

ECONOMIC CONSEQUENCES OF THE COVID-19 PANDEMIC

March 2020

The COVID-19 pandemic entails an economic crisis unlike anything we have seen before

The coronavirus has already left dramatic rippling effects across the global economy, making a mark on the level of economic activity in every region of the world. In response to the virus, governments across the world have taken strict measures to curtail infection rates, to protect the functioning of healthcare systems and the most vulnerable members of society.

These measures, consisting of quarantines and closure of physical shops and businesses, are essential for abating the spread of the coronavirus. However, they have a pronounced immediate impact on the level of economic activity in certain sectors, as they lock down large parts of the economy.

The economic consequences reach far beyond the immediate impact, for example:

- Higher unemployment and reduction in wages lower economy-wide demand
- Increased uncertainty defers investments from households and businesses
- Otherwise healthy companies go bankrupt, reducing production capacity

These effects become more pronounced over time. In addition, a prolonged lockdown period increases the risk of a massive scale-up of governmental and corporate debt, building up fundamental financial imbalances that could prolong the recovery period.

This raises several questions for companies and society

- What are the different recovery scenarios, depending on the duration of the lockdown?
- What is the depth of the economic crisis looming ahead of us? How does it compare to the financial crisis?
- How will companies in different sectors be affected? For example, which sectors will face the highest indirect effects from the lockdown?
- Will the crisis have a permanent impact on the economy? Stimulate new production methods and ways of consuming? Does it entail new business opportunities?
- How effective are policy responses in inhibiting the potentially permanent impacts of the crisis?

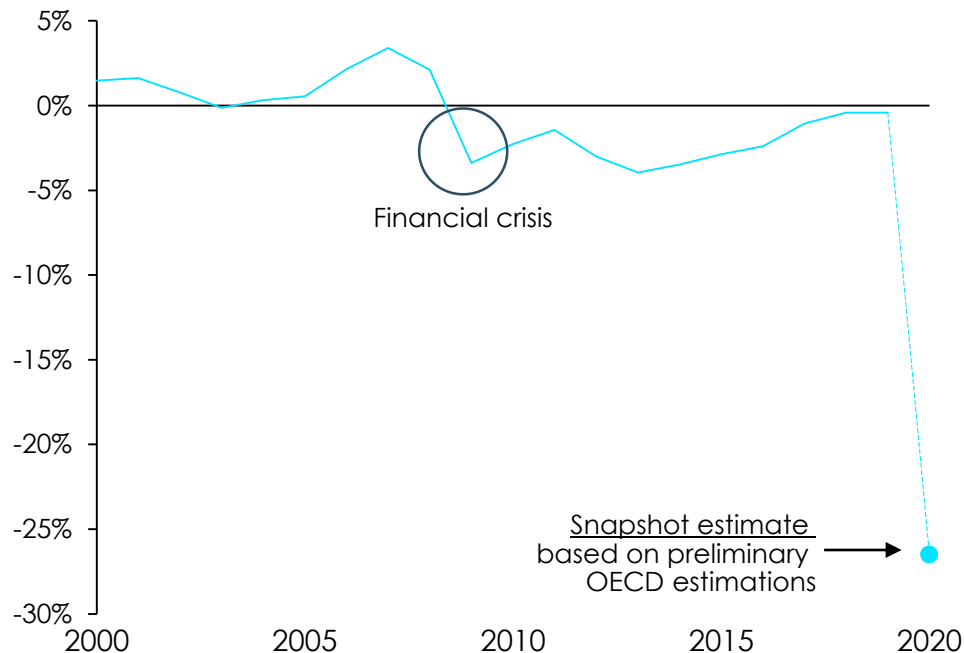
These are difficult questions, entailing great uncertainty. We will present our approach to assessing the effects of the crisis, thereby shedding light on some of these questions.

