, this was unknown at the time of the survey).
- **For most regulators, expenses either decreased or remained relatively unchanged in response to the pandemic.** Regulators identified a drop in expenses for travel, inspections and offices, whereas increases were seen in expenses to adjust IT equipment and systems and to clean offices. Overall expenses decreased for 47% of regulators, while 4% saw a (modest) increase in expenses. For other regulators, there was either no significant impact or the overall impact was unknown at the time of the survey.
- **Significant differences across regulators in the impact of the pandemic on their revenues might underline the different levels of risk exposure in funding arrangements.** For regulators funded through national budget, there was sometimes a decrease due to the reallocation of

budgets towards the crisis response, whereas in other cases regulators saw an increase in their funding to compensate for new COVID-19 related tasks. Fee-funded regulators sometimes saw a drop in their revenues due to a decrease in fee payments or a weakened financial position of entities in the sector.

## Interpretation of survey results

This study provides the first in-depth analysis of the funding and management of human and financial resources of economic regulators. In the interpretation of the survey findings, readers are reminded that the survey has been distributed among members of the OECD NER. Findings could potentially differ for the wider population of economic regulators.

The choice over the specific resourcing arrangements in place for a regulator may be determined by numerous factors, including the sector and political context in which the economic regulator operates, as well as by the breadth of its mandate. This means that practical implications of certain arrangements may differ depending on the context in which the regulator operates, which needs to be taken into account when comparing arrangements across regulators. As existing arrangements may be explained by a wide variety of factors, the report does not aim to explain why certain arrangements exist. Instead, it identifies current trends in arrangements across regulators and sectors and discusses how these could affect the work of regulators.

The analysis focuses on trends and differences in arrangements across regulators, but does not provide any evidence on how efficiently resources are used or what the optimal resource levels of individual regulators should be. Where resource levels of regulators are included, these figures should not be interpreted as a direct comparison of efficiency levels across regulators, as regulators tend to differ significantly both in terms of their mandate and the context in which they operate. Therefore, information on resource levels on their own will not provide an appropriate basis for an assessment of the regulator's efficiency. There are many factors that together determine the necessary resources for an efficiently-run economic regulator, making it difficult to assess the appropriate level of resources based on a simple international comparison. The appropriate level of resources of an efficiently run economic regulator could among others depend on:

- The number of sectors overseen by the organisation;
- The scope of action of the organisation within each of these sectors;
- The size of the sector in terms of number of economic agents and total level of economic activity;
- The characteristics of economic agents in the sectors, including the extent of public ownership;
- The ambitions and policy goals for the sector, and the role, mission and objectives of the regulator in meeting these;
- Challenges faced by the sector, in terms of quality, financial sustainability, affordability and environmental concerns;
- The institutional framework in which the regulator operates;
- Other functions of the organisation, such as consumer protection, competition oversight and other regulatory roles.

## Areas for further research

Building on this study, as well as other relevant work on the resourcing of economic regulators[2], the following avenues for further research could be considered:

- *Relationship between resourcing arrangements and performance*

  There could be value in better understanding the relationship between resourcing arrangements and the performance of regulators. The exact impact of the different aspects of resourcing arrangements on the regulator's internal effectiveness and its ability to improve sector performance is yet to be unravelled.
- *The impact of the multisector model on a regulator's efficiency*

  The current study analyses a number of specific arrangements for regulators that oversee multiple sectors. However, it does not provide sufficient evidence to draw conclusions on how the multisector model affects the regulator's efficiency in its use of resources or its ability to improve sector outcomes. Additional data and analysis are necessary to understand under what conditions the multisector model could support a more efficient and able regulator, and what aspects of its resourcing arrangements will matter most in this regard.

## Notes

[1] Since the survey took place in early 2021, the OECD has opened accession discussions with six countries on 25 January 2022, including Brazil, Peru and Romania. Brazil is currently an OECD Key Partner.

[2] Earlier work by the OECD on the resourcing of economic regulators includes the 2014 OECD *Best Practice Principles on the Governance of Regulators*, the 2016 *Being an Independent Regulator* publication and the 2017 *Creating a Culture of Independence: Practical Guidance against Undue Influence* publication (OECD, 2014[1]) (OECD, 2016[3]) (OECD, 2017[6]).

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# 2 Human resources

This chapter presents findings on how economic regulators receive and manage their human resources, based on the 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators. It provides an overview of staff characteristics in place at regulators, as well as employment conditions such as contracts and salaries. It further discusses how regulators recruit their staff, the training and career development they offer and the arrangements they put in place to ensure staff integrity. The chapter also explores the impact of the COVID-19 pandemic on regulators' human resources and illustrates how staff arrangements tend to differ for regulators overseeing multiple sectors.

# Main findings

### Staff characteristics

- Half of staff at regulators hold at least a master's degree or equivalent
- On average, 42% of a regulator's staff are below the age of 40
- Regulators with younger workforces tend to have a higher staff turnover
- Women are underrepresented in regulators' senior management
- More than half of staff work at the regulator for more than five years

### Contracts and salaries

- Staff members are usually employed with permanent contracts
- Many economic regulators cannot set salaries autonomously, but have to conform to the remuneration policy in place for central government
- Energy and e-communications regulators usually offer lower salaries than in the sector they oversee
- The level of autonomy to set salaries can affect the ability of the regulator to offer salaries that are in line with market salaries
- On average, regulators that need to follow government remuneration face more difficulties to recruit

### Recruitment

- Most regulators advertise positions publicly and select new staff independently
- Requirements to obtain approval before hiring exist in 9 out of 31 countries
- Many regulators do (to some degree) face difficulty in recruiting well-qualified staff

### Training and career development

- Most regulators provide financial support to staff to obtain external qualifications
- Staff exchanges are most common for e-communications, and least common for water regulators

### Integrity

- Staff either face restrictions or are prohibited to hold shares in the sectors they oversee
- Post-employment restrictions are less common for more junior staff levels

### Impact of COVID-19

- Most regulators developed or transformed their business continuity plans in response to the COVID-19 pandemic
- Ninety-two percent of staff worked remotely at any point during the COVID-19 pandemic
- Many regulators plan to increase the use of teleworking on a permanent basis

### Multisector regulators

- Most multisector regulators promote internal knowledge sharing, around half also promote staff mobility

The staff of a regulator is arguably its greatest asset. The organisation relies on the expertise and qualities of its staff to provide evidence-based and technical analyses as a basis for regulatory decisions and the delivery of a regulator's strategic objectives. Therefore, the ability of a regulator to make the right decisions, and as such its performance and impact, relies directly on the quality of its human resources.

A number of elements matter in this context. To be able to deliver on their mandate, regulators need to recruit a sufficient number of staff with the right qualifications. However, this is only the first step. Regulators work in a dynamic sector context that requires the organisation to continuously stay abreast of developments and if necessary adjust, and they often compete with the sector they oversee to hire staff with similar qualifications. World-class regulators therefore continuously invest in the knowledge of their staff and organisation to create the right conditions to retain talent. To enable staff members to carry out their tasks effectively, regulators should provide them with the right incentives and freedom of action (OECD, 2017[1]). Finally, while staff may be less prominently exposed to pressures from government and the sector than its board or the agency head, a culture of independence among staff members is nevertheless essential to ensure unbiased and objective decision making.

## Staff characteristics

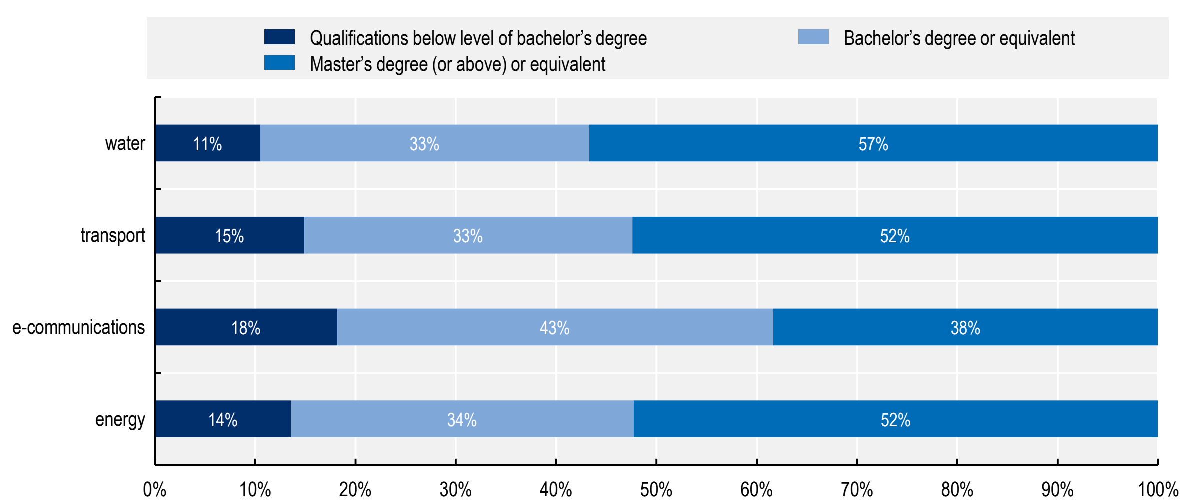
The characteristics of a regulator's staff is a multidimensional topic. The following sections discuss a number of aspects, including the academic and professional background of staff, their age profile, gender diversity and the length of employment at the regulator.

### *Background*

Economic regulation is a complex matter, requiring technical expertise from many different disciplines and extensive knowledge on the sector. Given the nature of their work, regulators tend to employ staff that is highly educated. Eighty-six percent of the staff members that regulators employ have an education level equivalent to a bachelor's degree or higher, whereas half have at least a master's degree (or equivalent). This observation differs only slightly between sectors (Figure 2.1).

#### Figure 2.1. Half of staff at regulators hold at least a master's degree or equivalent

Academic background of staff at the regulator, by sector




Note: Average shares per sector are determined by averaging the shares for the categories of academic background for individual regulators within the respective sector. Multisector regulators are included in the data for each of the sectors they oversee. Analysis is based on responses from 49 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

Across all sectors, staff working at the regulator are usually recruited from the private sector or other government bodies. The share of staff members coming from the private sector is highest for energy (47%) and e-communications (46%) regulators. Water and transport regulators are more likely to recruit staff from other government bodies and regulatory bodies (41% and 43% respectively). Only 8% of staff members join the regulator directly from university or college.

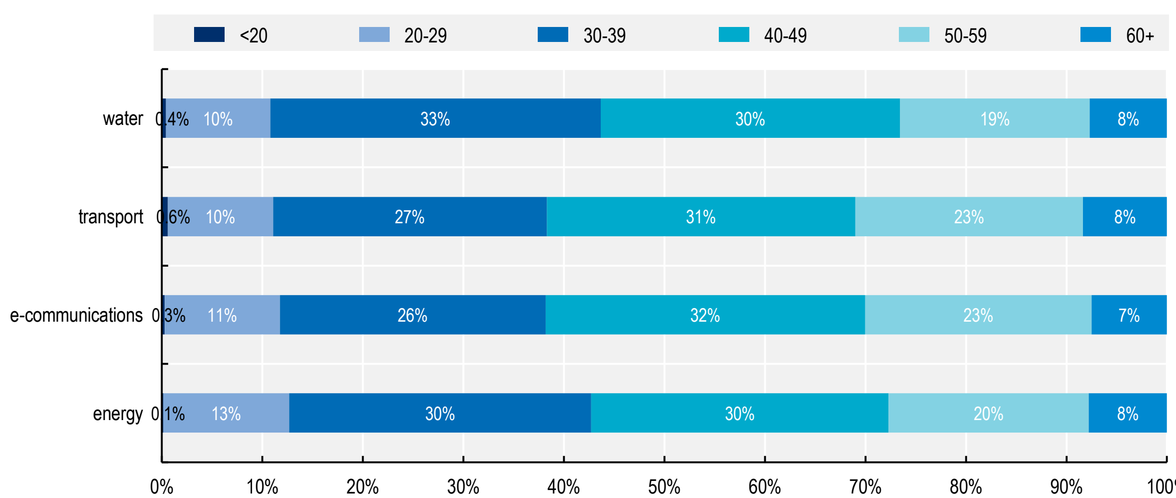
### *Age profile*

The age profile of staff within an organisation matters for current and future human resources management challenges. Relatively older workforces can bring in a wealth of experience for an organisation, but also make an organisation more vulnerable to the risk of retirement of a significant share of staff members. Younger workforces can bring in fresh perspectives and new ways of thinking, but also require an organisation to invest more in training and talent retention. A multigenerational workforce could provide opportunities to combine both, benefiting from the experience of long-serving staff while allowing the development of younger employees (OECD, 2021[2]).

On average 28% of staff at regulators is aged 50 years and over (Figure 2.2). However, this average hides rather strong differences between regulators. It also hides strong differences in the ageing of regulators' staff across countries, in line with findings for the public sector more widely (OECD, 2021[3]). For 16 out of the 54 regulators with data on the age of its staff, the share of staff over the age of 50 years is above 35%, whereas for 13 regulators this share is below 20%. These differences highlight how human resource challenges may differ quite significantly across regulators. In particular, there may be need for increased attention on succession planning related to retiring staff members especially for regulators with a relatively older workforce (Box 2.1).

## Figure 2.2. On average, 42% of a regulator's staff are below the age of 40

Staff breakdown by age, by sector




Note: Average shares per sector are determined by averaging the shares for the different age categories for individual regulators within the respective sector. Multisector regulators are included in the data for each of the sectors they oversee. Analysis is based on responses from 54 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

### Box 2.1. The attraction and retention of staff at the Essential Services Commission of South Australia

The Essential Services Commission of South Australia (ESCOSA) identifies the attraction and retention of high performing employees as one of the main human resource challenges for the organisation. This requires sound succession planning, which includes both those who may seek career progression elsewhere and those who transition to retirement.

In response to the issue, ESCOSA is focusing on engagement and culture, part of which includes providing additional (non-financial) benefits to employees. These additional benefits include flexibility, learning and development, organisational well-being events, opportunities for staff members to act up in higher-level positions and opportunities to work across functional teams.

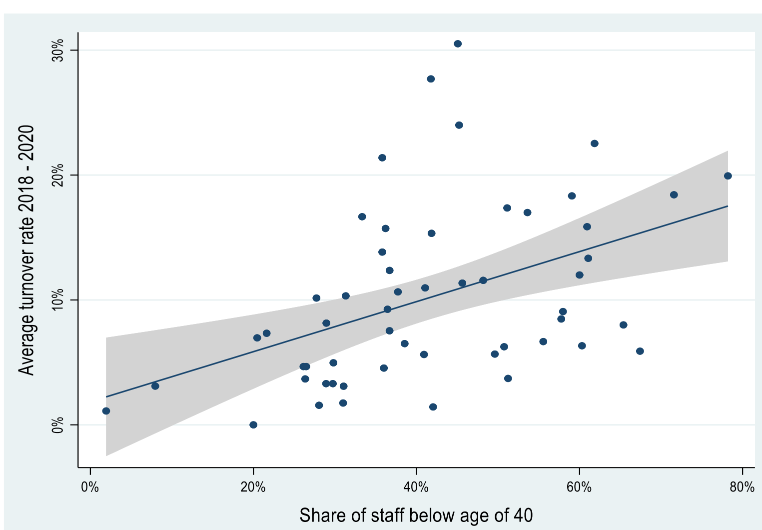
In addition, ESCOSA is also continually examining the way that the work is undertaken to provide a forward-focused view to removing organisational barriers and improve processes such as data integration, which enables staff to fully contribute based on capability rather than role or level.

ESCOSA uses multiple metrics including an annual engagement survey to provide valuable indicators into what areas it needs to improve and those it needs to consolidate or continue. This allows ESCOSA to measure the impact of its initiatives and increased engagement has resulted in a stronger alignment to ESCOSA's values and a culture of both high performance and genuine collaboration. Increased engagement and a positive culture change is visible throughout the office.

Source: Information provided by ESCOSA, 2021.

### Figure 2.3. Regulators with younger workforces tend to have a higher staff turnover

Correlation between the share of staff below the age of 40 and the turnover rate of staff, by regulator




Note: Grey area indicates a 95% confidence interval based on a linear fitted regression line in Stata. Pearson correlation coefficient is equal to 0.4480. Total number of observations is 54.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

Across the sample of regulators, there appears to be a negative correlation between the age of staff and staff turnover. This is demonstrated in Figure 2.3 above, where it can be seen that regulators with a higher share of staff members below the age of 40 on average have a higher turnover rate, although this correlation does not hold for each individual regulator. This may suggest that measures for the retention of talent will be especially important for regulators with a relatively younger workforce, as on average they face a higher staff turnover rate.

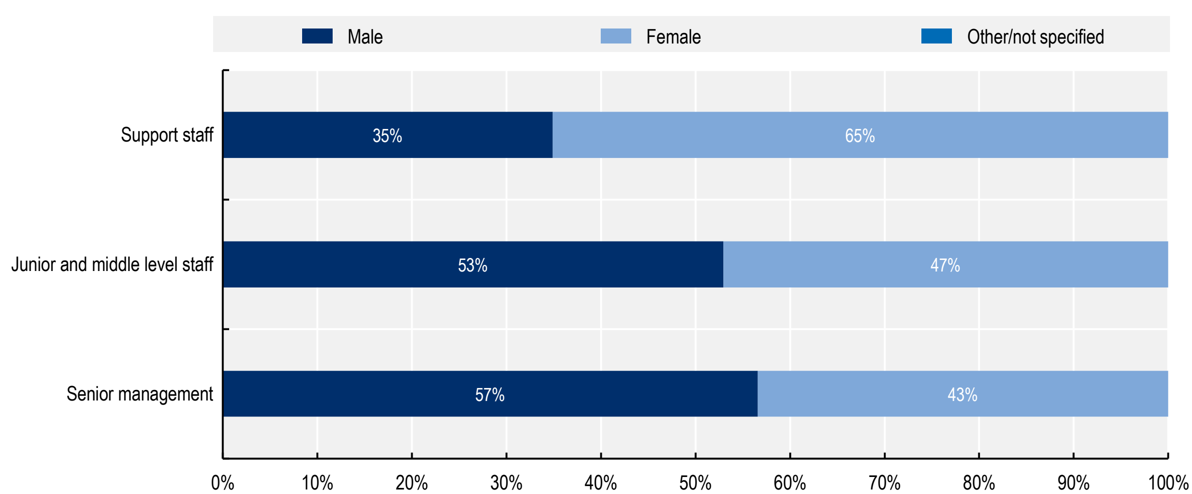
### *Gender diversity*

The OECD *Recommendation on Public Service Leadership and Capability* and the *Recommendation on Gender Equality in Public Life* encourage countries to ensure gender diversity in the workforce (OECD, 2019[4]) (OECD, 2016[5]). Gender equality is an important dimension of a diverse workspace, which can boost performance through greater innovation and employee engagement (Nolan-Flecha, 2019[6]). Moreover, the pursuit of diversity could benefit public sector values such as fairness, transparency, impartiality and representativeness (OECD, 2009[7]).

Staff at regulators is on average made up of equal shares of male and female employees, but this gender balance differs across the different levels of staff. Overall, the share of female staff members is highest in the water sector (57%) and lowest in the e-communications sectors (46%). Female staff is particularly well-represented at the level of support staff, making up almost two thirds of total staff. On the other hand, women are underrepresented at higher levels of decision making: just 43% of senior management is female (Figure 2.4). A similar underrepresentation of women in senior management can be found more widely across central governments in OECD countries (OECD, 2021[2]).

