SOCIO-ECONOMIC BENEFITS OF DATA CENTRE SECTOR IN PORTUGAL

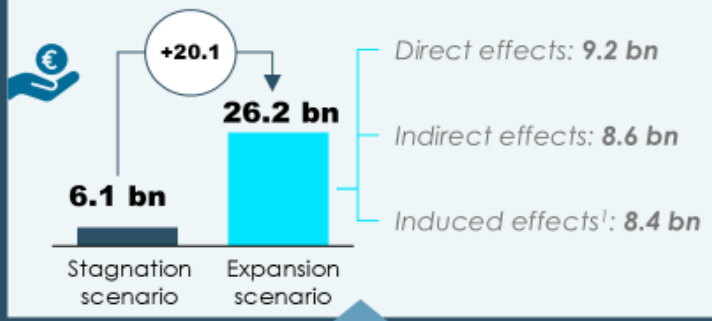
Copenhagen Economics

THE DATA CENTRE SECTOR IN PORTUGAL IS GROWING, WITH THE POTENTIAL TO SUPPORT SUBSTANTIAL GDP CONTRIBUTIONS AND JOBS

Up to **+EUR 26.2 bn in total GDP contribution between 2025-2030**

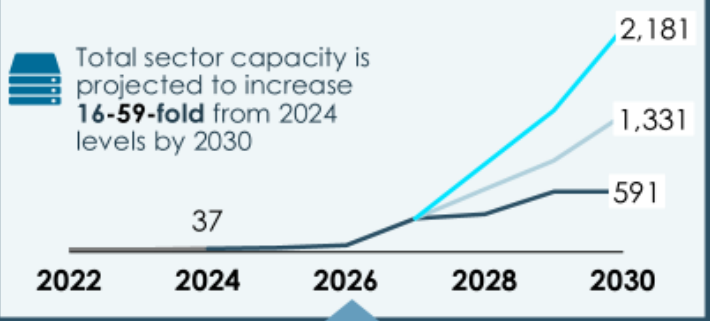
Up to **+48,400 jobs supported** (full-time per year, across the economy)

Estimated total GDP contribution 2025-2030



A SUBSTANTIAL PART OF POTENTIAL GDP CONTRIBUTIONS WILL DEPEND ON THE SECTOR'S GROWTH TRAJECTORY

Projected sector capacity (MW)



THE SECTOR CAN TAKE DIFFERENT GROWTH TRAJECTORIES DEPENDING ON INVESTMENT CONDITIONS

THE DATA CENTRE SECTOR SUPPORTS DIGITAL TRANSFORMATION ACROSS THE ECONOMY, AND FOSTERS BROADER SOCIO-ECONOMIC BENEFITS

AI

Globally, data centres support digital transformation, including the development and adoption of advanced cloud and AI solutions

Enabling innovation
Supports research across sectors and the development of new products/services

Significant productivity gains
Helps businesses achieve more without the need for more resources, supporting growth

AI

Increased AI adoption can drive a substantial increase in annual GDP in Portugal over the next 10 years.

Broader socio-economic benefits, based on interviews with a wide stakeholder group

Retains skilled talent in Portugal and attracts further talent from abroad

Data centres "contribute significantly to regional development and help retain local youth by providing job opportunities and attracting new, highly qualified talent to the region, which helps combat population decline and further supports local economic growth"

Creates new education opportunities to develop skilled workforce in high-tech industries

"In our school we have partnerships with data centre operators that help us adapt existing curricula and develop new programs tailored to the sector's needs"

Fosters social/territorial cohesion through regional development and support to communities

"Data centres help improve social and territorial cohesion by expanding broadband coverage, reducing digital inequalities, and contributing to providing access to healthcare, education, and public services in all regions, including rural areas."

1) Induced effects arise from employees at data centres and supplier industries spending wages throughout the economy. These effects are less clearly attributable to the sector itself than other effects.

SOCIO-ECONOMIC BENEFITS OF DATA CENTRE SECTOR IN PORTUGAL

Copenhagen Economics

PORTUGAL HAS FAVOURABLE CONDITIONS FOR DATA CENTRE DEVELOPMENT

1 A strategic location and robust connectivity

- Subsea cables: Portugal hosts 25 per cent of global subsea cables.
- Location and connectivity enable competitive latency to many regions.
- High coverage of fibre networks: 92 per cent of households covered.