IMMEDIATE IMPACT OF THE PANDEMIC

An economic shock unlike anything we have seen before: Three key differences to the financial crisis

Annual output gap for the Euro area

(Actual GDP – Structural GDP)/Structural GDP



Source: OECD (2020), Evaluating the initial impact of COVID-19 containment measures on activity

1. The shock is felt differently across sectors

Some sectors are more or less shut down, whereas others are only indirectly affected (see next slide)

2. The immediate impact is up to 3-4 larger than the financial crisis

3. There is hope for a faster recovery than during the financial crisis

The European economies are in an entirely different economic landscape now, with much less need of fundamental financial rebalancing of the economy (e.g. less of a credit-fuelled housing and financial asset bubble):

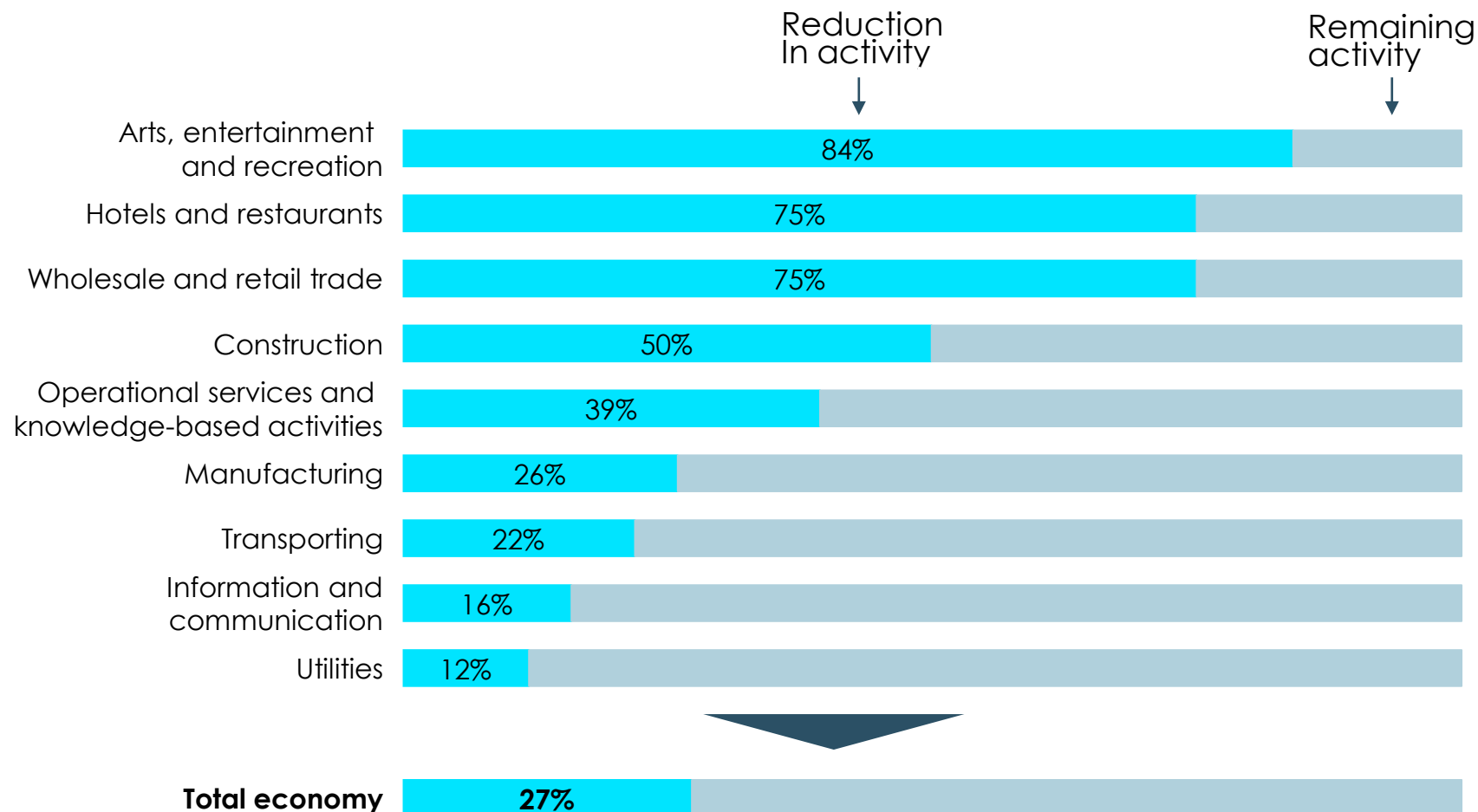
- The average household debt to income ratio has decreased in many European countries (e.g. by 28% in Spain) since the last financial crisis, making households more resilient to interest rate spikes and periods of unemployment.
- Annual domestic credit growth in the European Union has been increasing in the last two years but is still approximately 10% lower than prior to the financial crisis.
- Growth in house prices has been moderate, and more in line with household income, unlike the rapid growth observed prior to the financial crisis.
- The capitalisation of the European banks has increased from on average of 7% risk-weighted assets in 2007 to 15% today.