#### Figure 2.4. Women are underrepresented in regulators' senior management

Staff breakdown by gender and staff level



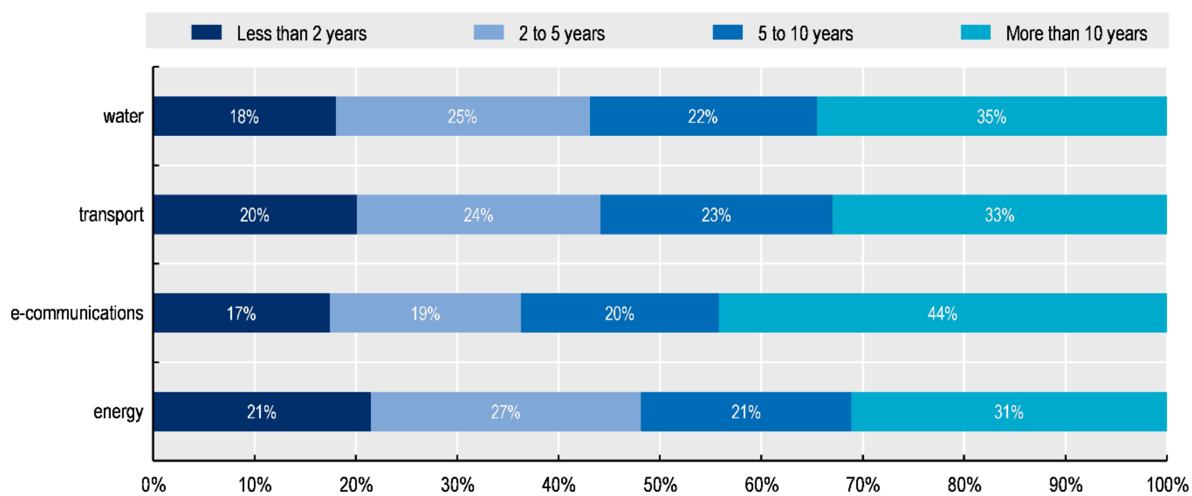

Note: Senior management includes the first two levels of management below the board or agency head. Junior or middle level staff includes all managerial and technical staff below senior management. Support staff includes staff members that provide support services for the operation of the organisation, such as administration or IT services, but which do not directly execute any regulatory or supervisory activities themselves. Average shares per staff level are determined by averaging the shares for the different gender categories for individual regulators within the respective staff level. Multisector regulators are included in the data for each of the sectors they oversee. Analysis is based on responses from 55 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

### *Length of employment*

The length of employment of staff can indicate the extent to which a regulatory body benefits from an experienced staff that has had time to build up expertise and sectoral knowledge. More than half of staff members have been employed at their regulator for at least five years, whereas 34% have worked at their regulator for over ten years. The length of employment is particularly high for staff at e-communications regulators (Figure 2.5). In line with this finding, the average staff turnover rate for e-communications regulators is with 8% somewhat lower than the overall average across sectors (10%).[1] The turnover rate does not differ significantly between regulators that are required to follow central government remuneration policy and those that do not face such requirements. This suggests there is no direct correlation to be found between the requirement to follow government remuneration policy and the frequency of staff leaving the organisation.

**Figure 2.5. More than half of staff work at the regulator for more than five years**

Share of staff by length of employment




Note: Analysis is based on responses from 54 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

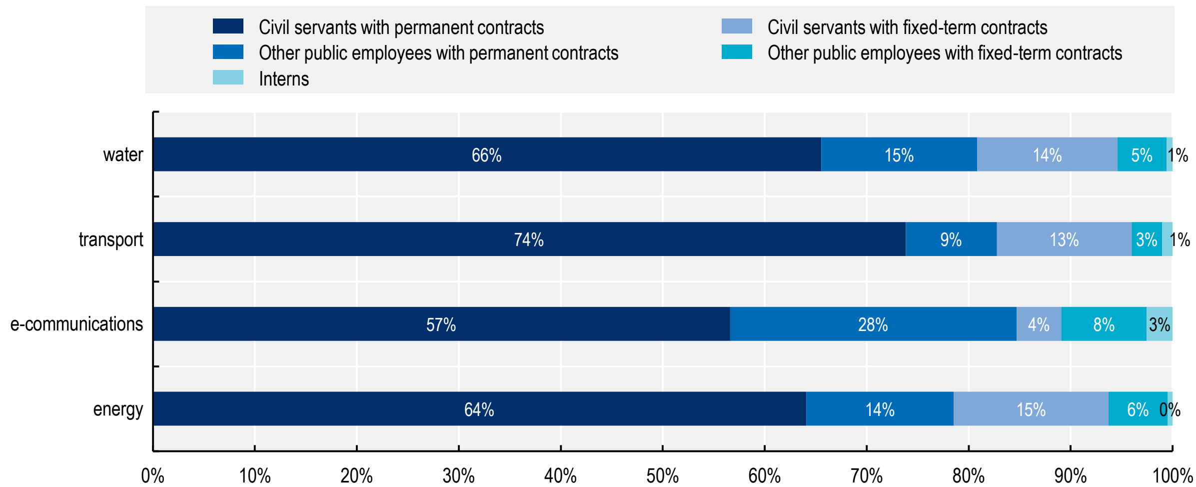
## Contracts and salaries

### *Contracts*

Employment at regulators is characterised by a high level of job stability. While there are some differences between sectors in the presence of the different types of employment, regulators overwhelmingly hire staff through permanent contracts. This observation is valid for each of the four sectors. On average across regulators, roughly four in five staff members are employed through a permanent contract rather than a fixed term contract, and a large majority are hired as civil servants (Figure 2.6).[2] The high level of job stability is not unique to economic regulators, but is present throughout the wider public administration (OECD, 2021[8]).

## Figure 2.6. Staff members are usually employed with permanent contracts

Staff breakdown by contract type




Note: Average shares per staff level are determined by averaging the shares for the different contract types for individual regulators within the respective age group. Multisector regulators are included in the data for each of the sectors they oversee. Analysis is based on responses from 55 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

### *Salaries*

Many economic regulators cannot set salaries autonomously, but have to conform to the remuneration policy in place for central government. Nearly three in four regulators are required to follow government salary scales, although a small number of them are allowed to deviate from this policy on some elements. One in four regulators are not bound by the central government remuneration policy and can set their remuneration more autonomously. For example, Costa Rica's Regulatory Authority of Public Services (*Autoridad Reguladora de Servicios Públicos* – ARESEP) sets its salaries based on a survey of salaries carried out by a consultancy. Mexico's Federal Institute of Telecommunications (*Instituto Federal de Telecomunicaciones* – IFT) proposes its remuneration policy for approval to the Chamber of Deputies.

As discussed in the OECD *Creating a Culture of* Independence publication, the salary scales and progression that a regulator can offer its staff should take into account the fact that the sector they oversee employs staff with similar skills and the wider (non-financial) benefits to employment at the regulator (Box 2.2). This might sometimes mean a deviation from the public sector norm and a need for certain autonomy to adjust salary scales (OECD, 2017[1]). Especially in the energy and e-communications sectors, salaries tend to compare less favourably, and more than 60% of regulators report that their salaries are below those in the sector they oversee. This is less frequently the case for water and transport regulators, where only a minority reports salaries below market levels, and one in five even reports salaries above market levels (Figure 2.7).

## Box 2.2. Improving the quality of the workplace at regulators

### Brazil's National Telecommunications Agency

Improvements in the quality of work are identified as a necessary condition for the health and well-being of staff and performance by Brazil's National Telecommunications Agency (*Agência Nacional de Telecomunicações* – ANATEL). To collect data on the quality of the workplace, the human resources department of ANATEL carries out biannually an organisational climate survey, which covers indicators on the quality of the workplace. Based on the survey data, the HR department can carry out specific actions directed at the health of employees and the quality of work.

### Peru's Supervisory Agency for Private Investment in Telecommunications

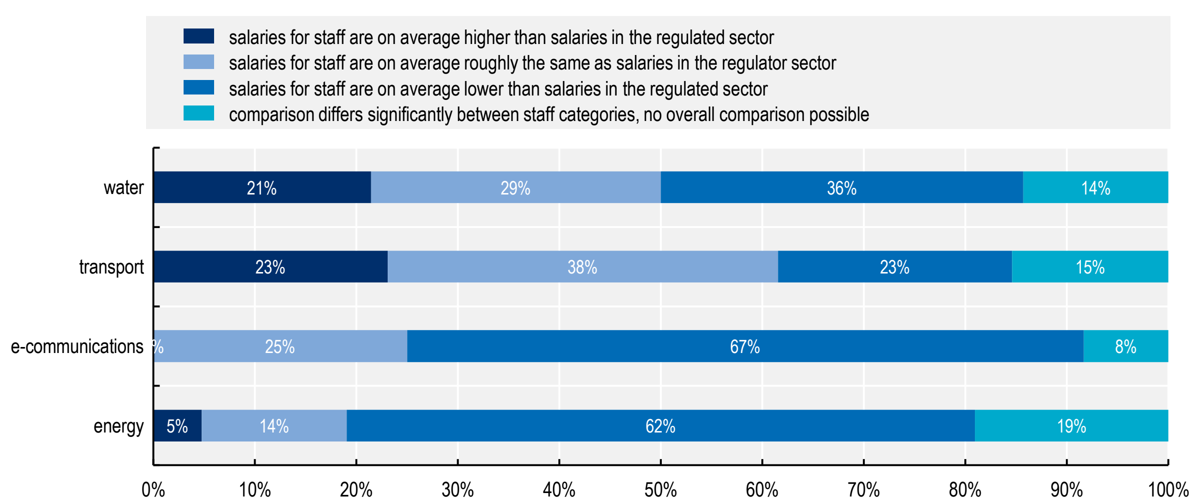
Peru's Supervisory Agency for Private Investment in Telecommunications (*Organismo Supervisor de Inversión Privada en Telecomunicaciones* – OSIPTEL) aims to become one of the main references as a great place to work among public organisations. It believes a motivated and recognised employee will be able to deliver better results. It therefore changed the way it managed its human resources by putting the employee at the centre, increasing the focus on well-being, work environment and internal communication processes.

Attesting to its efforts, OSIPTEL was certified as a great place to work by the Great Place to Work Institute for two years in a row. It was also recognised by the American Chamber of Commerce in Peru with an award for the best flexible work arrangement programme.

Source: Information provided by ANATEL and OSIPTEL, 2021.

## Figure 2.7. Energy and e-communications regulators usually offer lower salaries than in the sector they oversee

How do salaries for staff compare with similar positions in the regulated sector?

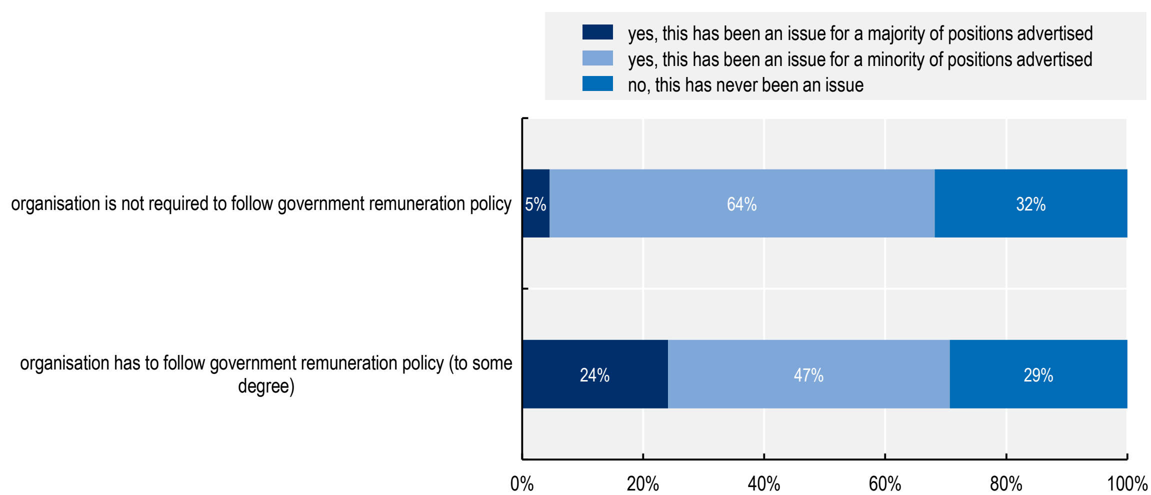



Note: The question asks regulators to indicate how salaries compare to the regulated sector, and to provide quantitative information on this comparison when available. Analysis is based on responses from 41 regulators. The figure does not include 14 regulators that reported that the comparison of salaries with similar positions in the regulated sector is unknown.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

The level of autonomy to set salaries can affect the ability of the regulator to offer salaries that are in line with market salaries, and potentially its ability to recruit staff. Sixty-one percent of regulators that are required to follow government remuneration policy report that salaries are below those in the sector they oversee. For regulators that are not required to follow central government remuneration, or can deviate on some elements, this share is lower (37% and 38% respectively). Moreover, regulators that are required to follow government remuneration policy (fully or to some degree) report more frequently that their remuneration policy is an issue in finding competent and skilled staff (Figure 2.8). Unsurprisingly, remuneration policy has not been an issue in finding competent and skilled staff for regulators where salaries are on average above those in the sector.

### Figure 2.8. On average, regulators that need to follow government remuneration face more difficulties to recruit

Answer by regulators whether their remuneration policy has been an issue in finding competent and skilled staff, separately for those that need to follow government remuneration policy (to some degree) and those that do not



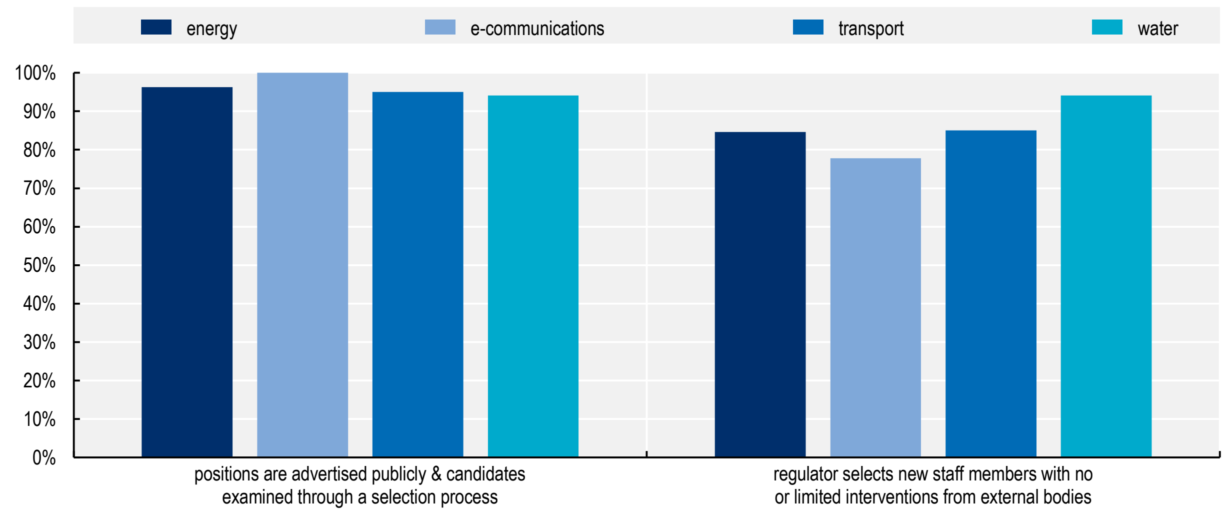

Note: Analysis is based on responses from 55 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

## Recruitment

The OECD *Recommendation on Public Service Leadership and Capability* recommends the recruitment, selection and promotion of candidates through transparent, open and merit-based processes, to guarantee fair and equal treatment (OECD, 2019[4]). A transparent and unbiased appointment process can support a culture of independence within the organisation (OECD, 2016[9]). Almost all regulators recruit the majority of their staff members through an open process that includes the public advertisement of positions and an examination of candidates through a selection process. Many have autonomy to select new staff members following the recruitment process with no or limited interventions from external bodies, with only small differences between sectors (Figure 2.9).

### Figure 2.9. Most regulators advertise positions publicly and select new staff independently

Recruitment of majority of staff and autonomy of regulator to select staff members




Note: The question on staff recruitment asks how the majority of staff is recruited (not necessarily all staff). For autonomy of regulator to select staff members: analysis is based on responses from 56 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

Twenty-nine percent of regulators are required to obtain approval from an external body prior to the recruitment of staff, for example on the number of staff to recruit or the overall agency headcount, which could restrict their autonomy (Table 2.1). This requirement in itself does not directly reduce the regulator's capacity and could ensure a match between the regulator's staff number and its level of appropriated financial resources. However, without appropriate safeguards, it could potentially provide an opening for undue influence in the regulator's operations if the hiring of staff is restricted below the level of staff that is required. As such, it could impact the effectiveness with which the regulator can execute its functions and deliver on its mandate.

### Table 2.1. Requirements to obtain approval before hiring exist in 9 out of 31 countries

Requirement to obtain approval from an external body before recruitment of staff, by country and sector

| | Energy | E-communications | Transport | Water |
|---|---|---|---|---|
| ALB | | | | ❍ |
| AUS- ACCC | ❍ | ❍ | ❍ | ❍ |
| AUS- AER | ❍ | | | |
| AUS- ESCOSA | ❍ | | ❍ | ❍ |
| BEL | ❍ | | | ❍ |
| BRA | | ● | ● | ● |
| CAN | ❍ | | ❍ | |
| COL | ❍ | ❍ | | ❍ |
| CRI | ❍ | ❍ | ❍ | ❍ |
| CZE | ❍ | | | |
| EST | ❍ | | ❍ | ❍ |
| FIN | ❍ | ❍ | ❍ | |
| FRA | ❍ | ❍ | ❍ | |

| | Energy | E-communications | Transport | Water |
|---|---|---|---|---|
| DEU | ❍ | ❍ | ❍ | |
| GRC | ● | ● | ● | |
| HUN | ❍ | | | ❍ |
| IRL | ● | ● | | ● |
| ITA | ❍ | | ❍ | ❍ |
| JPN | ● | | | |
| LVA | ❍ | ❍ | | ❍ |
| LTU- RRT | | ● | ● | |
| LTU- VERT | ● | | ● | ● |
| MEX | ❍ | ❍ | | |
| NZL | ❍ | ❍ | ❍ | |
| NOR | | ● | | |
| PER | ● | ● | ● | ● |
| POL | ❍ | | ❍ | |
| PRT | ❍* | ❍* | | ❍* |
| ROU | | | ❍ | ❍ |
| SVK | | | ❍ | |
| ESP | ● | ● | ● | |
| SWE | ❍ | | | |
| TUR | ● | | | |
| GBR | | ❍ | ❍ | ❍ |
| ● Requirement to obtain approval from an external body | | | | |
| ❍No requirement to obtain approval from an external body | | | | |

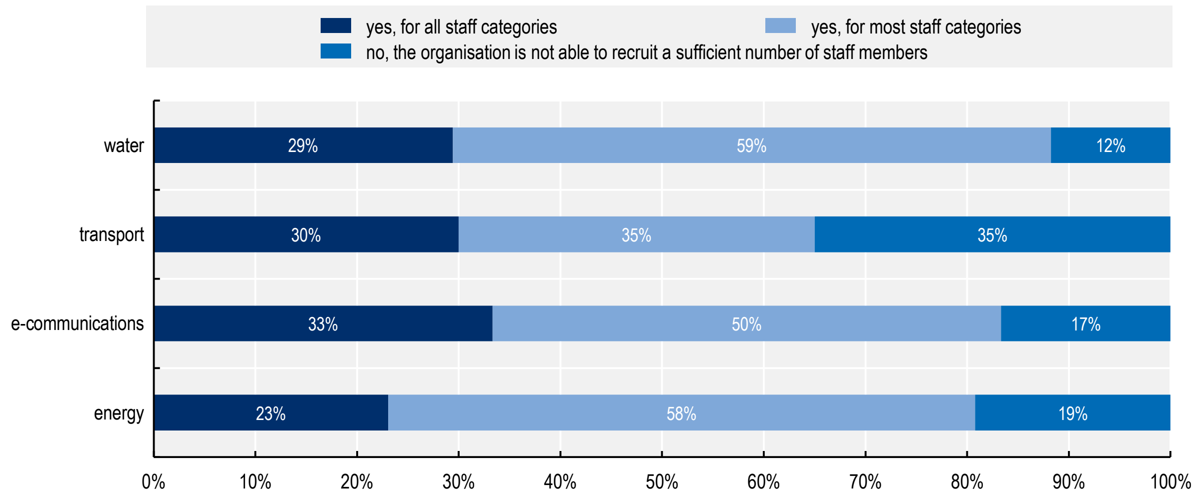
Note: An empty field means there is no data included on a regulator for that sector in the country. Elements that need approval can for example include the total agency headcount or the number of new employees to recruit.
* The framework law for Portugal's independent economic regulators determines that the management of personnel, including the hiring of workers, is not subject to the opinion of members of government. The agencies' annual budgets and multiannual activities plans – which include the agency's staff count – are subject to approval by the members of government in charge of their respective areas, but approval can only be refused under a limited set of circumstances (such as illegality or detriment to the regulator's objectives or public interest).
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

In practice, many regulators do to some degree face difficulty in hiring well-qualified staff members for their organisation. Just 28% of regulators report that they are able to recruit a sufficient number of staff members with the right qualifications for all staff positions. Another 51% is able to recruit sufficient well-qualified staff for most positions, and 21% report they are not able to recruit a sufficient number of staff members. Difficulties to recruit well-qualified staff members seem to occur less frequently for multisector regulators, with only 15% of multisector regulators indicating their organisation is unable to recruit a sufficient number of staff members (compared to 27% of single sector regulators). Transport regulators most frequently report difficulties to recruit sufficient well-qualified staff members (Figure 2.10). Where regulators face difficulties recruiting staff members, regulators report relatively frequently a lack in terms of skills such as IT and data science, and less frequently for economists, lawyers, engineers or statisticians. These findings are in line with broader findings across the public sector in OECD countries (OECD, 2021[8]).

