The Danish business sector and the sustainable development goals

DANMARKS STATISTIK

The Danish business sector and the sustainable development goals

DANMARKS STATISTIK

The Danish business sector and the sustainable development goals
Published by Statistics Denmark
January 2021
Photo cover: Colourbox

Pdf-version
Can be downloaded free of charge from
www.dst.dk/publ/BusinessGoals
ISBN 978-87-501- 2376-7

Addresses:
Statistics Denmark
Sejrøgade 11
2100 Copenhagen Ø, Denmark

Phone +45 39 17 39 17
E-mail: dst@dst.dk
www.dst.dk

Symbols

-	Nil
0	Less than 0.5 of the applied unit
0.0	Less than 0.05 of the applied unit
•	Not applicable
..	Available information inconclusive or omitted for reasons of confidentiality
…	Data not available
*	Provisional estimated figures
|	Horizontal or vertical line indicates data break in a time series. Data from before and after the data break is not fully comparable.

Due to rounding, the sum of the figures in the tables may differ from the total.

Authors:
Ole Olsen
Michael Kongsted
Claus Werner Hansen

Preface

The Sustainable Development Goals (SDGs) have given us a wider understanding of sustainability than before and have received great attention from society. This is reflected in the 17 goals, 169 targets and 232 indicators on which all countries are to report. In Denmark, Statistics Denmark is at the centre of these efforts, e.g. with the SDG platform and the task to report the indicators to the UN.

You can also use the sustainable development goals to shed light on selected parts of society. In this publication, we focus on enterprises and the business sector in Denmark. Using existing statistics, we clarify the development in employment, the economy, development activities, environmental matters, working environment and gender equality.

In our work, we have mainly drawn inspiration from UNCTAD, which has extrapolated the sustainable development goals into a targeted number of core indicators of sustainability on which enterprises should ideally report individually. Investors are demanding this type of information more than ever.

It is possible to describe a number of these matters statistically, thus providing a view across industries and across SDG aspects. In general, the publication includes the development from 2010 to 2019. Since new data are released on a continuos basis, it will also be possible to keep track of developments in the years to come, where the consequences of COVID-19 may affect the statistical view, however.

The publication, involving fourteen industrial groups, also offers an overview specifying on which sustainability aspects the various industries should focus for maximum impact. You can also find much of the underlying data used in the tables and figures of this publication as part of Statistics Denmark's dissemination of the SDG indicators. See details at www.dst.dk/Sdg.

With this publication, Statistics Denmark hopes to provide knowledge to sustainability efforts in enterprises, in industrial and trade organisations and in relevant authorities. Further, we want to contribute with knowledge for anyone with a general interest in business and sustainability and to inspire to similar analyses in other countries.

The business statistics section was at the head of the work involved in this publication, and Ole Olsen, Michael Kongsted and Claus W. Andersen were responsible for analyses and dissemination. Ea Lahn Mittet prepared tables and figures. Marianne Gross Stryhn has translated the original Danish version.

Statistics Denmark, January 2021

Birgitte Anker, Director General

Claus W. Andersen, Head of Division

Contents

Summary

The business sector's involvement is important for fulfilment of the SDGs

The sustainable development goals from 2015 constitute a common frame of understanding and an agenda to change society in the direction of increased sustainability. The business sector can be examined with the sustainable development goals and related indicators as the underlying basis. This is what we aspired to do with this publication, focussing at the business sector in Denmark

Indicators for enterprises and sustainable development goals

We have mainly used work done by UNCTAD in our preparation of this publication. UNCTAD has developed a number of core indicators on which large enterprises should report in relation to the SDGs. This has attracted significant attention, e.g. among investors. We were able to find many of the indicators directly or in approximate form in existing statistics. The primary purpose is to show the *tendency* of the development, but also to provide information about the high or low importance of various industries in the given context.