However, a prolonged lockdown period increases the risk of a massive scaleup of governmental and corporate debt, building up fundamental financial imbalances that could prolong the recovery period.

Impact is currently distributed across sectors differently

Indicative current reduction in economic activity as a result of the lockdown in the Euro area

Share of total Gross Value-Added (GVA)



Source: Based on estimates from the OECD, Dansk Industri, Dansk Erhverv, Danske Bank and Copenhagen Economics
Note: We assume that some industries are unaffected by the lock-down, including agriculture, mining and quarrying, and financial and insurance activities. Utilities cover the sectors water supply, waste management, electricity, gas and steam. Operational services and knowledge-based activities cover professional, scientific and technical activities, and administrative and support service activities.

**ASSESSING THE ECONOMIC
CONSEQUENCES BEYOND
THE IMMEDIATE IMPACT**

Assessing the long-term economic impact: A three-part approach

PART 1: Pandemic development and duration of lockdown

The working age population is not in the high-risk group of the pandemic. An extensive lock-down is in place to protect the most vulnerable and to avoid overwhelming the healthcare system.

Duration of the lock down depends on:

- How quickly capacity to deal with severe cases can be built up (tests, staff, treatment etc)..
- ... allowing people to return to work and build immunity in large numbers

Three scenarios:

1. **Optimistic scenario:** Virus is contained efficiently, lockdown is lifted in Q2 allowing for a quick economic recovery.
2. **Intermediate scenario:** Virus is contained slower, lockdown is lifted in Q3, where economic recovery can begin.
3. **Severe scenario:** Virus is contained slowly, possibly due to second wave, lockdowns not fully lifted before an effective vaccine is in place in 2021.

PART 2: Economic modelling

The immediate impact of the lock-down is visible, with entire sectors more or less shut down.

- We expect private sector economic activity to be down by more than 20% in most European countries.

The economic consequences go beyond the immediate impact

- The lockdown generates demand and supply shocks, impacting the entire economy – even after the lockdown is lifted.

Economic impact using three steps of economic modelling:

1. **Path of economic recovery:** the severity of the economic shock depends on the duration of the lock-down.
2. **Sectorial impact:** Despite the fact that not all sectors are directly hit by the lock-down, its effects will ripple across industries, depending on sectorial interdependencies.
3. **Lasting structural effects across sectors:** The crisis could permanently change how goods are being produced and consumed.

PART 3: Company specific impact

Based on Part 2 assessment, impact on individual companies can be mapped out:

- **Place of operation** and the way the national economy is affected by the lockdowns.
- **The industry** the company operates in, and the spill-over effects from the industries it transacts with.

Company specific drivers:

- **Supply effects:** Disruptions in the value chain for goods (e.g. network equipment from China) have direct impact on production capacity.
- **Demand effects** specific for the company, including competitive considerations. For example, increased need for network solutions due to lock-down.

Pandemic development and duration of the lockdown

Fundamental challenge to society

Primary challenge is to get the reproduction number, or R_0 , below 1.

- This implies that each infected person infects less than 1 person, resulting in the virus dying out.
- Without any containment measures, R_0 takes a value between 2 and 3.

Exit strategy

Three main elements to exit strategies

1. **Limit contagion:** Identify sick and isolate population to prevent contagion.
2. **Immunise the population:** The R_0 is likely to drop below 1 naturally, with the rate depending on epidemiological factors and containment strategies.
3. **Develop vaccine:** Theoretically, a lockdown could continue until a vaccine is developed.