Some regulators report an impact of recent austerity measures on their ability to hire, remunerate or promote staff. One regulator reports a freezing of new recruitment due to a government policy to reduce public spending, which minimised the influx of new staff for the organisation for a period of eleven years. In another example, austerity policies halted career progressions for staff and created a requirement for the regulator to obtain approval on the recruitment of new staff, promotions and performance-based bonuses.

### Figure 2.10. Many regulators do (to some degree) face difficulty in recruiting well-qualified staff

Answer to the question whether in practice the regulator is able to recruit a sufficient number of staff members with the right qualifications to fulfil all duties




Note: Analysis is based on responses from 56 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

## Training and career development

Given the strong reliance on knowledge and sector expertise in regulatory decision making, training and knowledge management are key elements of human resource management to ensure staff are sufficiently equipped with all the necessary information to do their job. Two aspects make this area increasingly important for many regulators. The first is the dynamic context of many utility sectors and an increasing reliance on data-driven regulatory tools, which requires regulators to constantly update their knowledge base and the skills within the organisation to keep up with the sector. The second aspect is the potential threat of retirements or talent leaving the organisation, which asks regulators to ensure knowledge remains within the organisation beyond the tenure of specific staff members.

To help staff members in their efforts to expand their skills set, regulators often put in place-dedicated programmes to support the training and development of staff (Box 2.3). Eighty-six percent of regulators provide their staff with financial support to obtain external qualifications, such as academic qualifications, professional qualifications or external training courses. The share of regulators providing financial support to obtain qualifications is highest in the e-communications sector (94%), and lowest in the water sector (76%) (Figure 2.11). When such support is available, this tends to be available for both technical and support staff members within the organisation.

### Box 2.3. Career development programmes at Peru's Supervisory Agency for Public Transport Infrastructure

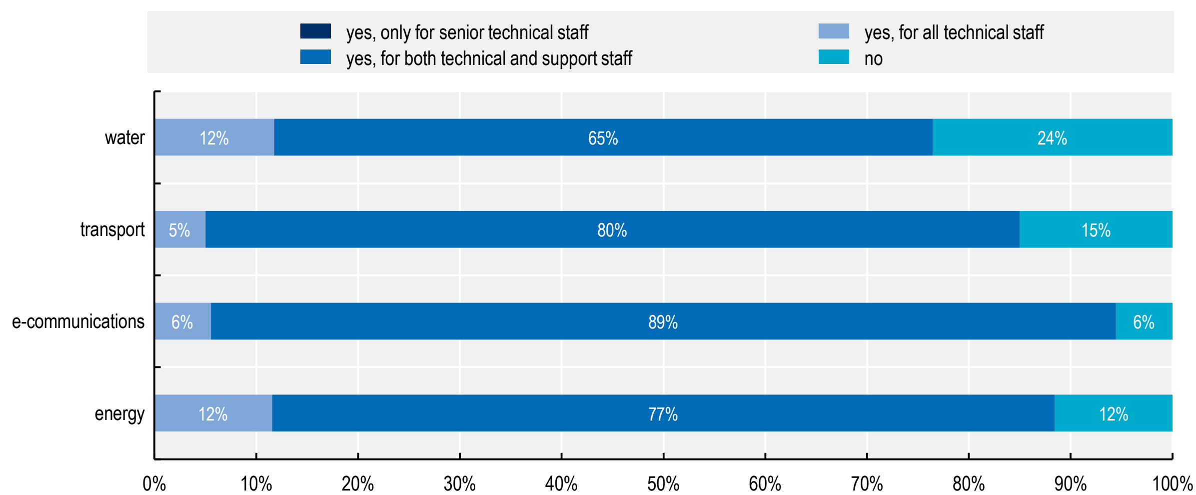
To provide opportunities for the development of staff, Peru's Supervisory Agency for Public Transport Infrastructure (*Organismo Supervisor de Infrastructura de Transporte de Uso Público* – Ositrán) has created a number of programmes and initiatives. These include a management and talent development model for staff. Ositrán also developed a specific focus on leadership, as its leaders are the ones responsible for developing and supporting their teams. This makes them key pieces to overcome challenges and exceed the institutional goals.

To identify the required competences for the organisation, Ositrán defined the specific competences by position level and institutional competences, and supported this with a Talent matrix and a Critical and Key Positions Matrix. To enable the organisation to attract the right staff, it also designed an attraction programme and paid attention to "employer branding" to position the regulator as an attractive employer for potential staff.

Source: Information provided by Ositrán.

### Figure 2.11. Most regulators provide financial support to staff to obtain external qualifications

Does your organisation provide financial support to staff members that wish to obtain external qualifications?

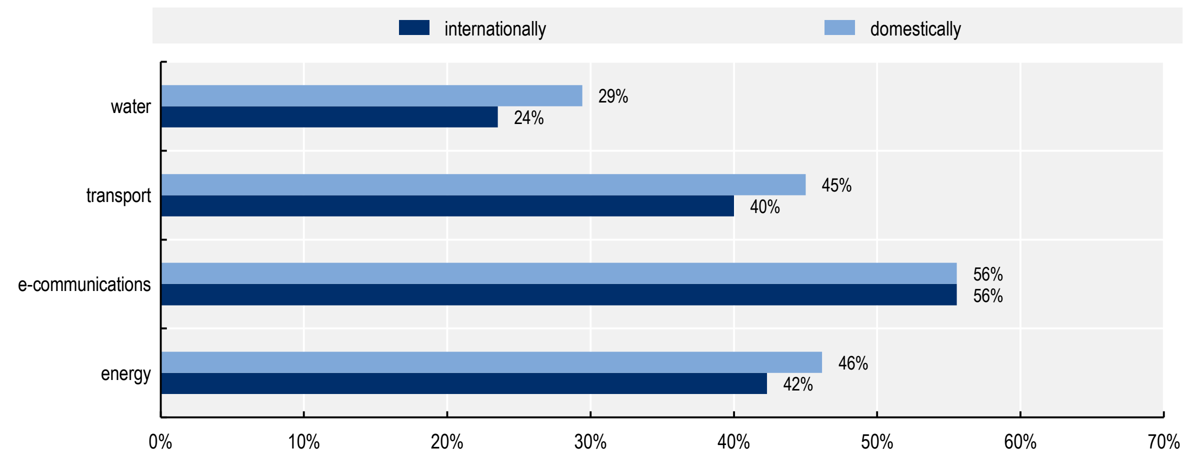



Note: External qualifications can include academic qualifications such as master degrees and PhD's and professional qualifications such as accounting and finance qualifications or external training courses. Support staff includes staff members that provide support services for the operation of the organisation, such as administration or IT services, but which do not directly execute any regulatory or supervisory activities themselves. Analysis is based on responses from 56 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

The exchange of staff members between regulators and other bodies – both domestically and internationally – is another way to bring in fresh perspectives and new knowledge. Moreover, staff exchanges across regulatory bodies can provide for mutual learning and exchange of good practices. Staff exchanges take place slightly more frequently at the domestic level (44% of regulators). Most regulators exchanging staff domestically mention exchanges with other government bodies, although some also indicate staff exchanges with the regulated sector. International staff exchanges are used by 41% of the regulators (Figure 2.12). A number of European regulators mentioned the use of temporary assignments to EU organisations, for example as Seconded National Experts. Staff exchanges across regulators internationally also occur, although these appear less common.

### Figure 2.12. Staff exchanges are most common for e-communications, and least common for water regulators

Share of regulators that exchange staff domestically or internationally




Note: Respondents were asked two questions: "Does your organisation exchange staff with other government bodies or the regulated sector?" and "Does your organisation exchange staff with other bodies outside your country?". For staff exchanges at the domestic level, this includes regulators exchanging staff with other government bodies and/or the regulated sector. Analysis is based on responses from 56 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

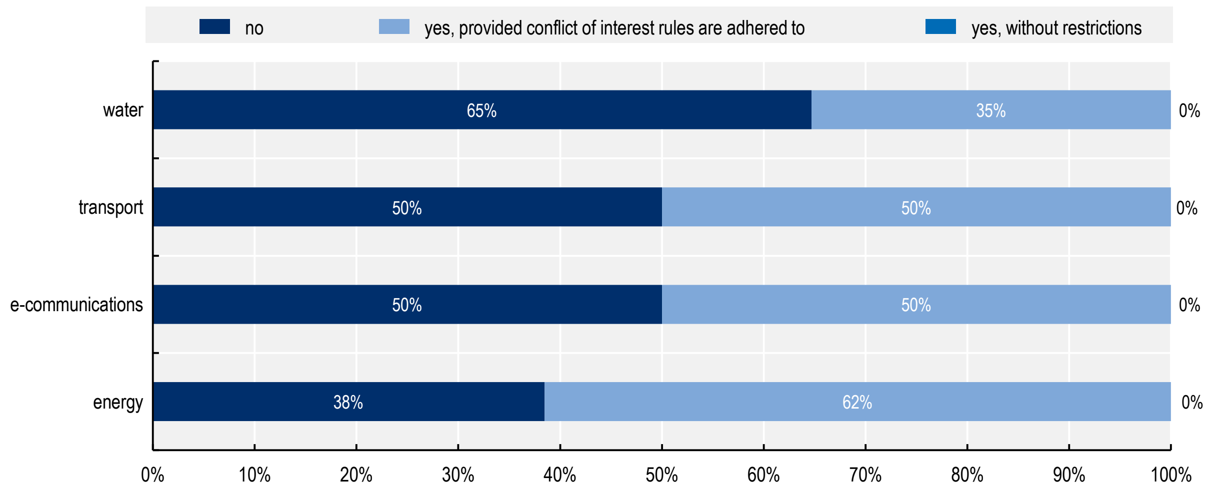
## Integrity

As "market referees", regulators are asked to be objective, impartial and free from undue influence. To support a culture of independence, many have procedures in place to prevent conflict of interest situations. All regulators that responded to the survey have at least some restrictions in place regarding the ownership of shares or financial instruments in the sector by staff members. Nearly half of all regulators prohibit staff to hold shares and financial instruments in the sector, whereas 51% allow such ownership provided conflict of interest rules are adhered to. For example, staff at Brazilian e-communications regulators ANATEL cannot invest in companies in the sector when they hold insider information. For some other regulators, ownership in companies in the sector should follow conflict of interest provisions specified in national anticorruption legislation. Prohibitions on holding shares and financial instruments are most common for water regulators (65%), and least common for energy regulators (38%) (Figure 2.13).

Conflict of interest policies for staff leaving the regulator can reduce potential undue influence and signal a clear distinction between the regulator and the sector they oversee. Most regulators restrict their leadership from accepting jobs in the sector or the government related to the sector, usually through a cooling-off period after their term (Casullo, Durand and Cavassini, 2019[10]). A wider application of some form of post-employment restrictions to all staff could prevent the risk of a "revolving door" between regulator and sector, although such restrictions should be modulated to the roles and responsibilities of staff and should be more limited for middle and junior staff members (OECD, 2017[1]). Especially for more junior staff, some back and forth between industry and regulator can sometimes be beneficial when it provides for exchanges of knowledge and skills (OECD, 2016[9]).

## Figure 2.13. Staff either face restrictions or are prohibited to hold shares in the sectors they oversee

Are staff allowed to hold shares or other financial instruments in the regulated sector?




Note: None of the regulators selected the answer option that staff could hold shares in the regulated sector without restrictions. Analysis is based on responses from 56 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

In practice, there is indeed a negative correlation between the existence of post-employment restrictions and the level of staff. Forty-eight percent of regulators have some form of post-employment restrictions in place for senior management (excl. board members and/or agency heads). Post-employment restrictions are less common for middle and junior level staff, with just 27% of regulators having such restrictions in place (Table 2.2). Overall, post-employment restrictions are present in 15 out of 31 countries that are included in the survey.

## Table 2.2. Post-employment restrictions are less common for more junior staff levels

Share of staff subject to post-employment restrictions by country, for different staff levels

| | Energy | E-communications | Transport | Water |
|---|---|---|---|---|
| ALB | | | | ❍ |
| AUS- ACCC | ❍ | ❍ | ❍ | ❍ |
| AUS- AER | ❍ | | | |
| AUS- ESCOSA | ❍ | | ❍ | ❍ |
| BEL | ❍ | | | ❍ |
| BRA | | ◗ | ● | ● |
| CAN | ● | | ◗ | |
| COL | ● | ● | | ◗ |
| CRI | ❍ | ❍ | ❍ | ❍ |
| CZE | ❍ | | | |
| EST | ● | | ● | ● |
| FIN | ❍ | ❍ | ❍ | |
| FRA | ● | ● | ● | |
| DEU | ❍ | ❍ | ❍ | |
| GRC | ❍ | ❍ | ❍ | |

| | Energy | E-communications | Transport | Water |
|---|---|---|---|---|
| HUN | ◗ | | | ◗ |
| IRL | ◗ | ❍ | | ◗ |
| ITA | ◗ | | ◗ | ◗ |
| JPN | ◗ | | | |
| LVA | ❍ | ❍ | | ❍ |
| LTU- RRT | | ● | ● | |
| LTU- VERT | ● | | ● | ● |
| MEX | ◗ * | ◗ * | | |
| NZL | ❍ | ❍ | ❍ | |
| NOR | | ❍ | | |
| PER | ● | ● | ● | ◗ |
| POL | ● | | ● | |
| PRT | ◗ | ◗ | | ◗ |
| ROU | | | ❍ | ❍ |
| SVK | | | ❍ | |
| ESP | ❍ | ❍ | ❍ | |
| SWE | ❍ | | | |
| TUR | ● | | | |
| GBR | | | ❍ | ❍ |
| ❍No post-employment restrictions | | | | |
| ◗ Post-employment restrictions for senior management | | | | |
| ● Post-employment restrictions for senior management and some or all junior and middle level staff | | | | |

Note: An empty field means there is no data included on a regulator for that sector in the country.
* The post-employment restriction for senior management of the Mexican regulators in the sample reflects the situation as of 1 January 2021. This post-employment restriction has been invalidated following a decision by the Mexican Supreme Court of Justice on 4 May 2022 (Supreme Court of Justice of the Nation, 2022[11]).
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

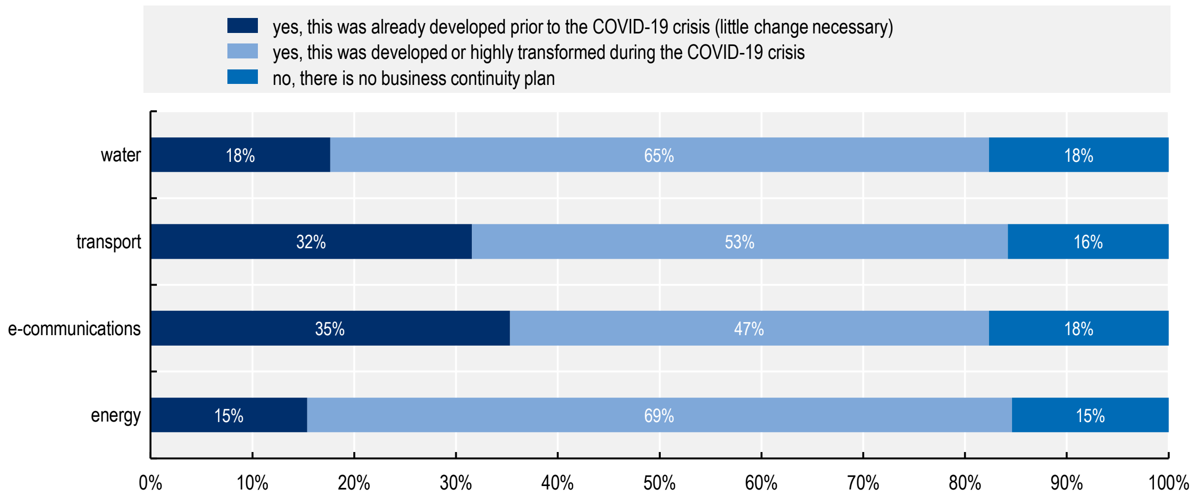
## The impact of COVID-19

The COVID-19 pandemic disrupted economies and daily life worldwide, including the operations of network sectors. Many of these saw strong shifts in usage patterns, with large consequences for operators. In their efforts to support the continuity of essential service delivery, regulators took part in the formulation of emergency measures, and changed how they operated (OECD, 2020[12]). This affected how they took decisions, and engaged with stakeholders, but also their human resource arrangements.

Sanitary measures and restrictions on mobility and office-based work fundamentally changed how all economic and public actors had to deliver on their work. All regulators implemented teleworking arrangements to adjust to the new circumstances, and many inspections were suspended, minimised, or conducted remotely (OECD, 2020[12]). Eighty-four percent of regulators used a contingency or business continuity plan to guide the organisation's operations during the COVID-19 pandemic. Twenty-four percent of regulators already had an adequate plan developed prior to the crisis that required only little change. However, a majority did not have such a plan prepared, and either had to develop a new plan or adjust existing plans to ensure the continuity of operations (Figure 2.14).

### Figure 2.14. Most regulators developed or transformed existing business continuity plans in response to the COVID-19 pandemic

Does your organisation have a contingency/business continuity plan that guides the measures taken during the COVID-19 crisis?