Overview: Positive or negative tendency in the data in terms of the SDGs, by industry

Indicator	Total	Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Energy supply	Water, sewerage and waste	Construction	Wholesale and retail trade	Transportation	Accommodation and food serv.	Information and communication	Financial and insurance	Real estate activities	Knowledge-based services	Business services
Employment	↑	→	↑	↑	↓	↓	↑	↑	→	↑	↑	→	↑	↑	↑
Value added	↑	→	↓	↑	↓	→	↑	↑	↑	↑	↑	↓	↑	↑	↑
Research expenditure	→	→	→	→	→	→	→	↑	→	→	↓	↑	→	→	→
Environmental goods and serv.	↑	↑	-	↑	↑	↑	↑	-	-	-	-	-	-	↑	-
Donations	↑	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greenhouse gases/value added	↑	→	↓	↑	↓	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Energy consumption/value added	↑	↑	↓	↑	↓	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Water consumption/value added	↑	↓	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Volume of waste/value added	↑	↓	↑	↑	↑	↑	↓	↑	↑	↓	↑	→	↓	↑	↑
Accidents at work, frequency	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Sickness absence, men	↓	-	→	↓	→	→	↓	↓	↑	↑	↓	↓	↑	↓	↓
Gender distribution, reg. jobs	↓	-	↓	↑	↑	↑	→	→	↓	↓	↓	↓	↑	↓	↓
Gender distribution, senior management	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Equal pay, regular jobs	↑	-	→	↑	↑	→	↑	↑	↑	↑	→	↑	↓	↑	↑

↑: Positive tendency ↓: Negative tendency ↓: Neutral/uncertain -: No information.
Note: The overview does not cover all indicators. More information and details in the individual chapters.

Special circumstances may affect the figures

From an SDG perspective, the development in the figures indicate a positive tendency. This is true for the majority of the selected indicators, and for most of the fourteen industrial groups. However, in specific cases, underlying circumstances may balance or change the immediate conclusions. Below is a summary of several conclusions based on the indicators – their relation to the SDGs – and some points that call for special attention:

Economic indicators

More people in employment (target 8.5)

From 2010 to 2019, job creation in the business sector has increased, as employment is up by 10 per cent. The increase is most notable in services and also in construction and manufacturing.

Significant growth in value added (target 8.1)

Calculated as gross value added, the value creation has gone up more than employment, in fact by as much as 23 per cent. In absolute numbers, manufacturing and trade saw the highest increase, whereas knowledge-based services and other business services as well as construction saw the relatively highest increases. Only mining and quarrying saw a clear decline in value added.

The business sector's research at a stable level (target 9.5)

Since 2010, the business sector has spent a fairly stable amount on research and development, compared to the value added. Manufacturing still accounts for most of the research expenditure, whereas information and communication saw a relatively large decline.

More environmental goods and services (several SDGs)

The manufacturing of environmental goods and services, representing part of the green transition, has grown to a value of DKK 230 billion annually, and the business sector, especially manufacturing, increasingly contributes to environmental protection and resource savings. This has also resulted in more jobs focused on sustainable activities.

Contributions to non-profit purposes have increased (goal 17)

The contributions by commercial foundations for non-profit purposes have increased to over DKK 11 billion, indicating that more contributions are going towards social and humanitarian purposes, which means that enterprises increasingly engage in the surrounding community.

Environmental indicators

Noticeable decline in emission of greenhouse gases (target 9.4)

The emission of greenhouse gases (excl. biomass burning) by the business sector has declined since 2010, in absolute figures (by 4 per cent) as well as relative to the value added (by 22 per cent). The conversion in energy supply to other fuels than fossil fuels is part of the explanation. The large decline in value added in mining and quarrying makes this industry appear to develop negatively when measured by this indicator.

Improved energy efficiency, but increased energy consumption (target 7.3)

The business sector, including the considerable international sea transport sector, has increased its total energy consumption by 1 per cent since 2010. However, if energy consumption is measured relative to the value added, it declined by 18 per cent, i.e. a more efficient use. The transportation industry, which accounts for the main part of the business sector's energy consumption, declined by 8 per cent.