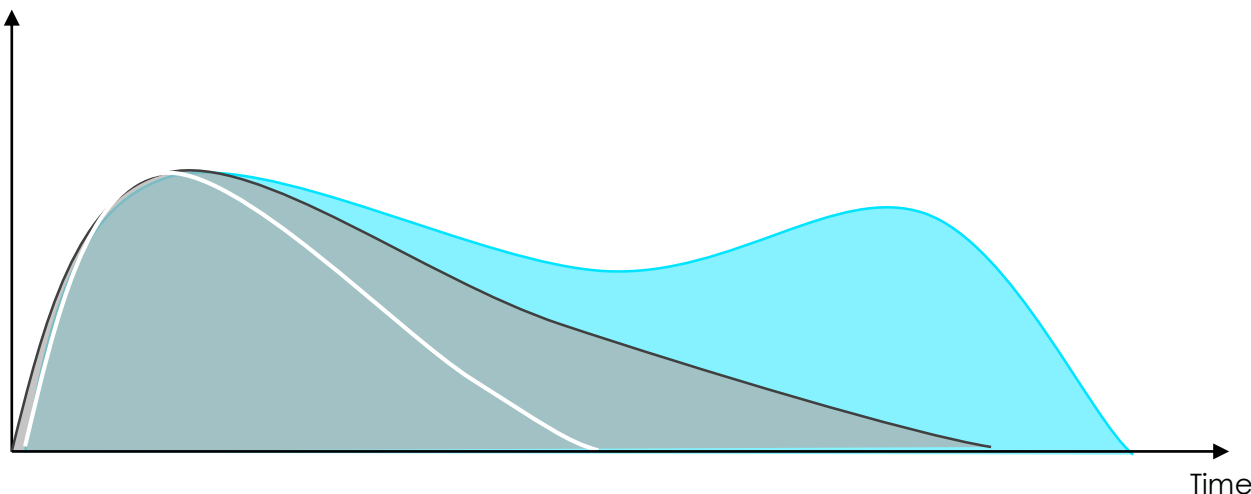
Economic consequences

Depending on the chosen strategy, the economic consequences are likely to depend on the following:

- Capacity of the health care system: higher capacity allows for less strict measures
- Ability to isolate and protect vulnerable members of society, while increasingly allowing healthy (working age) and immunised persons to return to work
- Government policies and relief packages

Three scenarios for the development of the pandemic

Number of infected



Optimistic scenario: virus is contained efficiently (heavy testing, isolating infected) and dies out in spring, with no second wave

Intermediate scenario: virus containment is slower, growing pressure on health care system due to limited resources

Severe scenario: virus is contained slowly, not possible to isolate sick due to insufficient testing, second wave hits in the autumn

Path to economic recovery

A key task in understanding the economic consequences is to determine the recovery path back to a normal business cycle situation for the economy as a whole.