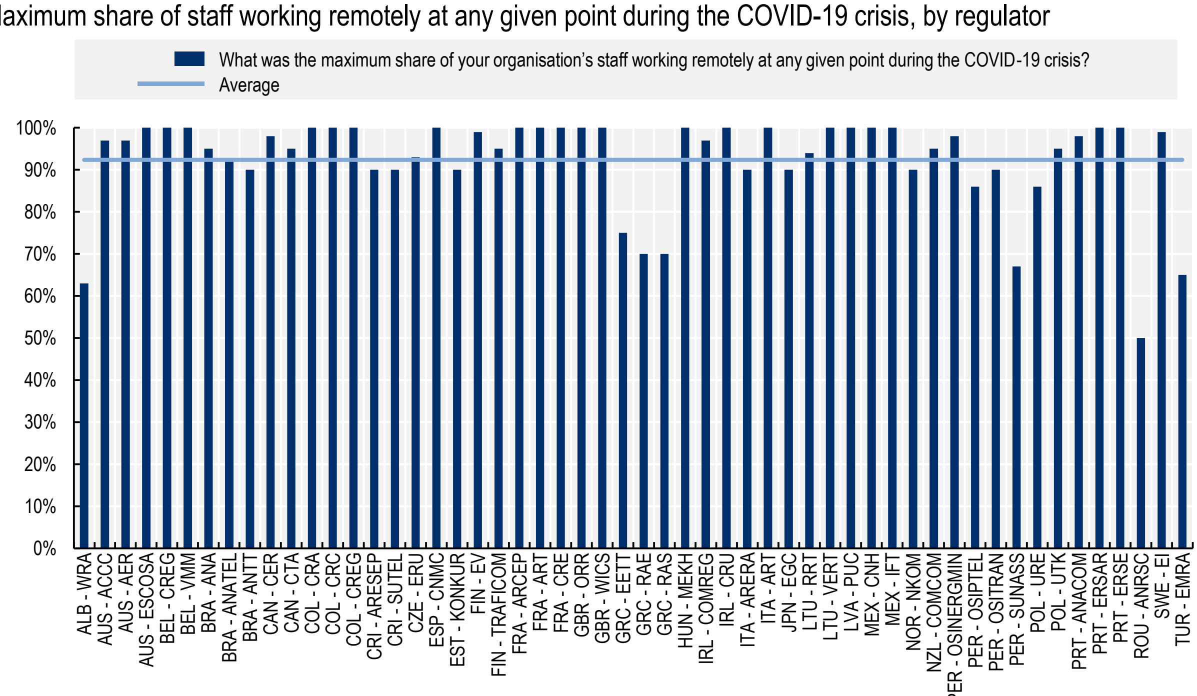



Note: Analysis is based on responses from 56 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

On average across regulators, the maximum share of staff working remotely at any point during the pandemic was 92%. This experience differed somewhat between regulators, depending on differences in sector contexts, sanitary requirements as well as the practical possibilities to move operations online. However, none of the regulators participating in the survey reported a maximum share of staff teleworking during the pandemic below 50% (Figure 2.15).

### Figure 2.15. Ninety-two percent of staff worked remotely at any point during the COVID-19 pandemic

Maximum share of staff working remotely at any given point during the COVID-19 crisis, by regulator



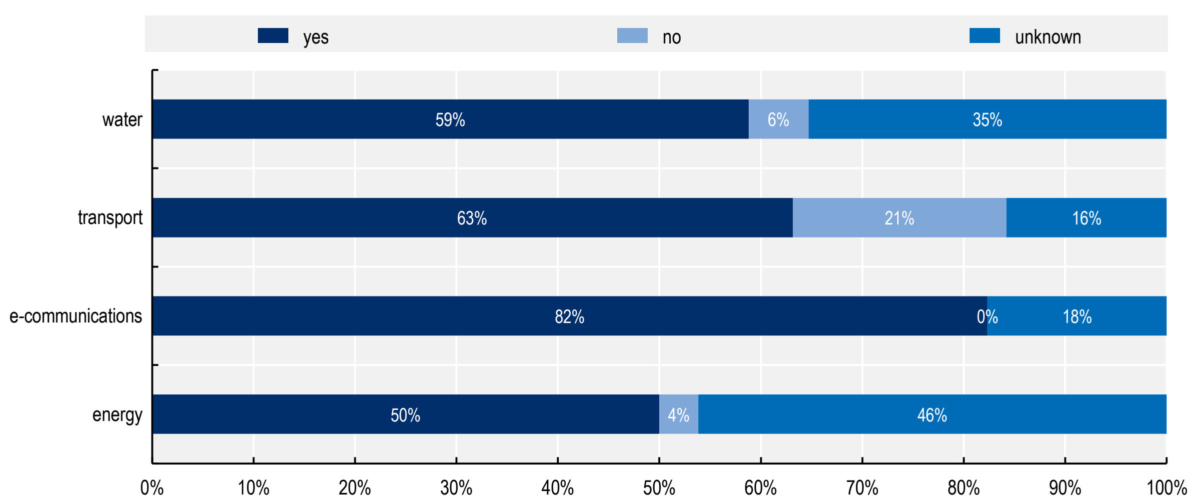

Note: Analysis is based on responses from 54 regulators. Light blue line refers to the average across regulators included in the figure.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

Apart from the logistical and IT challenges, regulators also reported an impact on the well-being of staff. The status quo in terms of the work-life balance shifted, and in many cases became more blurry, and the lack of in-person interaction made it more difficult to effectively develop and maintain interpersonal relationships with colleagues. Some regulators identified a risk to emotional and psychological well-being, which became areas of increased priority for the organisation requiring additional attention. Nearly all regulators confirmed the implementation of additional measures to support the well-being and safety of staff, such as additional communication, the provision of adequate personal protective equipment, or dedicated trainings and seminars on well-being.

Despite initial challenges to adjust to new ways of working, the crisis did also present an opportunity to facilitate or speed up a shift towards more flexible working arrangements. While ways of working are likely to continue to adapt in the future, bringing more staff back to the offices once circumstances allow, remote working has also proven its advantages. Three in five regulators indicated that they intend to increase their use of remote working even beyond the crisis, based on their experiences over the past years. Among e-communications regulators, the share planning to increase remote working on a permanent basis was highest, at 82%. For 30% of regulators this was yet to be decided upon at the time of the survey in early 2021, whereas only 8% indicated they had no such plans (Figure 2.16).

### Figure 2.16. Many regulators plan to increase the use of teleworking on a permanent basis

Does your organisation plan to increase the use of remote working on a permanent basis, based on the experience with remote working during the COVID-19 crisis?




Note: Analysis is based on responses from 56 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

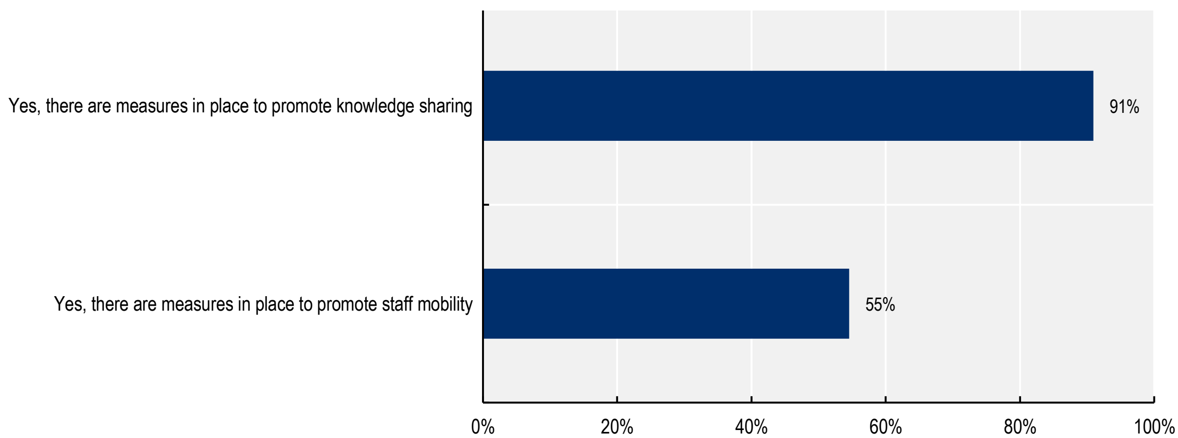
## Multisector regulators

The choice of whether or not to establish a multisector regulator, rather than multiple industry-specific regulators, is a complex question that goes beyond the scope of the current study (Alexiadis and da Silva Pereira Neto, 2019[13]). Among the different advantages and disadvantages noted in studies on the matter, one is the benefit that the multisector model can facilitate learning and sharing of regulatory expertise across different industries (World Bank, 2000[14]). This rationale is based on the understanding that there are certain common features across regulated industries and that the sharing of insights and experiences across sectors would be easier within a single regulatory body (World Bank, 1997[15]).

The data collected through the survey enables an analysis of some elements specific to the resourcing arrangements of multisector regulators. The survey finds that where multisector regulators have technical departments dedicated to specific sectors, nearly all (91%) have some measures in place to promote knowledge sharing across the different departments. Slightly more than half (55%) also promote staff mobility between sector-specific departments (Figure 2.17). Apart from the benefits of knowledge sharing, some multisector regulators also noted the shared use of combined legal or economics teams across departments dedicated to specific sectors. It is important to note that the analysis does not assess the impact of these measures, or how their effectiveness compares to staff exchange mechanisms at the domestic or international level for the wider sample of regulators (see section on Training and career development).

### Figure 2.17. Most multisector regulators promote internal knowledge sharing, around half also promote staff mobility

Share of multisector regulators with measures in place to promote knowledge sharing and staff mobility between sector-specific departments




Note: Analysis is based on responses from 11 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

## Notes

[1] The turnover rate for a given year can be calculated by dividing the number of employees that left the organisation during the given year by the average number of employees in the same year. Analysis is based on responses from 55 regulators.

[2] For the purpose of the survey, civil servants are only those public employees employed under a specific public legal framework or other specific provisions.

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# 3 Financial resources

This chapter presents findings on how economic regulators receive and manage their financial resources, based on the 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators. It first identifies the different sources of funding for regulators and the procedures through which funding needs are identified and decided upon. The chapter then distinguishes the arrangements regarding funding through national budget appropriations and funding through regulatory fees. The sections on financial management and audit highlight the restrictions regulators may face in managing their funds and spending, as well as the mechanisms in place to scrutinise their spending. The chapter also explores the impact of the COVID-19 pandemic on regulators' funding and illustrates how financial arrangements tend to differ for regulators overseeing multiple sectors.

# Main findings

### Source of funding

- Half of regulators are exclusively fee-funded, but fewer in the transport sector
- Funding arrangements differ significantly across sectors and within countries
- Those funded through a mix of national budget and fees more frequently indicate lacking funds
- Lacking funds are most common for transport regulators, and least common for energy regulators

### Funding procedures

- Regulators usually submit their costs and resources for approval
- Budget appropriations are publicly substantiated by the responsible body for 62% of regulators
- For most regulators, budgets are decided on an annual basis

### Funding through national budget

- Most national budget-funded regulators are involved in their budget discussion, but fewer in the water sector

### Funding through fees

- For most regulators funded through fees, fees are charged periodically based on the revenues or activity level of the entities in the sector
- Three in four fee-funded regulators independently collect fee revenues from the sector without involvement from an external body
- Fee-funded regulators tend to set fee levels themselves or propose the fee level
- Where there is a cost-recovery principle for setting fees, revenues are less frequently used for other purposes
- In most cases, fee levels are revised annually

### Financial management

- One in three regulators can experience spending restrictions that do not require the approval of the legislature
- Where the regulator's budget can be modified after initial approval, this usually requires approval by the legislative branch
- Some regulators are allowed to carry over funds from one financial cycle to the next, although there are usually restrictions

### Audit

- The spending of all regulators can be externally evaluated, usually by the supreme audit institution
- Nearly all regulators collect information on their financial performance, and this information is published for 86% of regulators

### Impact of COVID-19

- The impact of the COVID-19 pandemic on regulatory budgets differed substantially across regulators
- Expenses usually either decreased or were unaffected by the COVID-19 crisis

### Multisector regulators

- Multisector regulators usually face restrictions to redistribute fee revenues across the sectors they oversee

Economic regulators rely on adequate funding to carry out their mandates and exercise their functions effectively. They are usually funded through fees, the national budget or a mix of both. However, it is not just the source or the absolute level of funding that is important. Other aspects of a regulator's funding arrangements matter at least as much. The way in which funding needs are determined, budgets are decided and appropriated and the extent to which regulators can manage their funds autonomously together contribute to the good governance and performance of regulators.

Appropriate funding mechanisms should ensure that regulators receive sufficient funds for an effective and efficient execution of their activities, and should contain adequate safeguards that prevent undue influence in the work of regulators through the appropriation or restriction of funds. At the same time, procedures should be transparent, to support trust in public institutions. Moreover, arrangements should ensure sound financial management and enable accountability of a regulator for its spending, to show how the regulator delivers upon the policy objectives of governments.

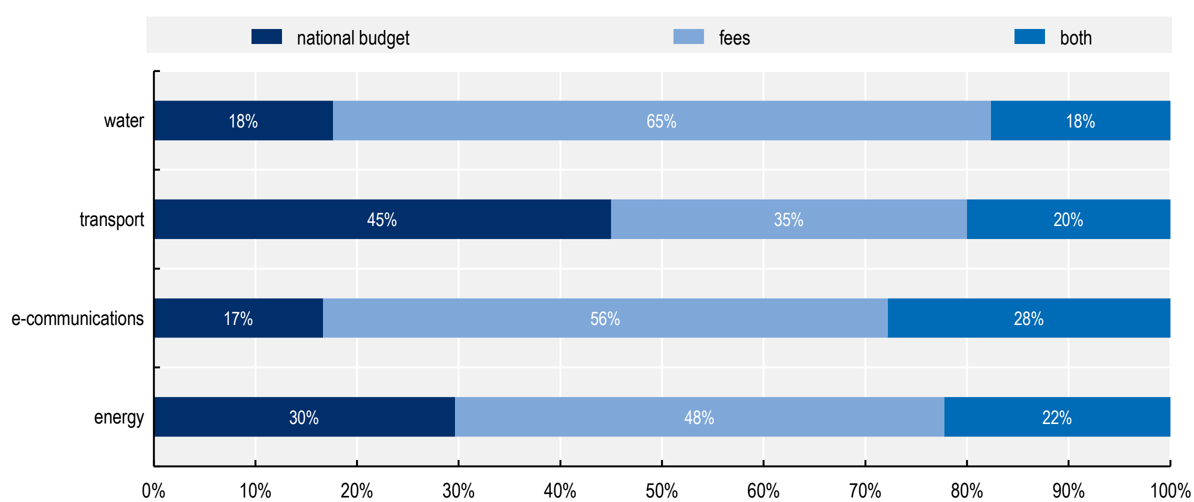
## Source of funding

There is no universal right or wrong in terms of what the source of funding of a regulator should be. The context in which the regulator operates may affect the appropriateness of different funding sources. When identifying the sources of funding, due consideration should be given to circumstances that could potentially compromise the integrity of the regulator, such as public ownership in the sector and expected market volatility (OECD, 2017[1]).

The source of funding is stated in the establishing legislation for most regulators. Half of all regulators are solely funded through fees, an arrangement that is especially common for water regulators. Twenty-eight percent of regulators are funded solely through national budget appropriations, whereas 22% are funded through a mix of both fees and national budget (Figure 3.1). Funding arrangements differ significantly, both across and within countries (Annex D).

### Figure 3.1. Half of regulators are exclusively fee-funded, but fewer in the transport sector

Percentage of regulators funded through fees, the national budget or a mix of both



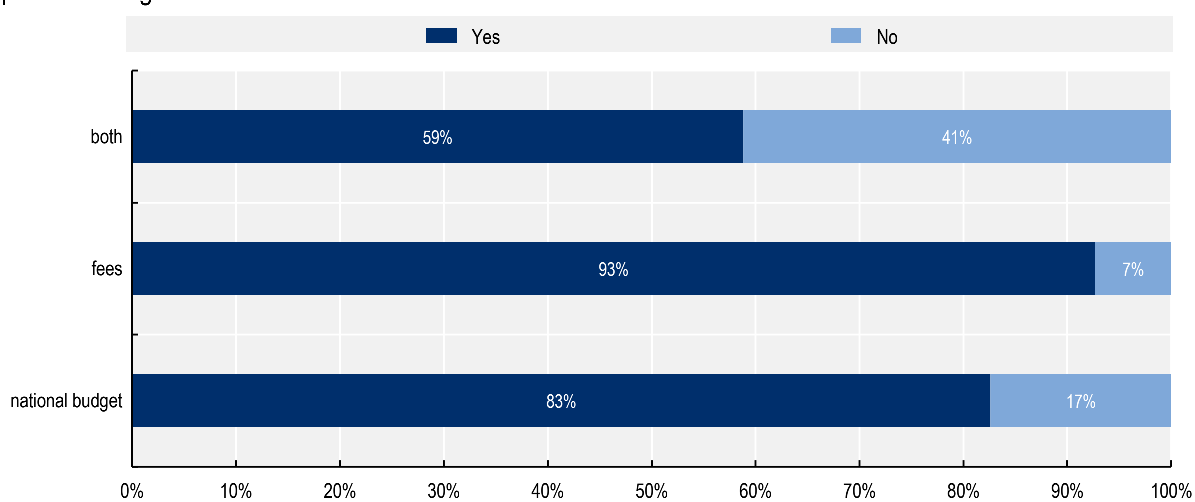

Note: The Peruvian transport regulator Ositrán receives funding through fees, but in 2020 exceptionally received additional funding from the national budget following the enactment of an emergency decree related to COVID-19. For the purpose of this survey, the funding of Ositrán has therefore been classified as a mix of fees and national budget. Analysis is based on responses from 57 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

Different funding sources bring with them different types of risks. Regulators funded through the national budget report that the modification or reallocation of resources towards other entities or contingencies, as well as the uncertainty of resources, could pose substantial risks to their organisation's funding. Regulators funded through fees identify risks related to the economic situation in the sector they oversee, such as the financial position of operators or a downturn in regulated revenues, as the main threats to their funding.

Moreover, looking at the regulators participating in the survey, there is a correlation between the type of funding and the share of regulators that report that they had sufficient funding over the last five years. Regulators that are funded through a mix of both national budget and fees are considerably more likely to report insufficient funding over the last five years, with 41% reporting that they did not have sufficient funding (Figure 3.2). This correlation does not necessarily need to imply that there is a causal relationship between the type of funding and the sufficiency of financial resources, and indeed for each type of funding a majority of regulators reported sufficient funding. However, the finding does raise the question of why funding deficiencies are perceived more frequently by regulators funded through a mix of funding sources.