2 Comparatively low energy prices

- Portugal has one of the lowest non-household electricity prices in the EU.
- Average prices in Portugal were 30 per cent lower than the EU average in 2024.

3 Access to renewable energy and water cooling solutions

- Large supply of renewable energy: In 2024, 87.5 per cent of net electricity generation in Portugal was from renewables (the second highest in the EU).
- Access to the Atlantic enables efficient data centre water cooling solutions.

4 Access to skilled professionals

- 28 per cent of university graduates are pursuing computer science or engineering.
- Nearly 230,000 ICT specialists, comprising 4.5 per cent of the workforce.

POLICY CONDITIONS WILL SHAPE THE LEVEL OF FUTURE INVESTMENTS

Policy conditions can contribute to (i) **addressing challenges that could block or delay investment** and (ii) supporting the data centre sector in **realising its full potential**

5 Key areas

Policymakers may consider to help the sector reach its full potential

- Protect against restrictions on the trade of advanced technologies, such as semiconductor chips
- Streamline permitting and other regulatory processes (construction, subsea cables, fibre)
- Ensure continued access to the electricity grid
- Develop measures aimed at supporting investments in the data centre sector
- Stimulate the adoption of digital tools across businesses, government and consumers

Portugal's **AI** and **digital strategies** do not currently have any measures specifically focused on data centres.

Policymakers may draw inspiration from other countries with dedicated policies to support data centres.

The UK, France and Spain include **measures focused on data centres** in their AI strategies

- *Streamlined permitting processes;*
- *Designating areas for data centre investments, considering key input availability (e.g., grid access);*
- *Financial incentives.*

EXECUTIVE SUMMARY

Data centres are critical components of the digital economy (Chapter 1).
Data centres are hubs that store, manage, and process the massive amounts of data needed to power everything from online banking and healthcare systems to streaming, shopping, and artificial intelligence (AI). Data centres are crucial for digital transformation, providing the computational capacity and connectivity needed for advanced digital solutions, enabling the benefits that such technologies offer. Simply put, they keep the internet running smoothly, ensuring that people, businesses and governments can access the digital services we rely on every day.

AI is triggering a surge in demand for data centres (Chapter 2).
AI can deliver significant economic gains inter alia by supporting innovation and by boosting productivity across almost all sectors. Research suggests that widespread AI adoption could drive a 7 per cent increase in GDP over the next 10 years, with perhaps even greater potential in economies with a favourable industry composition, such as Portugal. However, AI requires extensive computational capacity, which is often provided by data centres. The increase in demand for computing capacity for AI has been estimated to grow by as much as 33 per cent annually between 2023 and 2030. By 2030, it is estimated that around 70 per cent of total demand for computing capacity will be for data centres equipped to host advanced AI workloads. Apart from AI, the expansion of cloud computing and other digital services is also expected to drive increased demand for data centres.

Until now, little evidence has been available on the socio-economic contribution of the data centre sector in Portugal.
Although data centres play a key role in the digital economy, few existing studies have explored this sector in Portugal. Against this background, Start Campus asked Copenhagen Economics to conduct an independent research study to (i) describe how data centres fit into the digital economy, and (ii) assess the current and future potential socio-economic contributions of the entire data centre sector in Portugal. We note that the focus of this study is on the contributions of the data centre sector, rather than assessing the net impacts, weighing benefits against any potential drawbacks.

Portugal has favourable conditions for data centre development (Chapter 3).
We find that Portugal is well-positioned to become a key hub for data centres in Europe. First, its strategic location and robust connectivity infrastructure enable competitive latency to important European and global economic centres. Portugal is a hub for subsea cable connectivity, estimated to host 25 per cent of global subsea cables, and ranks third in the EU for fibre network coverage at 92 per cent of premises. Second, has comparatively low electricity prices that are 30 per cent below the EU average, an important cost advantage for data centres, where electricity is a major expense. Third, the country provides access to (i) a large supply of electricity from renewables, with 87.5 per cent of total net generation coming from renewables; and (ii) seawater that enables more energy-efficient cooling solutions. Fourth, Portugal provides access to a pool of skilled professionals that is perceived by stakeholders as highly skilled.