We are saving water (target 6.4)

Overall, the consumption of abstracted or collected water is stable, although highly irregular with the largest consumer, agriculture, where the need varies with weather and climatic conditions. The consumption by the non-agricultural sector also declined relative to both value added and employment.

Positive waste figures, but complex area (goal 12)

The figures for waste show a tendency towards more recycling of industrial waste and lower volumes of waste relative to production. Many types of waste and special circumstances at industry level make it difficult to draw any certain conclusions. E.g., agriculture accounts for increased volumes of waste, but the reason is that more manure is transported for use in biogas plants.

Social indicators

Relatively fewer accidents at work (target 8.8)

Going to work has become safer, measured by occupational accidents per person in employment. However, some industries, especially waste management and construction, are still challenged by a high number of accidents at work. Still, it is difficult to determine the development with any certainty, since reported accidents only account for part of the actual number of accidents.

More sick-days, especially for men (target 8.8)

In recent years, the workplaces have seen increased sickness absence, with a relative increase of approximately 10 per cent, mostly due to increased absence among men. However, the absence among women is still the highest. According to the data, the business sector has not achieved a healthier working environment in recent years, although absence, also by gender, is after all still below that of the public sector.

Unchanged gender composition, though more women with managerial responsibility (target 8.5)

The SDGs aim for workplaces to be attractive to both men and women. In the fourteen industries, only Accommodation and food service have an even share of women and men. The share of women with managerial responsibility has increased and come slightly closer to the gender composition in general.

Very few women in boards of directors and executive boards (target 5.5)

More women in senior management is a special area of focus. The totals for members of boards of directors and executive boards in commercial enterprises show a small share of women, especially in executive boards, regardless of industry. Furthermore, the figures do not show any signs of change in the five years currently covered by the statistics.

Closer to closing the gender pay gap (target 8.5)

There is a tendency towards equality in pay in these industries, based on the structure of earnings survey. In a number of industries, average hourly earnings are roughly the same irrespective of gender for employees without managerial responsibility. Among managers, the pay gap is also narrowing, but women's earnings still clearly lags behind. In general, the widest pay gaps exist in the industries with the highest earnings.

1. Introduction

Enterprises and sustainable development goals

In general, the sustainable development goals and the related indicators are prepared for a national level, which means that most indicators are assessed for Denmark as a whole. However, a few goals and indicators relate directly to the development in e.g. food production or industrial manufacturing, and there is a cross-sectoral goal for more enterprises to report on sustainability and business social responsibility in general. The recently prepared proposals for *national targets* for Denmark imply that e.g. the business sector becomes more transparent with respect to the SDGs.

The business sector is a key operator in the pursuit of SDGs

In our effort to attain the sustainable development goals, enterprises are the key operators in a number of areas. This is true for areas such as climate and the green transition in general. Similarly, the private sector is of primary importance to the conditions for the majority of employees in Denmark. Furthermore, growth and employment in the business sector is decisive for the development of the Danish economy.

1.1 Reporting of sustainability

Enterprises and social responsibility

For many years, business social responsibility has been the focus of attention. On an international scale, the *Global Compact*, introduced by the UN in 1999, constitutes a code of responsible business behaviour. *The UN Guiding Principles on Business and Human Rights* is a binding instrument, adopted by the UN's Human Rights Council in 2011. In Denmark, requirements, partly anchored in EU guidelines, are embedded in the Financial Statements Act for large enterprises to prepare reports on business social responsibility, so-called CSR-reports.