### Figure 3.2. Those funded through a mix of national budget and fees more frequently indicate lacking funds

Response by regulators whether they had sufficient funding to fulfil all duties over the last five years, for different types of funding



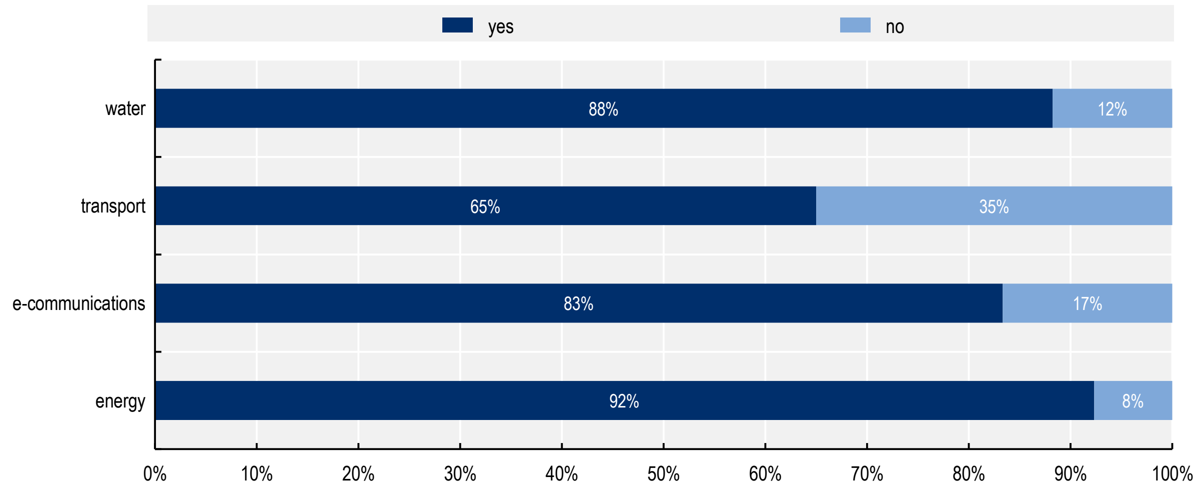

Note: The chart shows the correlation between the type of funding and the reporting by the regulator whether it had sufficient funding, but does not provide evidence of a causal relationship. Analysis is based on responses from 56 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

National budget funding is most frequently seen in the transport sector, where regulators are also more likely to report insufficient funding compared to other sectors. While 35% of transport regulators reported lacking funds to fulfil all duties over the past five years, this share was just 8% for energy regulators (Figure 3.3). Furthermore, multisector regulators less frequently report lacking financial resources, with only 8% reporting funding gaps (compared with 27% of single sector regulators).

However, in the interpretation of these findings, due consideration should be given to the timing of the survey, which was distributed in January 2021. During this period, some regulators felt the impact of the COVID-19 crisis on their funding model (OECD, 2020[2]). This affected the funding of some regulators due to a decrease in sector activity (for those funded through fees) or a reorientation of budgets towards the crisis response (for those funded through national budget) (see section on The impact of COVID-19). Especially in the transport sector, there was a drastic change in the use of different modes of transport (ITF, 2021[3]), which may have affected the high percentage of regulators in this sector reporting insufficient funds.

### Figure 3.3. Lacking funds are most common for transport regulators, and least common for energy regulators

Response by regulator whether it had sufficient financial resources to fulfil all duties over the past five years




Note: Analysis is based on responses from 56 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

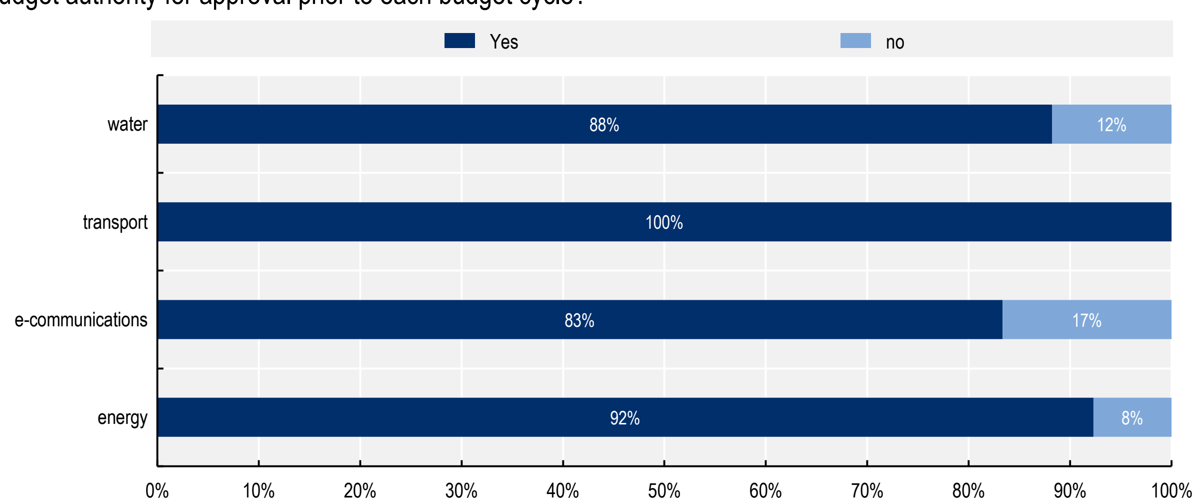
## Funding procedures

A correct assessment of resourcing needs depends on the availability of clear and up-to-date financial information. For that reason, it is essential that the regulator provides adequate information to the legislature or relevant budget authority on the resources required to fulfil its mandate.

Most regulators indeed do so, with 91% submitting their costs and resources for approval to the legislature or relevant budget authority prior to each budget cycle (Figure 3.4). In other cases, in the absence of a requirement to obtain approval, some regulators nevertheless share information. For example, Ireland's Commission for Communications Regulation still provides information to the government on its costs and resources, a practice that supports the accountability of the regulator.

### Figure 3.4. Regulators usually submit their costs and resources for approval

Does the regulator submit the costs and resources needed to fulfil its mandate to the legislature or the relevant budget authority for approval prior to each budget cycle?

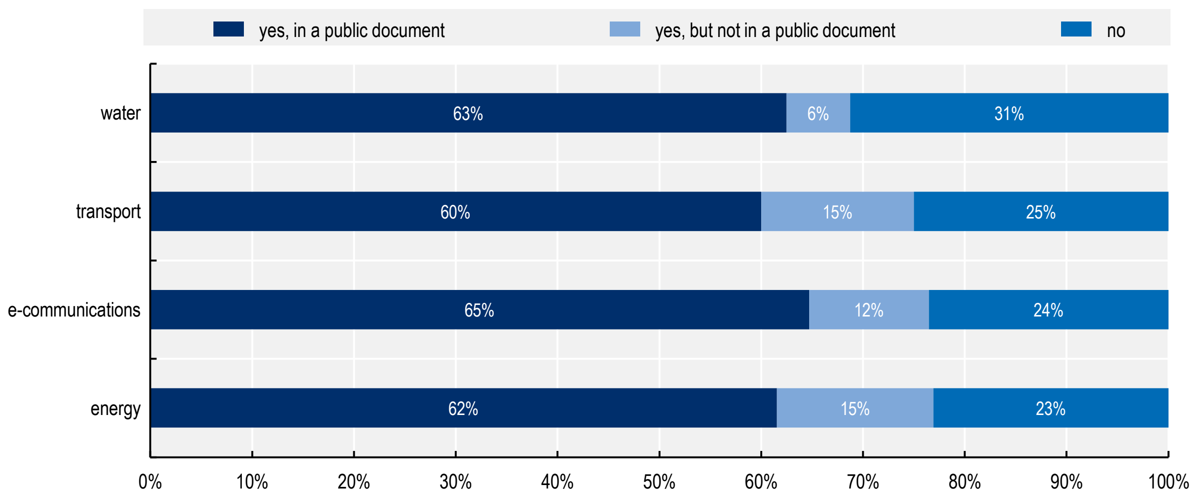



Note: Analysis is based on responses from 56 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

Budget decisions for economic regulators should be made through a transparent and clearly defined process. This requires the body deciding upon the budget allocation to disclose the budget decision and to provide an explanation. In practice, for three out of four regulators, budget decisions are substantiated by the responsible body. In most cases, this substantiation is made through a public document, supporting the accountability of the budget appropriation process (Figure 3.5).

### Figure 3.5. Budget appropriations are publicly substantiated by the responsible body for 62% of regulators

Does the body responsible for deciding upon the regulator's budget appropriation substantiate its decision?




Note: Analysis is based on responses from 54 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

For most regulators (90%), budgets are decided on an annual basis, whereas for the remaining 10% of regulators the length of appropriations is at least three years. This is a relevant aspect for the regulator's financial independence, as the budget decision is a so-called "pinch-point" during the regulatory cycle where there is the greater potential for undue influence in the regulator's work (OECD, 2017[1]). Annual appropriations can make it easier to influence the regulator than multi-annual appropriations, because shorter-term appropriations are more contingent to short-term shocks such as political imperatives. Therefore, especially for regulators funded through annual appropriations, due consideration should be given to the design of safeguards that could prevent undue influence, such as clear criteria, procedures as well as multiannual forecasts (Box 3.1).

Regulators may at times face the need for supplementary funding in situations where their responsibilities have increased beyond what is reflected in their initial budget allocation, or where shocks such as the COVID-19 crisis lead to additional expectations. Many regulators indicate that in such cases a temporary or ad-hoc request can be made, usually directed to the relevant budget authority. This mechanism can support the sufficiency and flexibility of resources to absorb changes in the regulator's responsibilities. However, the use of temporary funding mechanisms could potentially be more problematic where they are used on a recurring basis. In particular, one regulator reports the use of supplementary funding allocations to compensate for a non-temporary increase in responsibilities for the organisation. In such cases, the use of temporary funding mechanisms could restrict the regulator to the use of temporary staffing arrangements. This may result in a more continuous rehiring of staff ("hiring treadmill") and make it more difficult to draw up long-term resourcing plans or invest in staff capabilities.

### Box 3.1. Multiannual budget programming in Peru

The Government of Peru makes use of a performance budgeting system for some government entities, including the country's economic regulators. This system requires the budgets of Peruvian regulators to be aligned with the goals and objectives established by the institutions in their strategic plans and operational plans. Based on multiannual strategic and operational plans, a multiannual budget programme (for a three-year period) is approved by the Ministry of Economy and Finance (MEF). The budgets for departments within the regulator are allocated taking into consideration the prioritisation of the activities according to the operational plans and the historical performance.

The multiannual budget programming allows regulators to incur financial obligations beyond the period of one year. However, final budgets are still decided upon on an annual basis. Only the first year of the multiannual budget programme is set in an annual budget decision by MEF, whereas budget figures for subsequent years may still change based on macroeconomic conditions and government policies and priorities.

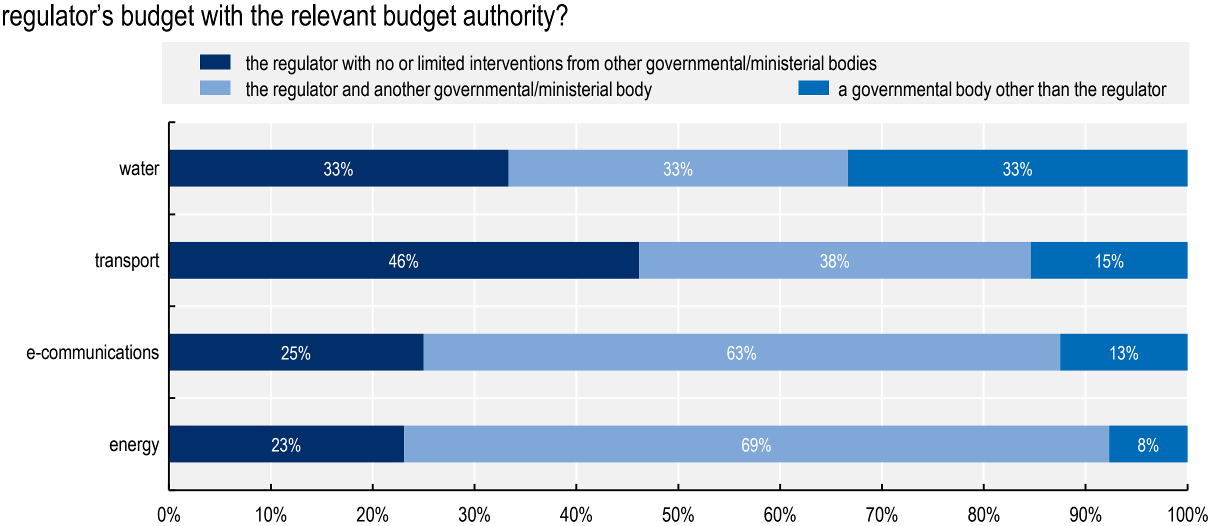
Source: Information provided by Ositrán, 2021; MEF (2021), *Multiannual Budget Programming Report 2022-2024*, https://www.mef.gob.pe/contenidos/presu_publ/pres_multi/Informe_Programacion_Multianual_2022_2024.pdf.

## Funding through national budget

Where regulators are funded through national budget appropriations, they are usually involved in the discussion of their budget with the relevant budget authority. One in three regulators discuss their budget with no or limited involvement from other bodies, whereas another 53% is involved in the discussion together with another ministerial or governmental body. Only in a few cases is the regulator not directly involved in the negotiation of its budget; this appears to happen more frequently for regulators in the water sector (Figure 3.6).

### Figure 3.6. Most national budget-funded regulators are involved in their budget discussion, but fewer in the water sector

If the regulator is financed in total or in part through the national budget, who is responsible for discussing the regulator's budget with the relevant budget authority?




Note: Analysis is based on responses from 29 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

## Funding through fees

For most regulators funded through fees, fees are charged periodically based on the revenues or activity level of the entities in the sector. In a smaller number of cases (19%), the fee is charged for a specific activity by the regulator, such as processing a license application or taking a specific decision. Fourteen percent report another type of fee, for example where a fee is charged directly to consumers or where there is a more complex mix of fees used to fund the regulator (Box 3.2). Three in four fee-funded regulators independently collect fee revenues from the sector without involvement from an external body (Box 3.3). For most other regulators (17%), fee revenues are collected and distributed to the regulator by a ministerial or governmental body.

### Box 3.2. Fee funding for the Belgian energy regulator (CREG)

Until the end of 2021, Belgium's Commission for Electricity and Gas Regulation (*Commissie voor de Regulering van de Elektriciteit en het Gas / Commission de Régulation de l'Électricité et du Gaz* – CREG) was funded through federal electricity and gas contributions, which are surcharges levied respectively on the quantities of electricity and natural gas consumed by consumers in Belgium. In addition, the CREG also received relatively small fees for the assessment of the application for authorisations to supply natural gas on the Belgian market.

The federal electricity and gas contributions covered the costs of the functioning of the CREG, but also provided funding for other funds managed by the CREG that do not relate to the costs of operations of the CREG (such as funds related to denuclearisation of the electricity supply and the protection of residential consumers). The CREG set the level of the unit value of the fees (EUR/MWh or EUR/m3) autonomously, while taking into account global amounts yearly specified by royal decrees. The CREG published the annual fees on its website.

All final consumers in Belgium are liable to pay the federal contributions and had to pay these to the electricity and natural gas suppliers. The gas suppliers transferred the collected fees to the energy network operators, which in turn passed the collected amounts on to the CREG (*principe de la cascade tarifaire*).

Since 1 January 2022, the functioning costs of the CREG are covered by a special excise duty rate on electricity and natural gas levied by the Federal Public Service Finance and paid to the CREG, up to the budget approved by the Parliament.

Source: Information provided by CREG (2021); JUSTEL (2019), Law of 29 April 1999 concerning the organisation of the electricity market, http://www.ejustice.just.fgov.be/.

## Box 3.3. Improving the collection of fee payments by the Albanian water regulator

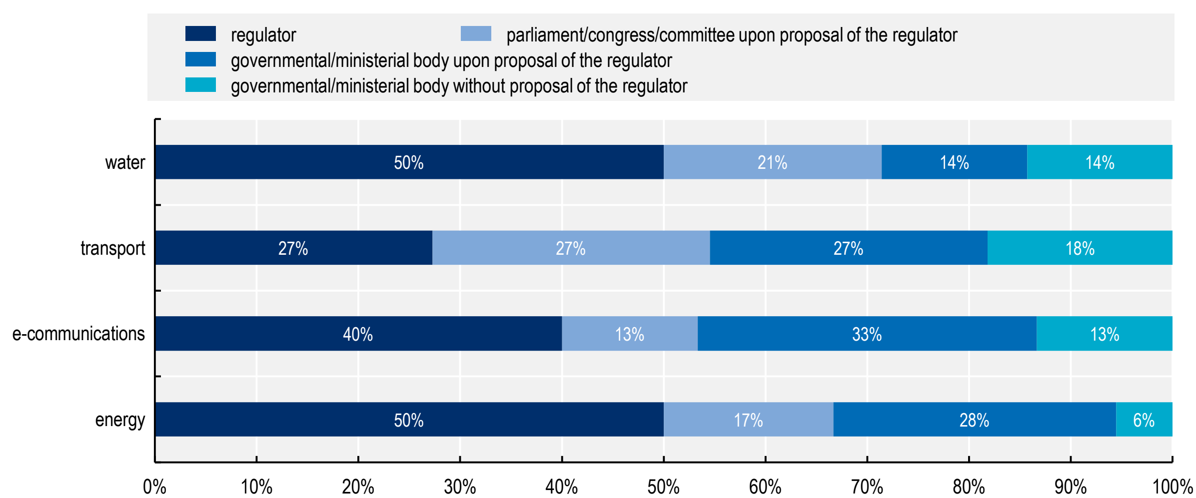
The Albanian Water Regulatory Authority (Entit Rregullator të Ujit – ERRU) is funded through regulatory fees collected from entities in the water sector. To improve the payment of regulatory fees by entities, the regulator has looked for ways to avoid the rather lengthy court procedures foreseen in law in case of non-payment. The regulator organises meetings with the leadership of water utilities that have failed to pay regulatory fees, to establish a contract to define the conditions for the payments of regulatory fees that are due. Only in cases where this approach appears unsuccessful will the regulator address the missed payments through procedures at the administrative court.

Source: Information provided by ERRU, 2021.

Care should be given to the process in which fees are set. Regulators should not set the level of their cost-recovery fees without arm's-length oversight (OECD, 2014[4]). Moreover, where the minister or the cabinet sets the fee level, issues could potentially emerge in situations where governments hold a stake in companies in the sector (OECD, 2016[5]). Regulators funded through fees tend to be closely involved in the fee-setting process. Forty-three percent of regulators funded through fees are themselves in charge of setting the fee level. Another 45% of fee-funded regulators proposes the fee level, either to a parliament or congress (or a committee) or to a governmental or ministerial body. For just 12% of regulators, fees are set without any direct involvement of the regulator (Figure 3.7).

## Figure 3.7. Fee-funded regulators tend to set fee levels themselves or propose the fee level

If the regulator is financed in total or in part through fees paid by the regulated sector, who sets the level of the fees?



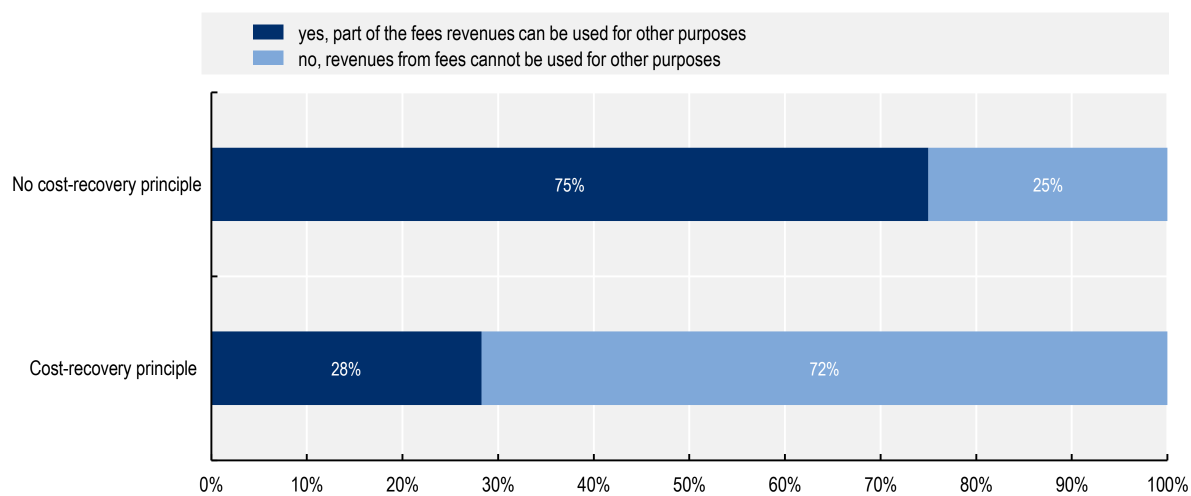

Note: Analysis is based on responses from 41 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

When a regulator is funded through fee contributions from the sector(s) it oversees, these revenues should be allocated to the regulator through an independent and accountable channel. An appropriate cost-recovery mechanism is essential to ensure fees are set at the "right" level and cover the costs of the regulator and nothing more. It can avoid a regulator from being underfunded, captured by industry or undermined by the executive (OECD, 2017[1]). This may be especially relevant in sectors with a relatively large share of public ownership. The survey finds that for four in five fee-funded regulators, fees are set according to a cost-recovery principle.