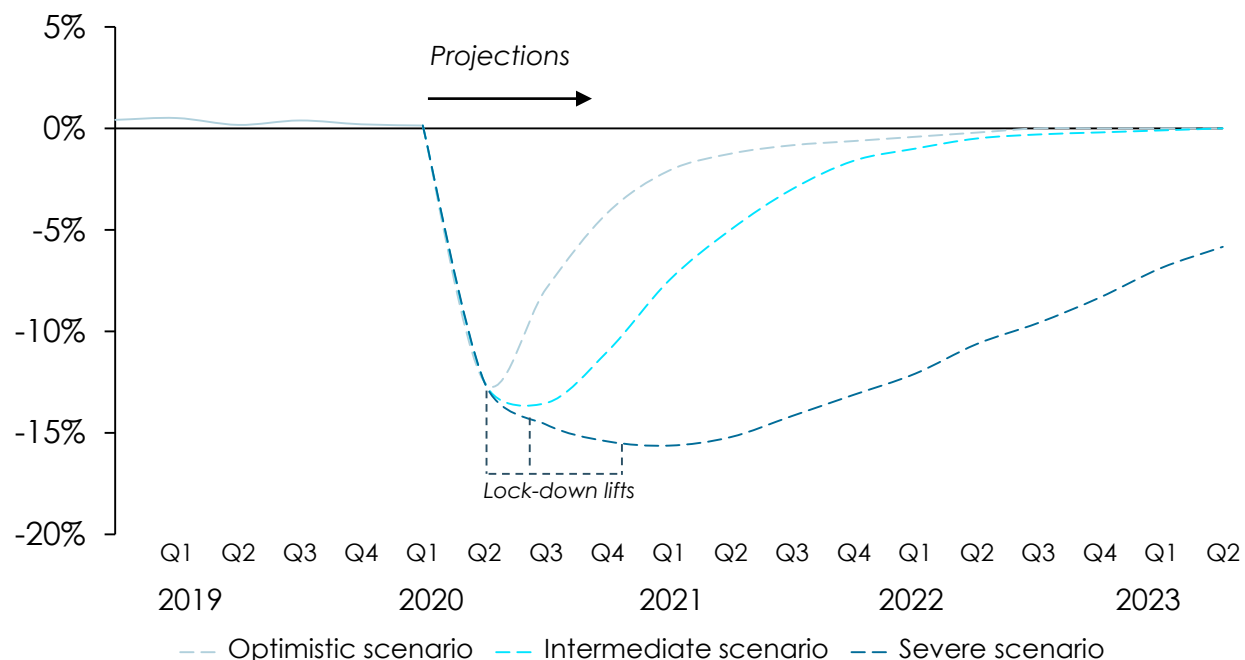
The depth of the economic shock depends on the duration of the lock-down. Therefore, we present economic recoveries under the three scenarios for the development of the pandemic and the lockdown.

The recovery path is expected to depend on the length of the lock-down; supply and demand effects become increasingly pronounced.

- **Supply effects:** Value-chain disruptions – both domestic and global. Also, otherwise healthy companies go into default due to lack of revenue or value chain disruptions, leading to increasingly lower production capacity.
- **Demand effects:** Loss of income has a direct negative effect on the demand for goods and services, or the propensity to consume. Also, uncertainty about the development of the pandemic make households and companies hold back on investments. Finally, the global crash in the stock market and possible decline in property prices leads to increased propensity to save.

Illustrative path of recovery in the three scenarios

Quarterly output gap (% of long-run GDP)



The sectorial impact of the lockdown

Having determined the recovery path of the economy under the three scenarios, we can turn our attention to the sectorial impact.

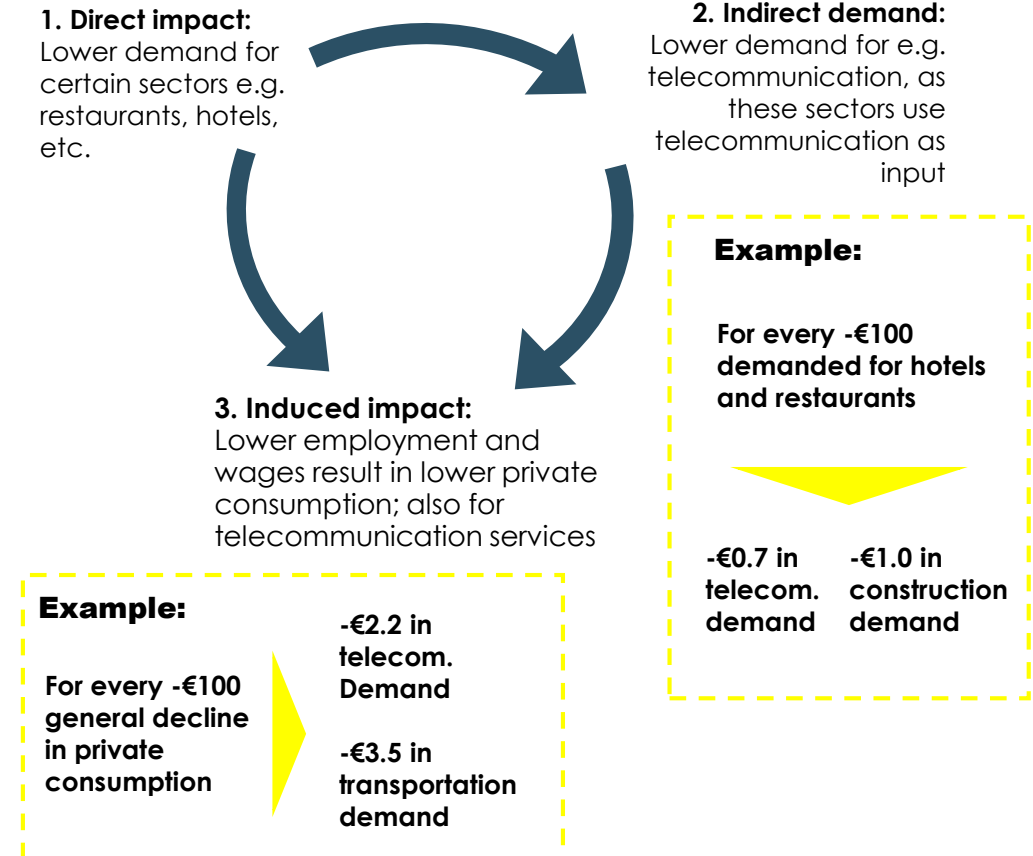
The impact on different sectors are not necessarily parallel to impacts on the economy as a whole. The effects of the pandemic will ripple across industries, depending on sectorial interdependences.

