

Executive summary

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The socio-economic impact of the oil- and gas sector

Damvad Analytics has analyzed the socio-economic impact of the oil- and gas sector for Oil Gas Denmark through the sector's impact on other sectors in the economy.

The main findings in the analysis:

- The sector employs 15.000 people, equivalent to 12.700 full-time employees.
- 1 full-time job in the oil- and gas sector generates 1,6 full-time jobs in the rest of the Danish economy and contributes 1,6 million DKK in GNP – that is more than the average 1,2 and 0,9 million DKK generated by Danish industry and the overall economy respectively.
- In total, 33.700 jobs and 39 billion DKK GNP in Denmark are dependent on the oil- and gas sector.
- 45 percent of jobs are located in the Region of Southern Denmark, with the vast majority located in Esbjerg – the sector accounts for approximately 10 percent of overall employment in Esbjerg Municipality.
- The sector itself employs many highly educated people and skilled workers, whilst the jobs generated outside of the industry are mainly skilled workers and unskilled workers (70 percent).

Definitions:

The oil- and gas sector is a collective definition for partly the oil- and gas companies who produce the oil and gas in the North Sea, and partly the supplier industry consisting of companies supplying technology and services for the oil- and gas companies.

In the calculations of the socio-economic effects, the sector's own direct contribution, the *indirect* effects and the *induced* effects have all been factored in.

The sector's own socio-economic impact consists of the GNP, employment and tax revenue created in the sector's production. The indirect effect is the effect generated by the sector purchasing goods and services, thereby generating economic activity and employment in companies outside the sector. This can be anything from hotel-stays and purchasing of stationary and IT, to the company's travel expenses. The *induced* effect is the effect generated by the sector's employees spending their salaries.

1. A total of 33.700 full-time jobs are dependent on the oil- and gas sector.

The oil- and gas sector employs 15.000 people, equivalent to 12.700 full-time jobs, in Denmark. In addition to this, another 9.700 jobs can be added as a result of indirect effects (the companies' purchases of goods and services) and 11.300 full-time jobs as a result of induced effects (spending of the employees' salaries) at companies selling to the sector's employees.

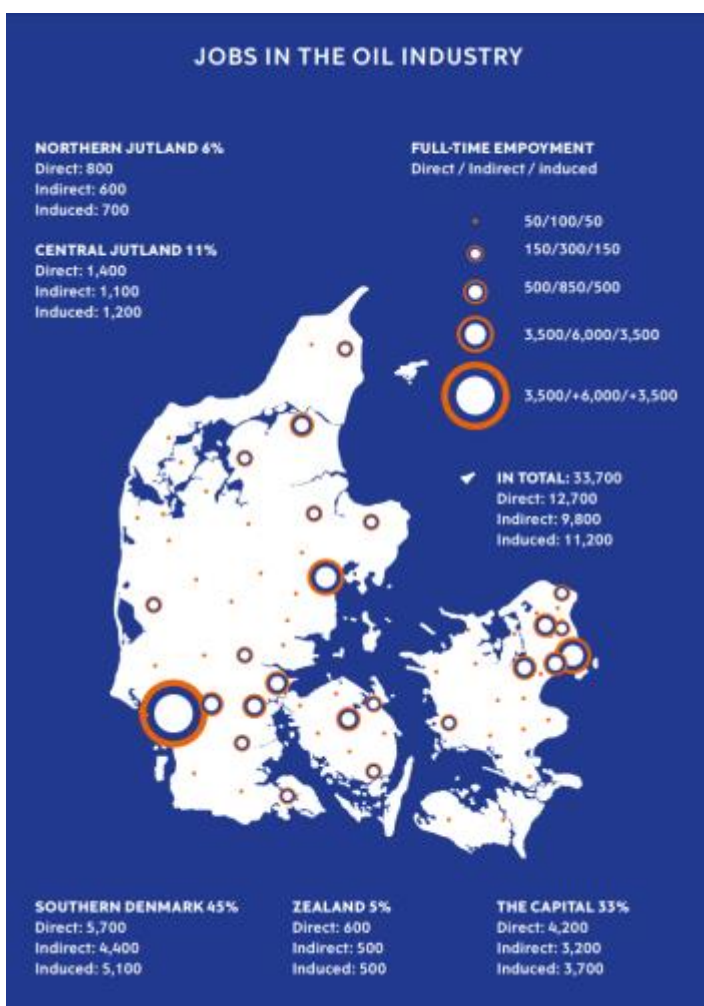
For every full-time job in the sector, the sector thus generates 1,6 full-time jobs in other sectors in the economy.

Measured in contribution to Denmark's GNP, the sector contributes 39 billion DKK. The 20 billion originate from the sector itself, whilst the remaining 19 billion DKK are indirect and induced effects respectively.

With a contribution of 20 billion DKK from the sector, this means that every full-time employee in the oil- and gas industry contributes 1,6 million DKK. In comparison an average full-time employee in Danish industrial sectors contribute 1,2 million DKK, and the average for the overall Danish economy is 0,9 million DKK per full-time employee.

2. The oil- and gas sector is very important in the Region of Southern Denmark

45 percent of the sector's jobs are located in the Region of Southern Denmark – with the majority in Esbjerg. In the region of Southern Denmark the oil- and gas sector make up 2 percent of private jobs, whilst oil- and gas related jobs make up 10 percent of the employment in Esbjerg Municipality.



Note: the circles represent intervals where the municipalities have been placed. The explanation marks the upper boundary of the interval. The circles for indirect and induced employment indicate that employment is generated with outset in the geographical placement. The precise geographical placement of the indirect and induced employment is impossible to decide with the used set of data.

Source: The Central Business Register (CVR), Statistics Denmark and own calculations.

3. The oil- and gas sector employs highly educated labor and creates many skilled and unskilled jobs.

Among the oil- and gas companies more than 70% percent of the employees have further education. For the supplier industry the share of employees with further education is about 40 percent, and on top of this there is a large number of skilled workers (30 percent). If you look at the jobs created by the indirect and induced effects of the oil- and gas sector, the composition of employees is more equal to the collective Danish workforce. The employment generated by the sector in companies outside the sector is made up of about 70 percent skilled and unskilled workers.

Method

The analysis is based on data from Oil Gas Denmark, including the following material:

- The list of companies in the sector, collected by Oil Gas Denmark, linked to the Central Business Register.
- Information on the 15.000 people, corresponding to about 12.700 full-time employees, employed in the sector from QUARTZ (2012) and the Region of Southern Denmark (2013)
- These numbers have been modeled in an input-output-model, which maps the economic flows between industries in the economy in detail. The economic interactions can be used to estimate the sector's effect on the grid of suppliers for the sector, and on the industries where the sector's employees spend their salaries.