The survey finds that where fees are set according to a cost-recovery principle, fees are less frequently used for purposes other than the regulator's budget (Figure 3.8). For 38% of the regulators funded through fees, fee revenues can also be used for other purposes than the regulator's budget, usually towards the central government budget. A large majority of regulators for which fees revenues can be used towards other purposes reports that in practice this has happened multiple times during the last five years. In some cases, there are legislative provisions that determine the maximum share of revenues that can be diverted towards the central government budget. In the case of Greece's National Telecommunications and Post Commission (EETT), there are strict legal provisions that prevent the use of administrative fee revenues collected from operators, subject to general authorisation, for any other purpose than the regulator's funding. Similarly, for Portugal's Energy Services Regulatory Authority (*Entidade Reguladora dos Serviços Energéticos* – ERSE), fee revenues cannot be used for purposes other than the regulator's budget.

### Figure 3.8. Where there is a cost-recovery principle for setting fees, revenues are less frequently used for other purposes

Correlation between the presence of a cost-recovery principle and the possibility that fee revenues can be used for purposes other than the regulator's budget



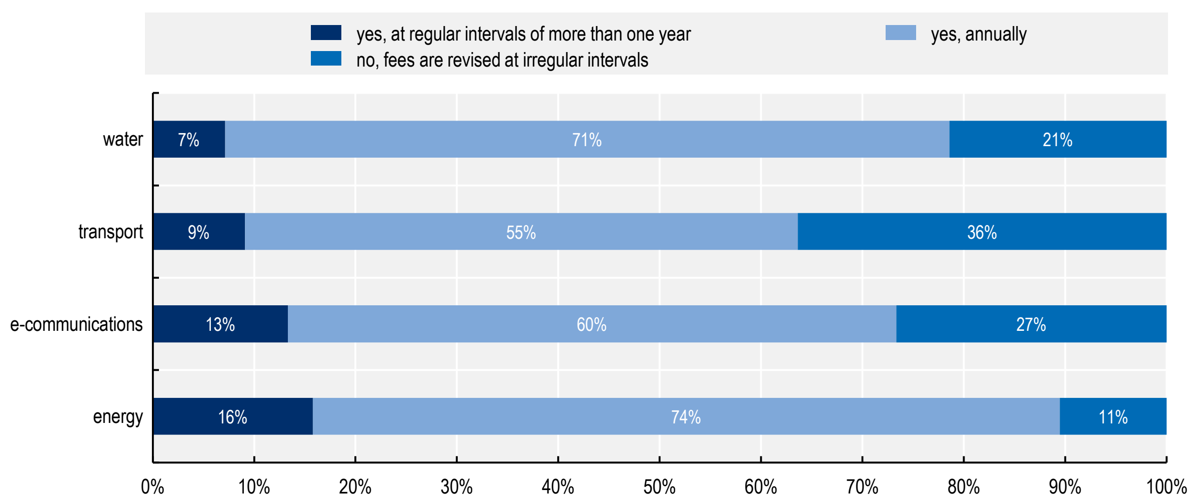

Note: The correlation between the two questions shows a correlation between the presence of a cost-recovery principle and the possibility fee revenues can be used for other purposes, but does not provide evidence of a causal relationship. Examples of other purposes include cases where fee revenues are redirected towards central government budget, or where these are used to fund certain sectoral funds. Analysis is based on responses from 41 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

When cost-recovery fees are being used as a means to fund the operations of the regulator, these fees should be set in accordance with government policy objectives and applicable cost-recovery guidelines, and ideally for a multi-year period (OECD, 2014[4]). In deciding upon the period for which fees are set, a balance should be struck between the stability and predictability of fee levels for the regulator and fee-paying entities on the one hand, and a need to keep the fee level aligned with underlying costs on the other hand. For most regulators, fee levels are revised at regular intervals, usually yearly (Figure 3.9). Only for 22% of regulators are fees revised at irregular intervals.

Adequate procedures and criteria for fee revision should be in place to ensure an accurate fee level, especially where fees are revised irregularly. Without such provisions, fee revenues may end up being either insufficient or excessively high, especially where the sector is relatively dynamic or the regulator's mandate is subject to change. A fee level that is too low could result in an underfunded regulator, which decreases the regulator's effectiveness and ultimately harms market outcomes. Alternatively, a fee level that is too high could pose a disproportionately high financial burden on fee-paying entities.

### Figure 3.9. In most cases, fee levels are revised annually

If the regulator is financed in total or in part through fees paid by the regulated sector, are fees revised at regular intervals?




Note: Analysis is based on responses from 42 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

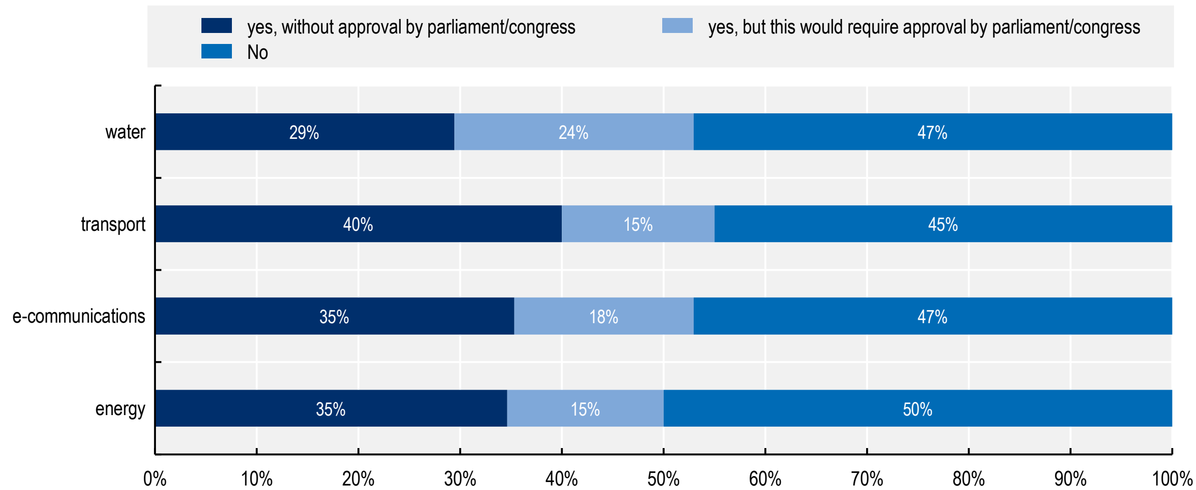
## Financial management

Financial management is crucial to ensure regulators have appropriate and accountable autonomy in the spending of their budget (OECD, 2017[1]). Their spending should be in line with government rules of public spending and procurement, but they should not be unnecessarily restricted in their activities or the way they spend their budget. Interference in the regulator's spending through the use of spending caps and political discretion on budget autonomy should not be allowed as long as regulators stay within general public spending rules.

Indeed, in practice, all regulators that participated in the survey are required to adhere to rules on public spending and procurement. A small majority (53%) can experience controls on their spending, such as spending caps for specific cost categories or restrictions on costs related to travelling abroad. Such cases appear to be less common for multisector regulators, of which 43% can experience controls on their spending (compared with 63% of single sector regulators). In some cases, these restrictions require the approval of parliament of congress. However, one in three regulators may be subject to controls on their spending which do not require legislative approval, which could potentially harm the autonomy of these regulators (Figure 3.10).

### Figure 3.10. One in three regulators can experience spending restrictions that do not require the approval of the legislature

Can other government bodies impose any controls on the regulator's spending after the budget has been approved, such as spending caps or other restrictions?

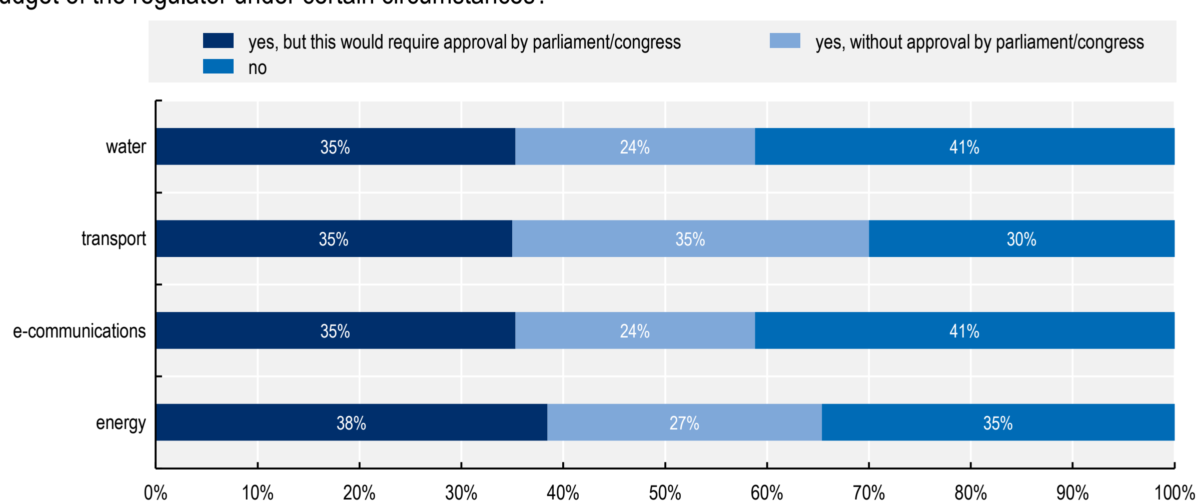



Note: Analysis is based on responses from 55 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

For many regulators there is at least a legal possibility of changes to their budget after initial approval, under certain circumstances. To improve the accountability, in most cases such changes require the approval by parliament or congress. However, for more than one in four regulators, the relevant budget authority can make changes to the initially approved budget without oversight by the legislature (Figure 3.11). This lack of checks and balances could open the door for potentially unpredictable or unwarranted changes to the regulator's budget, which threatens the sufficiency and predictability of a regulator's resources. Changes to the initially approved budget without oversight by the legislature are somewhat less common for multisector regulators (23%) than they are for single sector regulators (33%).

### Figure 3.11. Where the regulator's budget can be modified after initial approval, this usually requires approval by the legislative branch

After the budget of the regulator has been approved, can the relevant budget authority reduce or increase the budget of the regulator under certain circumstances?




Note: Analysis is based on responses from 55 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

Some regulators are allowed to carry over funds from one financial cycle to the next, although there are usually restrictions. Eleven percent of regulators can carry over funds without any restrictions, whereas 49% can do so only when certain conditions are met. By retaining unspent budgets in a reserve account, regulators can smooth revenues across financial cycles and improve the stability and predictability of their funding (Box 3.4). Safeguards could be put in place to prevent reserve funds from growing too large, for example by returning funds through fee cuts in case funds grow above a certain threshold.

## Box 3.4. Carrying over funds across financial cycles

### Latvia's Public Utilities Commission (PUC)

Since 2017, the regulatory fee that funds the PUC's operations is set directly in legislation. To account for any potential overpayments above the PUC's budget as approved by Parliament, excess funds are deposited in the account of the regulator at the Treasury. These limited funds can serve also to avoid unexpected or transitory decreases in PUC's income without revising primary legislation every year.

The regulator can use these funds to fund its operations in subsequent years, in accordance with its approved budget. In case the funds in the account exceed 25% of total fee revenues, the excess funds are returned to market operators through a deduction in fee payments in the respective year.

### Ireland's Commission for Regulation of Utilities (CRU)

The CRU is funded entirely through levy and licence fees from relevant electricity, gas, petroleum safety, and water industry participants. Levies from market participants comprise the bulk of the CRU's income. The CRU sets its own budget without requiring government participation, and is defined annually on a cost-recovery basis in the fourth quarter of the year, on the basis of an estimate of CRU operating and capital budget required for the next year. There is no direct government contribution to the CRU budget and the regulator's annual budget is approved by the Commission without approval or ex ante assessment by the Oireachtas.

Annual budgets for the electricity, gas, petroleum and water are allocated by the CRU to each sector. Revenues, expenses and capital expenditure directly incurred by each sector are recorded in the separate budgets of the electricity, gas, petroleum and water sectors. Shared costs are allocated to each sector in proportion to the staff numbers engaged in the relevant sector. Costs linked to shared administrative functions such as finance, HR, IT, and Communications are pooled for all sectors.

Where annual expenditures exceed revenue, the balance is offset against the levy income for the subsequent year. The balances for the electricity, gas, petroleum and water sectors are recorded in their respective accounts, and audited on an annual basis by the Office of the Comptroller and Auditor General, which reports to the Public Accounts Committee of the Oireachtas. The CRU also conducts an annual internal audit, which is outsourced to an audit company). Moreover, based on a risk assessment, a contingency fund is defined on a yearly basis to provide flexibility to deal with potential legal challenges or costs linked to safety cases or events. Any excess of revenue in the financial year is taken into account in determining the levy for the subsequent year per sector. The CRU can carry unspent funds over to the following year's budget without review or approval from external government entities.

Source: Information provided by PUC and CRU, 2021.

## Audit

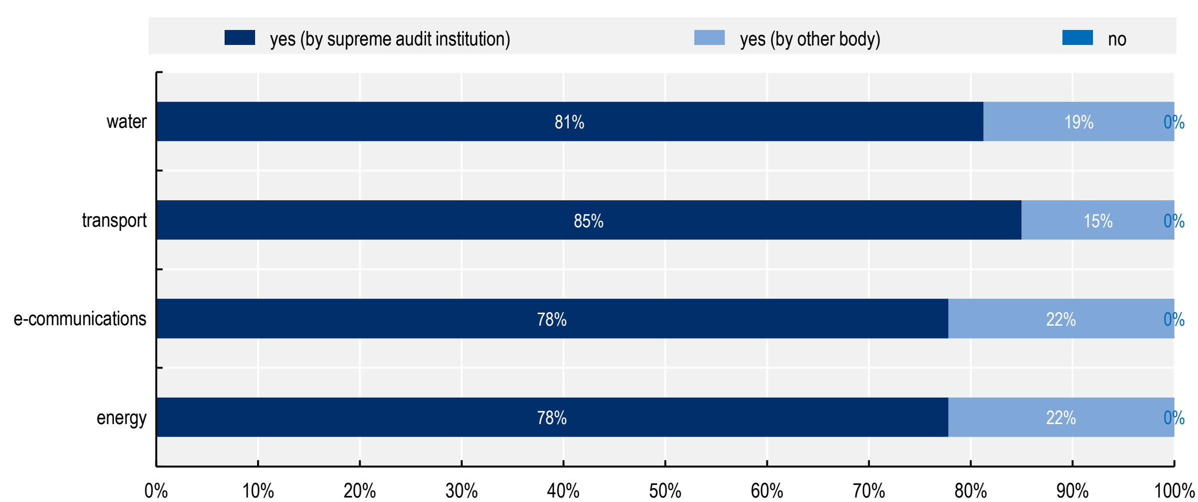
Accountability mechanisms can give legitimacy to a regulator's actions and bolster its reputation, by providing a mechanism to ensure responsible public spending. They do not entail a direct control on the regulator's actions, but rather provide a set of complementary and overlapping arrangements to ensure checks and balances (Hüpkes, Taylor and Quintyn, 2006[6]).

Economic regulators, as public bodies at large, are under increasing pressure to deliver against growing mandates and expectations, and to find more efficient and less costly ways to do their work. While many regulators are independent bodies, they should not be exempt from scrutiny of their finances. In return for the higher level of financial autonomy many regulatory bodies enjoy, compared to other governmental bodies, there should be mechanisms to hold the regulator to account for their expenditure and performance. Like any government body, their expenses should therefore be reviewed for prudence and efficiency (Kelley and Tenenbaum, 2004[7]). The OECD *Recommendation on Budgetary Governance* recommends the evaluation and reviewing of public expenditure programmes in a manner that is objective, routine and regular, and to ensure the availability of high-quality performance and evaluation information (OECD, 2015[8]).

Nearly all regulators collect information on their financial performance, such as the costs of running the organisation, and this information is published for 86% of regulators. To hold regulators to account for the money they spend, many countries also require an external evaluation by another public body, usually the country's supreme audit institution (Figure 3.12).

### Figure 3.12. The spending of all regulators can be externally evaluated, usually by the supreme audit institution

Is there an external evaluation of the regulator's spending by another public body?




Note: Analysis is based on responses from 56 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

## The impact of COVID-19

The pandemic stress-tested the agility and flexibility of the financial resources of economic regulators. In some cases, it also highlighted certain vulnerabilities in existing arrangements, which could put the regulator's way of working or the funding of its operations at risk. These risks could stem from changes within the regulator internally as well as external changes in the sector. Learning from this crisis experience could support regulators to build more resilient, robust, crisis-prepared and future-proof resourcing frameworks.

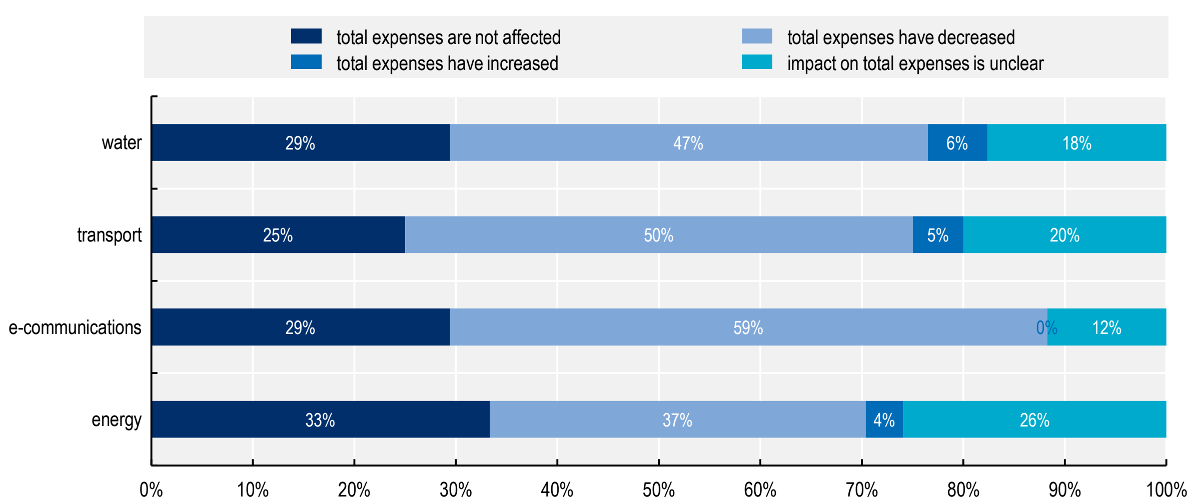
The COVID-19 pandemic affected the financial resources of many economic regulators, although the precise impacts differed largely across regulators. Some regulators saw little to no impact on their finances, whereas others saw significant impacts on their expenses and/or on their budgets. The sum of both impacts determines the overall financial impact of the pandemic on the regulator. As such, it could provide an indication of the financial risk or exposure that the regulator's financial arrangements may be subject to in times of change.