1. Initially the shock is unevenly distributed, concentrated on a handful of sectors that are directly impacted by the lockdown.

2. Gradually, other sectors transacting with the locked down sectors will be indirectly impacted.

3. Finally, the shock spreads to all parts of the economy

Illustrative example of impact from an I-O model



Source: Copenhagen Economics based on data on EU and UK from World Input-Output Database

Lasting structural effects across sectors

We can already observe changing consumer patterns and business behaviour during the first weeks of the lockdown. This could lead to permanent change if consumers and businesses are finding convenient and productive ways to consume, produce and innovate.

- **Increase in e-commerce:** The shutdown of local retailers will increase the demand for e-commerce, with a potentially permanent impact on consumer patterns.
- **Increased digital connectivity:** Digital solutions substitutes face-to-face engagements, both B2B and customer contact. We for example see an increased interest from device and pharma companies to exploit various apps in connection with their devices or medicines, which previously lacked uptake.
- **Reduced travel:** Increased digital connectivity could replace an even larger share of business travel.
- **Regionalisation of the value chain:** Production and sourcing could move closer to the end-user, as global value chains are disrupted.
- **Increased efficiency:** Companies will need to reconsider production methods and make fixed costs more flexible, increasing agility and responsiveness to change.

Policy maker response

Governments around the globe are currently responding to the economic crisis with massive rescue packages.

In the EU, this entails a EUR 37 billion (0.3% of GDP) package, including public investment for hospitals, SMEs and labor markets. In addition, the European Central Bank has initiated additional asset purchases of EUR 120 billion until the end of 2020.

The crisis could also have several derived sector-specific regulatory implications, for instance:

- **Utility and regulated services:** Turmoil in financial markets will increase firms' cost of capital, which has direct implications for WACC regulation. As a response, price regulation may be relaxed and regulation may change focus to ensuring the sustainability of the services. Further, state aid instruments could become more accessible.
- **Banking:** This will be the first major test of the regulatory overhaul implemented in the aftermath of the financial crisis. The robustness of the banking sector will guide policy makers in future regulatory changes.
- **Courier, express and postal (CEP) markets:** Digitalisation will be fast-forwarded by several years, putting up to 50% of letter volumes at risk of e-substitution.

Hard facts. Clear stories.

ABOUT COPENHAGEN ECONOMICS

Copenhagen Economics is one of the leading economics firms in Europe. Founded in 2000, we currently employ more than 90 staff operating from our offices in Copenhagen, Stockholm, Helsinki, and Brussels. The Global Competition Review (GCR) lists Copenhagen Economics among the Top-20 economic consultancies in the world, and has done so since 2006.

copenhageneconomics.com