The data centre sector has the potential to contribute up to EUR 26.2 billion to the Portuguese economy between 2025-2030 (Chapters 4 and 5).
Based on a macroeconomic model, we find that the sector supports substantial economic activity. Between 2022-2024, the data centre sector contributed a total of EUR 311 million to Portugal's GDP and supported 1,700 jobs annually, when considering direct, indirect, and induced effects. The sector's GDP contribution is expected to grow significantly between 2025 and 2030, but the benefits will depend on the growth trajectory influenced by investment conditions. Under favourable investment conditions, the sector is expected to contribute up to EUR 26.2 billion to GDP between 2025-2030, equivalent to 1.3 per cent of GDP per citizen, and supporting 48,400 jobs annually, including direct (3,045 jobs), indirect (24,143 jobs) and induced (21,213 jobs) effects.

The growth of the data centre sector has additional economic impacts beyond those we quantify in our model (Chapter 4).
We find that the sector supports additional economic impacts that our model does not account for, such as (i) enabling digital technologies like AI and cloud, which drive innovation and productivity and which analysis suggests could increase GDP by more than 7 per cent annually, (ii) strengthening the growth of the start-up ecosystem, (iii) fostering the competitiveness of suppliers, (iv) sparking synergies which can lead to additional infrastructure investments (e.g., in subsea cables) and (v) attracting substantial FDI across sectors in the supply chain. These factors enhance GDP and competitiveness and may foster clusters within the digital infrastructure value chain, drawing further investments to Portugal. Additionally, data centres can support the digital transition in other countries, allowing Portugal to leverage its digital infrastructure to export computing power.

Data centres can foster broader socio-economic benefits (Chapter 5).
Based on interviews with key stakeholders, we find that, beyond the substantial number of jobs supported, the sector fosters broader social benefits, stimulates local economies, and enhances the competitiveness of local businesses. The job opportunities created by data centre investments, including in the supply ecosystem, contribute to attracting and retaining skilled workers in Portugal. Data centre investments can also promote regional development by attracting businesses to less densely populated areas, mitigating depopulation, and strengthening social and territorial cohesion. Additionally, data centre investments can foster the development of new education programs and opportunities, further supporting the retention of residents and territorial and social cohesion.

Policy conditions will shape future investments and the corresponding economic benefits to GDP and employment (Chapter 6).
We find that, to support the data centre sector in realising its full potential, policymakers may consider five areas: (i) ensuring access to advanced technologies, particularly semiconductor chips, is crucial to prevent trade restrictions from hindering sector development; (ii) streamlining permitting and regulatory processes applicable to data centres, subsea cables and civil infrastructure to support fibre networks; (iii) ensuring continued access to the electricity grid and fostering transparency and predictability in energy supply expansion (iv) developing targeted measures for data centre investments, such as designated data centre zones or financial support; and (v) stimulating broader adoption of digital tools by businesses, the government and citizens adoption of digital tools. Policies in the UK, Spain, and France may provide valuable examples of measures to foster data centre investments that could enhance Portugal’s attractiveness and contribute to maximise the sector’s economic contribution to employment and GDP.

Structure of our report

For additional detail, access the full report, which is structured as follows:

- In **Chapter 1**, we describe the basics of data centres and their role in the broader digital landscape.
- In **Chapter 2**, we describe how AI is expected to drive significant economic growth in Portugal and how its development and use rely on robust connectivity infrastructure, particularly data centres.
- In **Chapter 3**, we provide an overview of various characteristics that make Portugal an especially attractive destination for data centre infrastructure.
- In **Chapter 4**, we estimate the economic contribution supported by the construction and operations of data centres to the Portuguese economy between 2022 and 2024, and the expected contribution until 2030 in different future scenarios.
- In **Chapter 5**, we describe the broader socio-economic benefits of data centre investments, including job creation, economic growth, territorial cohesion, and talent retention.
- In **Chapter 6**, we discuss how policymakers can support continued investment while achieving other policy objectives to ensure that future benefits materialise.