The impact of the COVID-19 pandemic on regulatory budgets differed substantially across regulators. Following the direct impact of the pandemic, some regulators funded through national budget appropriations saw their budget decrease due to a reallocation of funds towards the crisis response. In other cases, regulators saw an increase in their budget appropriation to finance new pandemic-related tasks. Regulators funded through fees sometimes saw a downturn in their revenues due to a decrease in sector revenues or due to a weakened financial position of fee-paying entities in the sector.

Expenses that were likely to increase in response to the pandemic relate to the cleaning of offices, the necessary adjustments to IT equipment and systems, as well as health expenses. Decreasing costs were linked most frequently to travel, inspections and office expenses. One regulator also reported a decrease in staff costs due to the postponement of staff recruitment. Overall, 47% of regulators reported a decrease in total expenses, whereas just 4% reported an increase. In other cases, expenses were either not significantly affected or the overall impact was still unclear (Figure 3.13).

### Figure 3.13. Expenses usually either decreased or were unaffected by the COVID-19 crisis

What has been the impact of the COVID-19 crisis on your organisation's total expenses?




Note: Analysis is based on responses from 56 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

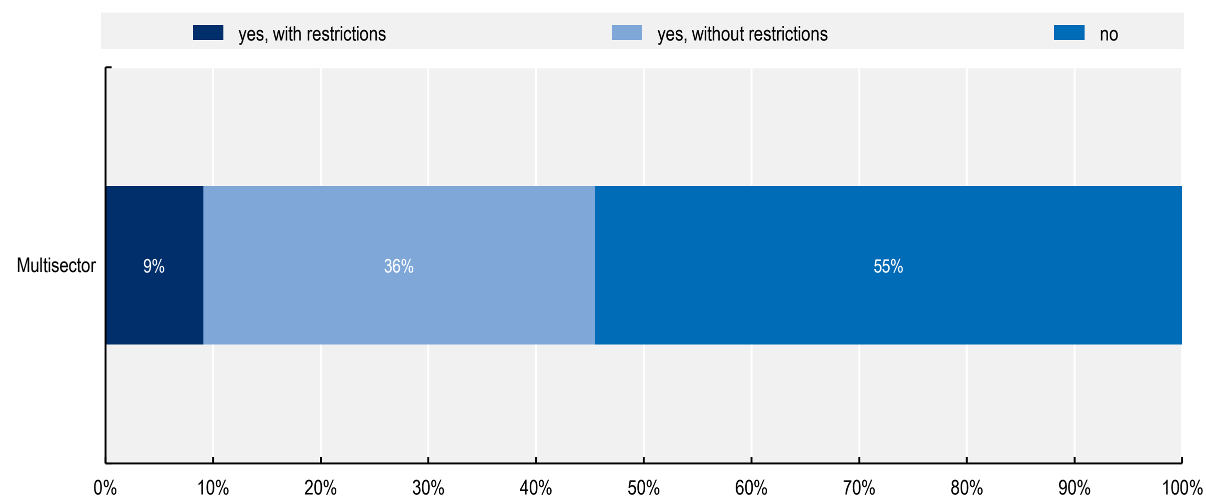
## Multisector regulators

Multisector regulators report certain efficiencies in terms of their financial resources thanks to their broader mandate. Frequently reported efficiencies relate to the sharing of administrative or support services across departments and sectors. The ability of staff to assist colleagues working on similar issues in other sectors is in one case also reported as a more cost-effective and efficient option than the contracting of external consultancy services.

The existence of a single regulatory body overseeing multiple sectors does not necessarily mean that the type of funding is the same for all sectors overseen by the multisector regulator. For example, while the activities of the Australian ACCC in the energy, transport and water sector are fully funded through national budget appropriations, its e-communications activities are almost entirely fee-funded. Moreover, where multisector regulators are funded through fees, there are usually restrictions to use revenues raised in one sector to fund regulatory activities in other sectors. Only 36% of multisector regulators that are (fully or partly) fee-funded are free to distribute their budget across the different sectors without restrictions (Figure 3.14).

### Figure 3.14. Multisector regulators usually face restrictions to redistribute fee revenues across the sectors they oversee

If the regulator is funded through fees (partly or fully), is it free to distribute its budget across the different regulated sectors, irrespective of the sector in which the revenues have been raised?




Note: Analysis is based on responses from 11 regulators.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

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# Annex A. Methodology

This annex includes a further description of the methodology used for the OECD Survey on the Resourcing Arrangements of Economic Regulators. It discusses the survey structure, focus, data coverage and process and presents a list of definitions used for the survey.

## Survey structure

The survey is structured into four sections (Figure A A.1). The first section identifies general information on the functions of the regulator and quantitative information on its staff and budget. The second section covers human resource arrangements of regulators, such as recruitment, salaries and career development. The third section focuses on financial resource arrangements, such as sources of funding, the regulatory budget and financial management. Finally, a fourth section includes questions specifically on resourcing arrangements of multisector regulators.

The survey benefitted immensely from extensive inputs from NER members during the discussion of a draft version at the 15th meeting of the NER in November 2020. The report incorporates feedback from delegates on the preliminary survey findings as presented at the 17th meeting of the NER in November 2021 and the draft report as presented at the 18$^{th}$ meeting of the NER in April 2022.

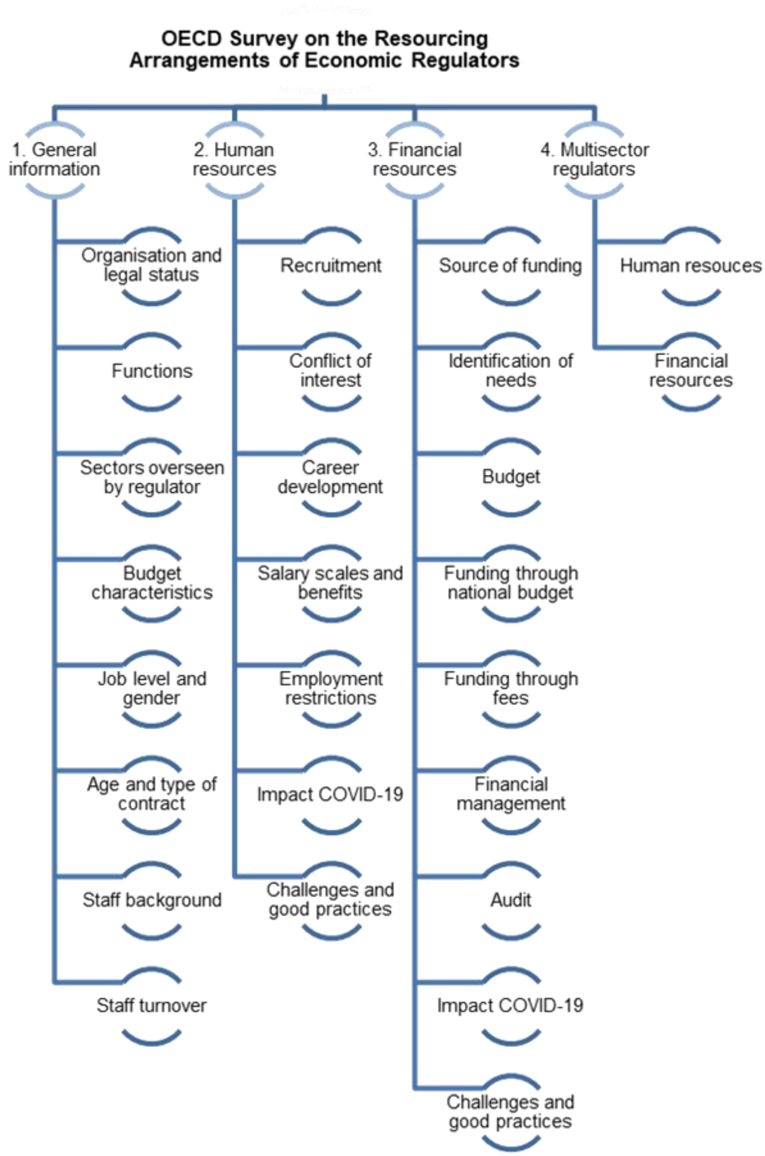
## Survey focus

The survey analyses the resourcing arrangements of economic regulators as of 1 January 2021. The analysis presents those arrangements that are in place as of this date, and does not consider any policy reforms, laws or regulations that were enacted after that date.

Where the survey analyses arrangements in place for staff, these arrangements concern managerial, technical and support staff, with the exception of members of the board and/or agency head. Arrangements specific to the board and/or agency head of regulatory authorities are outside the scope of the current survey.

The survey focuses on economic regulators within the OECD Network of Economic Regulators (NER) with a mandate in one or more of the following four sectors: energy, e-communications, transport and water. For the purpose of the survey, a regulator qualifies as a “single sector regulator” if it oversees only one of these four sectors, and qualifies as a “multisector regulator” if it oversees two or more out of the four sectors. A description of each sector, including relevant codes from the UN International Standard Industrial Classification of all economic activities (ISIC) is included in Table A A.1.

## Figure A A.1. Survey structure




Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

## Table A A.1. Sector descriptions

| Sector | Sector description | Relevant UN ISIC codes |
|---|---|---|
| **E-communications** | This sector covers the provision of telecommunications and related services, i.e. the transmission of voice, data, text, sound and video on fixed and mobile networks. | Included in ISIC rev 4.0 491, 492, 50, 51, 5221, 5222 and 5223 |
| **Energy** | This sector covers the provision of electric power, natural gas, steam, hot water and the like through a permanent infrastructure (network) of lines, mains and pipes. | Included in ISIC rev 4.0 35 and 493 |
| **Transport** | This sector covers rail transport, air transport, water transport, road freight transport and transport by coach. | Included in ISIC rev 4.0 61 |
| **Water** | This sector covers the collection, treatment, distribution and retail supply of water for domestic, agricultural and industrial purposes. | Included in ISIC rev 4.0 36, 37 and 493 |

Source: UN (2008), International Standard Industrial Classification of All Economic Activities (ISIC), Rev.4, https://unstats.un.org/unsd/publication/seriesm/seriesm_4rev4e.pdf.

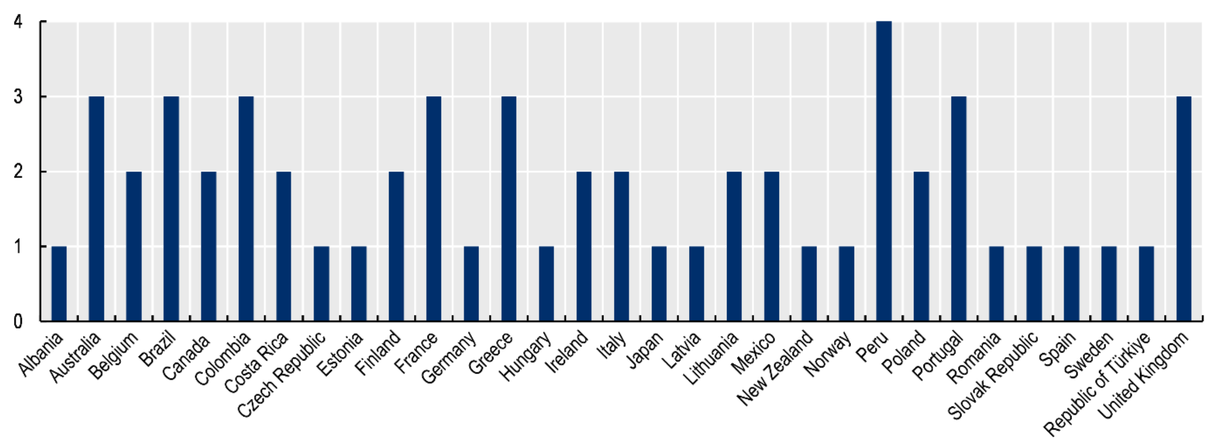
Where applicable, multisector regulators have been asked to specify their human and financial resource arrangements for each sector individually, as arrangements can differ between different sectors depending on the set-up of the authority. In the presentation of the results per sector, multisector regulators are included as part of the average for each of the sectors they oversee.

## Data coverage

The survey was distributed among delegates within the OECD Network of Economic Regulators. Fifty-seven national and subnational regulators responded to the survey. Responses cover 31 countries, out of which 27 OECD member countries and 4 non-members (Albania, Brazil, Peru and Romania).[1] For 17 countries, more than one regulator completed the survey (Figure A A.2).

### Figure A A.2. Fifty-seven regulators across 31 countries responded to the survey

Number of regulators covered in survey, by country

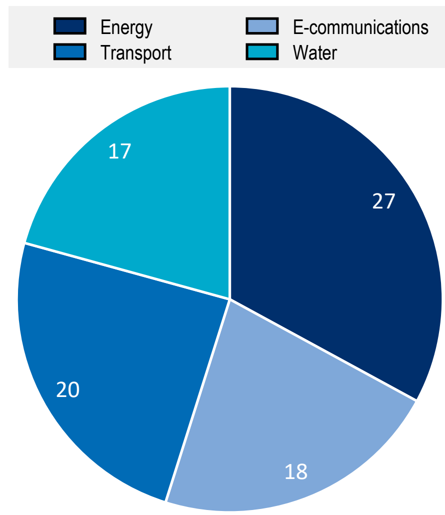



Note: Survey respondents include subnational regulators in the case of Australia (Essential Services Commission of South Australia), Belgium (WaterRegulator for Flanders) and the United Kingdom (Water Industry Commission for Scotland).
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

For the purpose of the survey, four sectors have been identified (energy, e-communications, transport and water). The survey response includes 42 regulators that oversee one of these four sectors, and 15 regulators that oversee two or more sectors (referred to in this report as “multisector” regulators). In total, the survey data provides a balanced number of responses across the four sectors (Figure A A.3).

### Figure A A.3. The survey response contains a balanced mix of utility sectors

Number of responses by sector

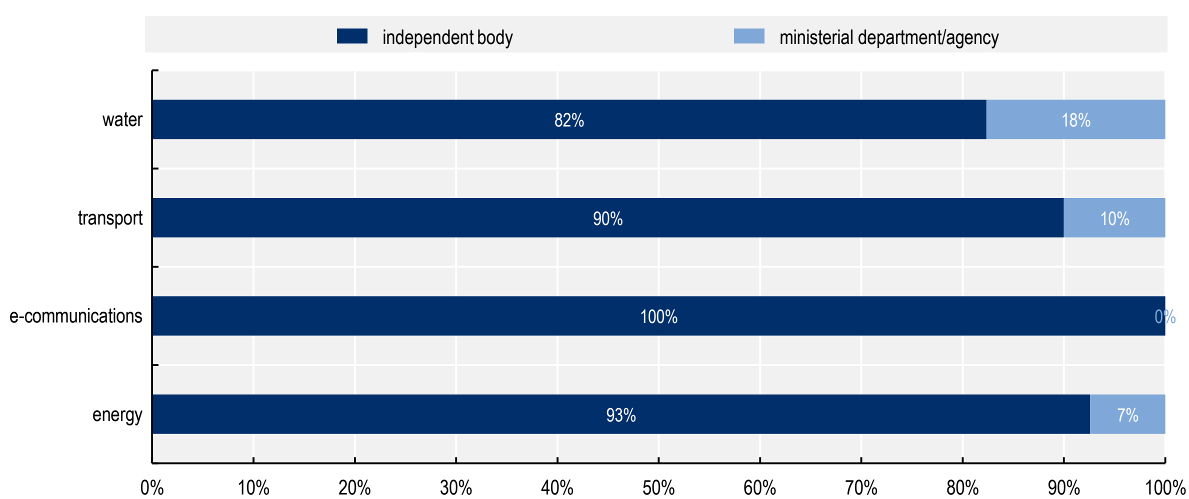



Note: Multisector regulators have been included for each of the sectors they oversee.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

A majority of regulators responding to the survey are independent regulatory bodies. Out of the 57 regulators that responded to the survey, 51 regulators (89%) have an independent legal status and six regulators (11%) are ministerial departments or agencies (Figure A A.4). This finding could reflect the characteristics of participants within the NER, and may differ for the wider population of economic regulators.

### Figure A A.4. A majority of regulators responding to the survey are independent bodies

Legal status of regulator by sector




Note: Multisector regulators are included in the data for each of the sectors they oversee.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

## Process

A first draft of the survey was discussed with a select group of regulators that participated in a pilot in October 2020. After incorporating comments, an improved draft was discussed at the 15th meeting of the NER on 17 November 2020. Discussions and feedback from NER members supported the development of the final version of the survey.

The finalised survey was distributed in January 2021 among all the regulators that are included in the contact list for the OECD Network of Economic Regulators. Respondents were asked to return the survey within six weeks. The NER Secretariat provided an update on the survey response and next steps at the 16th meeting of the NER on 13 April 2021.

Along with the survey distribution, the NER Secretariat provided a list of definitions and a document with instructions to support respondents in their survey response. Where applicable, additional notes and instructions were provided for specific questions within the survey, to clarify the type of information and specifics that were requested. Respondents were able to provide additional information on responses in a comments field that was included for each question.

The NER Secretariat validated survey responses between April and August 2021. During the data validation, the NER Secretariat assessed whether responses adhere to the multiple choice options provided, and are accurate, consistent and complete. Moreover, the data validation was used to ensure the interpretation of questions was consistent across regulators. Where possible, public sources were used to verify answers. Where public sources were unavailable, answers were assessed based on their plausibility and consistency, making use of additional information provided by regulators in the comments section. In case of doubts or potentially incorrect answers, the Secretariat followed up with regulators to obtain further information or clarification. For most regulators, two rounds of follow-up questions were conducted to verify the survey responses.

Following the validation of survey responses, the NER Secretariat analysed the data to identify trends across regulators and regulator-specific examples of challenges and good practices. Preliminary findings were discussed at the 17th meeting of the NER on 17 November 2021 and a draft report was discussed at the 18th meeting of the NER on 6 April 2022. Inputs from these discussions, as well as written comments received after the meeting, have been used in the development of the report.

## Definitions

Table A A.2 includes a list of definitions used for the purpose of the current survey.

### Table A A.2. Definitions used within the survey

| Term | Definition |
|---|---|
| Budget appropriations | Budget appropriations refer to the authorisation, to permit the regulator to incur obligations, and to pay for them. It represents the prescribed limit on spending within a specified period. |
| Budget lines | Budget lines are the different classes of expenditure as identified in the regulator's budget proposal. |
| Central government remuneration policy | Central government remuneration policy defines the general remuneration policy for central government employees, and defines categories and salary ranges for staff remuneration. |
| Civil servants | Civil servants are only those public employees employed under a specific public legal framework or other specific provisions. |
| Establishing legislation | The establishing legislation is the one that set up the regulator and defines its roles and functions. |
| External professionals | External professionals are professionals that are employed by a company or body outside the organisation and that are contracted to provide services for the organisation. External professionals can include among others consultants, as well as external IT and administrative support. |
| External qualifications | External qualifications can include academic qualifications such as master degrees and PhD's and professional |

| Term | Definition |
|---|---|
| | qualifications such as accounting and finance qualifications or external training courses. |
| Fees | Fees are any payments that are collected from regulated entities to fund the regulator's operations. |
| Fixed-term contract | A fixed-term contract is a work contract with a specified end date, as opposed to open-term contracts, which do not have specified end dates. |
| Junior or middle level staff | Junior or middle level staff includes all managerial, technical and support staff, with the exception of senior management (the first two levels of management below the board or agency head) and the members of the board and/or agency head. |
| National budget | The national budget defines the financial plans of the central government. The budget is the main economic policy document, demonstrating how it plans to use the public resources at the government's disposal to meet policy goals. |
| Other public employees | Other public employees are people working in the public sector, who are not hired under a specific public legal framework. Often, these employees are hired under labour law as private sector employees, however specific collective labour agreements may exist. |
| Performance-related remuneration system | A performance-related remuneration system refers to any system in which the salary of staff is linked to their performance. |
| Post-employment restriction regarding employment | A post-employment restriction regarding employment restricts the employee after the end of employment at the organisation in accepting any job that may cause a conflict of interest given the information he/she may have acquired during the employment, usually for a certain period ("cooling-off period"). |
| Relevant budget authority | The relevant budget authority is the ministry of finance and/or any other department or ministry in charge of preparing and monitoring the national budget. |
| Senior management | Senior management includes the first two levels of management below the board or agency head, and excludes the members of the board and/or agency head. |
| Spending caps | Spending caps are considered to be limits on the regulator's spending on certain types of expenditures. |
| Staff | Staff includes all managerial, technical and support staff, and does not include members of the board and/or agency head. |
| Stakeholders | Stakeholders refer to actors outside government, including regulated industry, consumers and the general public. |
| Support staff | Support staff includes staff members that provide support services for the operation of the organisation, such as administration or IT services, but which do not directly execute any regulatory or supervisory activities themselves. |
| Technical departments | Technical departments include those departments involved in regulatory and supervisory activities, as opposed to departments that provide administrative services. |
| Unspent budget | Unspent budget is the difference between the total approved budget and the total actual expenses. |

Note: The definitions have been designed for the purpose of the current survey, and do not define any official OECD definitions outside the context of the survey.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

## Note

[1] Since the survey took place in early 2021, the OECD has opened accession discussions with six countries on 25 January 2022, including Brazil, Peru and Romania. Brazil is currently an OECD Key Partner.

# Annex B. Survey respondents

## Table A B.1. Regulators responding to the survey by country

| Country | Name of regulator |
|---|---|
| Albania | Water Regulatory Authority – ERRU |
| Australia | Australian Competition and Consumer Commission – ACCC |
| | Australian Energy Regulator – AER |
| | Essential Services Commission of South Australia – ESCOSA |
| Belgium | Commission for Electricity and Gas Regulation – CREG |
| | Flanders Environment Agency / WaterRegulator – VMM |
| Brazil | National Water and Sanitation Agency – ANA |
| | National Telecommunications Agency – ANATEL |
| | National Land Transportation Agency – ANTT |
| Canada | Canada Energy Regulator – CER |
| | Canadian Transportation Agency – CTA |
| Colombia | Drinking Water and Basic Sanitation Regulation Commission – CRA |
| | Communications Regulation Commission – CRC |
| | Energy and Gas Regulation Commission – CREG |
| Costa Rica | Regulatory Authority of Public Services – ARESEP |
| | Superintendency for Telecommunications – SUTEL |
| Czech Republic | Energy Regulatory Office – ERU |
| Estonia | Estonian Competition Authority – ECA |
| Finland | Energy Authority – EV |
| | Finnish Transport and Communications Agency – Traficom |
| France | Electronic Communications, Postal and Print Media Distribution Regulatory Authority – ARCEP |
| | Transport Regulation Authority – ART |
| | Energy Regulatory Commission – CRE |
| Germany | Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway – BNetzA |
| Greece | National Telecommunications and Post Commission – EETT |
| | Regulatory Authority for Energy – RAE |
| | Regulatory Authority for Railways – RAS |
| Hungary | Hungarian Energy and Public Utility Regulatory Authority – MEKH |
| Ireland | Commission for Communications Regulation – ComReg |
| | Commission for Regulation of Utilities – CRU |
| Italy | Regulatory Authority for Energy, Networks and Environment – ARERA |
| | Transport Regulation Authority – ART |
| Japan | Electricity and Gas Market Surveillance Commission – EGC |
| Latvia | Public Utilities Commission – PUC |
| Lithuania | Communications Regulatory Authority – RRT |
| | National Energy Regulatory Council – VERT |
| Mexico | National Hydrocarbons Commission – CNH |
| | Federal Institute of Telecommunications – IFT |
| New Zealand | Commerce Commission – ComCom |
| Norway | National Communications Authority – Nkom |

| Country | Name of regulator |
|---|---|
| Peru | Supervisory Agency for Investment in Energy and Mining – Osinergmin |
| | Supervisory Agency for Private Investment in Telecommunications – OSIPTEL |
| | Supervisory Agency for Investment in Public Transport Infrastructure – Ositrán |
| | National Superintendence of Sanitation Services – Sunass |
| Poland | Energy Regulatory Office – URE |
| | Office of Rail Transport – UTK |
| Portugal | National Communications Authority – ANACOM |
| | Water and Waste Services Regulation Authority – ERSAR |
| | Energy Services Regulatory Authority – ERSE |
| Romania | National Regulatory Authority for Public Services – ANRSC |
| Slovak Republic | Transport Authority – NSAT |
| Spain | National Commission of Markets and Competition – CNMC |
| Sweden | Energy Markets Inspectorate – EI |
| Republic of Türkiye | Energy Market Regulatory Authority – EMRA |
| United Kingdom | Office of Communications – Ofcom |
| | Office of Rail and Road – ORR |
| | Water Industry Commission for Scotland – WICS |

# Annex C. Overview regulators and functions

## Table A C.1. Overview responsibilities and resources of regulators

| Country | Regulator | Energy | E-communications | Transport | Water | Competition oversight | Consumer protection | Staff number | Avg. budget 2018-2020 in EUR | Total revenues of regulated entities 2018 in EUR[1] | Number of regulated entities on 1 Jan 2020 | Type of ownership in sector |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ALB | ERRU | ❍ | ❍ | ❍ | ● | ❍ | ❍ | 25 | 399 863 | 72 888 107 | 57 | Public |
| AUS | ACCC | ● | ● | ● | ● | ● | ● | 1 267 | 141 797 389 | 45 732 138 832 | 102 | Mix |
| AUS | AER | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 266 | 36 659 081 | 8 741 045 926 | 30 | Mix |
| AUS | ESCOSA | ● | ❍ | ● | ● | ❍ | ❍ | 30 | 4 094 326 | N/A | 208[2] | Mix |
| BEL | CREG | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 68 | 15 140 712 | 1 500 000 000 | 2 | Mix |
| BEL | VMM | ❍ | ❍ | ❍ | ● | ❍ | ❍ | 5 | 469 584[3] | 702 000 000 | 7 | Public |
| BRA | ANA | ❍ | ❍ | ❍ | ● | ❍ | ❍ | 314 | 82 636 593 | N/A | N/A | Public |
| BRA | ANATEL | ❍ | ● | ❍ | ❍ | ❍ | ❍ | 1 497 | 125 304 852 | 24 033 691 776 | 158 197 | Mix |
| BRA | ANTT | ❍ | ❍ | ● | ❍ | ❍ | ❍ | 1 278 | 156 197 454 | 6 326 394 782[4] | 974 345[4] | Private |
| CAN | CER | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 537 | 71 199 992 | N/A | 112 | N/A |
| CAN | CTA | ❍ | ❍ | ● | ❍ | ❍ | ❍ | 368 | 24 451 816 | 28 182 291 775 | >1 500 | Mix |
| COL | CRA | ❍ | ❍ | ❍ | ● | ❍ | ❍ | 182 | 5 120 827 | 2 948 726 100 | 4 949 | Mix |
| COL | CRC | ❍ | ● | ❍ | ❍ | ❍ | ❍ | 131 | 9 095 348 | 5 836 750 000 | 1 500 | Mix |
| COL | CREG | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 82 | 8 301 640 | 20 355 401 357 | 307 | Mix |
| CRI | ARESEP | ● | ❍ | ● | ● | ❍ | ❍ | 320 | 35 353 735 | 5 831 710 131 | 16 026 | Mix |
| CRI | SUTEL | ❍ | ● | ❍ | ❍ | ❍ | ❍ | 129 | 55 164 077 | 1 218 549 738 | 158 | Mix |
| CZE | ERU | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 241 | 11 237 675 | 2 309 565 198 | ~600 | Mix |
| DEU | BNETZA | ● | ● | ● | ❍ | ❍ | ❍ | 2 952 | 235 542 667 | N/A | N/A | N/A |

| Country | Regulator | Energy | E-communications | Transport | Water | Competition oversight | Consumer protection | Staff number | Avg. budget 2018-2020 in EUR | Total revenues of regulated entities 2018 in EUR[1] | Number of regulated entities on 1 Jan 2020 | Type of ownership in sector |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ESP | CNMC | ● | ● | ● | ❍ | ● | ❍ | 509 | 59 986 700 | 30 664 018 416 | 371 | Private |
| EST | ECA | ● | ❍ | ● | ● | ● | ❍ | 38 | 1 961 475 | N/A | 299 | Mix |
| FIN | EV | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 89 | 6 810 333 | 14 500 000 000 | 560 | Mix |
| FIN | TRAFICOM | ❍ | ● | ● | ❍ | ❍ | ❍ | 965 | 198 350 000[5] | 27 801 000 000 | N/A | N/A |
| FRA | ARCEP | ❍ | ● | ❍ | ❍ | ❍ | ❍ | 178 | 28 059 000 | 31 100 000 000 | 2 048 | Mix |
| FRA | ART | ❍ | ❍ | ● | ❍ | ❍ | ❍ | 76 | 11 381 667 | 32 000 000 000[6] | 67 | Mix |
| FRA | CRE | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 156 | 26 533 333 | 22 800 000 000 | 201 | Mix |
| GBR | OFCOM | ❍ | ● | ❍ | ❍ | ❍ | ❍ | N/A | 139 561 822[7] | 38 180 706 007 | 202 | Private |
| GBR | ORR | ❍ | ❍ | ● | ❍ | ❍ | ❍ | 324 | 37 862 556 | 9 966 519 796 | N/A | N/A |
| GBR | WICS | ❍ | ❍ | ❍ | ● | ❍ | ❍ | 25 | 4 141 827 | 1 345 813 406[8] | 31 | Mix |
| GRC | EETT | ❍ | ● | ❍ | ❍ | ❍ | ❍ | 207 | 18 756 090 | 4 300 000 000 | 590 | Mix |
| GRC | RAE | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 107 | 9 390 429 | 1 453 521 823 | 6 | Mix |
| GRC | RAS | ❍ | ❍ | ● | ❍ | ❍ | ❍ | 15 | 909 333 | N/A | 5 | Mix |
| HUN | MEKH | ● | ❍ | ❍ | ● | ❍ | ❍ | 334 | 27 452 905 | 10 632 473 938 | 389 | Mix |
| IRL | COMREG | ❍ | ● | ❍ | ❍ | ❍ | ❍ | 148 | 35 796 333 | 3 509 434 000 | 672 | Mix |
| IRL | CRU | ● | ❍ | ❍ | ● | ❍ | ❍ | 116 | 18 533 333 | 2 309 000 000 | 5 | Mix |
| ITA | ARERA | ● | ❍ | ❍ | ● | ❍ | ❍ | 241 | 87 856 522 | N/A | 245[9] | Mix |
| ITA | ART | ❍ | ❍ | ● | ❍ | ❍ | ❍ | 100 | 22 454 333 | 129 900 000 000 | 4 697 | Mix |
| JPN | EGC | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 71 | 4 712 494 | 53 348 276 435 | 2 353 | Mix |
| LTU | RRT | ❍ | ● | ● | ❍ | ❍ | ❍ | 166 | 9 708 433 | 1 379 174 000[10] | 124[10] | Mix |
| LTU | VERT | ● | ❍ | ● | ● | ❍ | ❍ | 174 | 6 689 452 | 2 126 306 000 | 1 911 | Mix |
| LVA | PUC | ● | ● | ❍ | ● | ❍ | ❍ | 109 | 5 470 565 | 2 611 000 000 | 550 | Mix |
| MEX | CNH | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 338 | 34 599 700[11] | N/A | N/A | Mix |
| MEX | IFT | ❍ | ● | ❍ | ❍ | ❍ | ❍ | 1 236 | 71 756 906 | N/A | N/A | N/A |
| NOR | NKOM | ❍ | ● | ❍ | ❍ | ❍ | ❍ | 176 | 24 773 990[12] | 3 569 146 678 | 165 | Private |
| NZL | COMCOM | ● | ● | ● | ❍ | ● | ● | 276 | 30 705 359 | 4 752 556 055 | 45 | Mix |
| PER | OSINERGMIN | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 799 | 40 258 863 | 8 348 236 691 | 60 000 | N/A |
| PER | OSIPTEL | ❍ | ● | ❍ | ❍ | ❍ | ❍ | 464 | 24 425 319 | 4 896 939 242 | 1 549 | Private |

| Country | Regulator | Energy | E-communications | Transport | Water | Competition oversight | Consumer protection | Staff number | Avg. budget 2018-2020 in EUR | Total revenues of regulated entities 2018 in EUR[1] | Number of regulated entities on 1 Jan 2020 | Type of ownership in sector |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PER | OSITRÁN | ❍ | ❍ | ● | ❍ | ❍ | ❍ | 324 | 23 572 869 | 552 762 540 | 34 | Mix |
| PER | SUNASS | ❍ | ❍ | ❍ | ● | ❍ | ❍ | 651 | 25 234 174 | 794 410 200 | 25 086 | Public |
| POL | URE | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 376 | 11 665 047 | 107 780 429 317 | 7 927 | Mix |
| POL | UTK | ❍ | ❍ | ● | ❍ | ❍ | ❍ | 300 | 10 952 967 | 4 710 157 825 | 130 | Mix |
| PRT | ANACOM | ❍ | ● | ❍ | ❍ | ❍ | ❍ | 377 | 63 381 500 | 4 174 712 441 | 136 | Mix |
| PRT | ERSAR | ❍ | ❍ | ❍ | ● | ❍ | ❍ | 71 | 9 993 196 | 2 963 829 397 | 353 | Mix |
| PRT | ERSE | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 100 | 11 635 926 | 4 498 384 031 | 29 | Mix |
| ROU | ANRSC | ❍ | ❍ | ● | ● | ❍ | ❍ | 119 | 3 801 248 | 932 774 611[13] | 1 120 | Mix |
| SVK | NSAT | ❍ | ❍ | ● | ❍ | ❍ | ❍ | 197 | 6 479 399 | N/A | N/A | N/A |
| SWE | EI | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 151 | 12 903 630 | 5 090 110 618 | 187 | Mix |
| TUR | EMRA | ● | ❍ | ❍ | ❍ | ❍ | ❍ | 527 | 59 739 943 | N/A | 2 524 | Mix |

● Regulator has responsibility for the economic regulation of the sector/regulator has responsibility for this function

❍Regulator does not have responsibility for the economic regulation of the sector/regulator does not have responsibility for this function

Note: Staff and budget figures refer to the total numbers for the organisation, which can include other functions beyond the economic regulation of network sectors, such as competition oversight, consumer protection or safety regulation. Revenues regulated entities, number of regulated entities and type of ownership only refer to the energy, e-communications, transport and water sectors overseen by the respective regulator. Information on the regulated sector has been verified with publicly available information where possible (not in all cases was such information available, for example due to confidentiality of financial information).

[1] Budget values in local currency are converted into EUR using the applicable exchange rate on 1 July for each of the respective years (for example, the budgets for 2018 are converted into EUR using the exchange rate for 1 July 2018). [2] ESCOSA: Number of entities excludes the number of transport entities. [3] VMM: Final budget unavailable, figure refers to budget utilised for the years 2018-2020. [4] ANTT: Revenues and number of entities exclude road freight transport and transport by coach. [5] TRAFICOM: Average budget is based on the years 2019 and 2020. [6] ART France: Revenues of entities do not include bus terminals. [7] OFCOM: Average budget is based on the years 2018 and 2019. [8] WICS: Revenues do not include the revenues of licensed providers in the retail market. [9] ARERA: Number of entities only refers to the energy sector, figure for the water sector unavailable. [10] RRT: Revenues also include revenues for internet service provision, which is not regulated. Revenues and number of entities do not include data on transport service facilities. [11] CNH: In the case of CNH, the budget includes the allocation of the federal budget and income from fees and other income: the CNH receives an allocation from the federal budget to cover part of its expenses and receives additional funding throughout the year from fees and other income to cover the rest of its expenses. CNH's budget figure also includes the amounts transferred to the CNH trust (managed by a committee of officials from the CNH, the Ministry of Finance and Public Credit and the Ministry of Energy) which do not represent a direct expense but can finance multiannual projects of the CNH. [12] NKOM: Final budget unavailable, figure refers to budget utilised. [13] ANRSC: Revenues entities do not include transport sector.

Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

# Annex D. Funding arrangements of regulators

### Table A D.1. Source of funding of regulators, by sector and country

| | Energy | E-communications | Transport | Water |
|---|---|---|---|---|
| ALB | | | | ● |
| AUS- ACCC | ❍ | ● | ❍ | ❍ |
| AUS- AER | ❍ | | | |
| AUS- ESCOSA | ❍● | | ❍● | ❍● |
| BEL | ● | | | ❍ |
| BRA | | ● | ❍● | ❍● |
| CAN | ❍● | | ❍ | |
| COL | ● | ● | | ● |
| CRI | ● | ● | ● | ● |
| CZE | ❍● | | | |
| EST | ❍ | | ❍ | ❍ |
| FIN | ❍● | ❍● | ❍● | |
| FRA | ❍ | ❍ | ❍ | |
| DEU | ❍ | ❍ | ❍ | |
| GRC | ● | ● | ❍ | |
| HUN | ● | | | ● |
| IRL | ● | ● | | ● |
| ITA | ● | | ● | ● |
| JPN | ❍ | | | |
| LVA | ● | ● | | ● |
| LTU- RRT | | ❍● | ● | |
| LTU- VERT | ● | | ● | ● |
| MEX | ❍● | ❍● | | |
| NZL | ● | ● | ● | |
| NOR | | ❍● | | |
| PER | ● | ❍● | ❍● | ❍● |
| POL | ❍ | | ❍ | |
| PRT | ● | ● | | ● |
| ROU | | | ● | ● |
| SVK | | | ❍ | |
| ESP | ❍ | ❍ | ❍ | |
| SWE | ❍● | | | |
| TUR | ● | | | |
| GBR | | ● | ● | ● |
| ❍ National budget | | | | |
| ● Fees | | | | |
| ❍● Both | | | | |

Note: An empty field means there is no data included on a regulator for that sector in the country. The Peruvian transport regulator Ositrán receives funding through fees, but in 2020 exceptionally received additional funding from the national budget following the enactment of an emergency decree because of COVID-19. For the purpose of this survey, the funding of Ositrán has therefore been classified as a mix of fees and national budget.
Source: 2021 OECD Survey on the Resourcing Arrangements of Economic Regulators.

**The Governance of Regulators**

# Equipping Agile and Autonomous Regulators

Economic regulators are key to the performance of network sectors such as energy, e-communications, transport and water. They regulate and supervise to ensure sectors that can efficiently deliver essential services for the benefit of society. Operating from a unique position in relation to consumers, operators and government, they provide evidence-based and objective decision making that can build trust in the regulatory system and public institutions. A crucial factor in their ability to do this is their governance, including how they are resourced. Resourcing arrangements can make or break regulators' effectiveness. Constraints in their funding or in their autonomy to manage resources may limit regulators' agility or capacity to act. Where these constraints are significant, they may undermine the regulator's ability to fulfil their mandates. This report discusses the implications of funding and staff arrangements for the autonomy, agility, accountability and transparency of regulators in the energy, e-communications, transport and water sectors. It identifies trends, challenges, opportunities and good practices, drawing upon survey responses from 57 economic regulators across 31 countries.

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