The SDGs have shifted the focus

The adoption of the sustainable development goals in 2015 has drawn new attention to the enterprises and their impact on the sustainability of society. A range of initiatives aim to enhance the non-financial reporting, in an international context often referred to as business reporting on *Environmental and Social Governance* (ESG-reporting)

UNCTAD has made a proposal for "Core Indicators"

The UN Conference on Trade and Development, UNCTAD, which works with e.g. principles for business accounting and reporting, has worked on translating the SDGs to measurable indicators for corporations. As a result, they have prepared a list of 33 indicators, which are described in detail in the report (2019): *Guidance on core indicators for entity reporting on contribution towards implementation of the Sustainable Development Goals*[1], including a proposal on how to calculate the indicators. The statistical presentation of this present publication has primarily drawn inspiration from UNCTAD's report.

The UNCTAD indicators are organised under four headlines: The economic area, the environmental area, the social area (including gender equality) and the institutional area.

Danish proposals for sustainability indicators

Drawing inspiration from the international initiatives, CFA Society Denmark, FSR – Danish Auditors and Nasdaq Copenhagen, prepared a proposal in June 2019 for 15 indicators and their calculation in the overview: *ESG key figures in the annual report*[2] . To a wide extent, these indicators are aligned with UNCTAD's list and is intended as a "starter kit" for improved sustainability reporting.

---

[1] See https://unctad.org/en/PublicationsLibrary/diae2019d1_en.pdf.

[2] See https://www.fsr.dk/Files/Files/Dokumenter/Faglig/CSR/Publikationer/ESG%20engelsk%20december%202020.pdf

Limitations in scope

The proposed indicators – and also the statistics partly covering the same issue – will essentially only cover what goes on in the actual enterprises, e.g. with respect to environmental impact and staff-related matters. However, enterprises also impact sustainability, e.g. through their imports and their choice of suppliers, and they must pay attention to this, e.g. according to the Global Impact principles. The external sustainability impact is difficult to measure, however, especially across various types of enterprises.

Statistics and company reporting

To a wide extent, the statistics included in the assessment of business sustainability are based on data reported by the enterprises to Statistics Denmark or to administrative registers. Other statistics rely on data on the procurement of goods and services by Danish enterprises, in some cases supplemented with calculations of distribution by industry. In this way, there is a difference between what individual enterprises include in their own assessments and what can be compiled statistically for groups of enterprises. Accordingly, statistics cannot replace extended reporting by enterprises, but can be used for benchmarking. We have only used official statistics in this present publication.

1.2 Industries and indicators

Classification of industries

The statistics comply with the classification of industries that breaks down the economic activity of society into nineteen industries, as per the Danish Industrial Classifications 2007 (DB07), internationally corresponding to NACE Rev. 2 or ISIC rev. 4. From these nineteen industries, we have selected fourteen, consisting mainly of private enterprises or other enterprises operating on market terms. Most of the applied statistics and statistics bank tables cover the industry's economic activity in full, whereas a few of them only cover enterprises over a certain minimum size.

Names of industries

In figures and text, we have generally used the names applied in the statbank tables, but for editorial reasons *Electricity, gas, steam and air conditioning supply* are written as *Energy supply*, *Water supply, sewerage and waste management* as *Water, sewerage and waste*, *Accommodation and food service activities* as *Accommodation and food serv*. and the industry group *Travel agent, cleaning, and other operational services* has been abbreviated to *Business services*.

Assessment since 2010

Overall, we have decided to look into the development since 2010 until the most recent year for which statistics have been released. However, some results are not available before 2011 to 2013. The most recent years with results vary from 2017 to 2019, as the sets of statistics have different lead times. In all cases, the most recent results are included in the presentation, the main purpose of which it is to point out a *tendency*. Results published in Statbank Denmark after 18 September 2020 are not included in figures and tables for editorial reasons.

Selection of indicators

The sets of statistics used in this publication represent a selection based on existing information and an assessment of materiality. The following is a brief presentation of the indicators included in the six chapters. The more detailed relation to the SDGs and the company indicators in UNCTAD's proposal is dealt with in the individual chapters.

Employment and growth

This chapter holds an overall presentation of employment and (gross) value added in the individual industries. The clarification of employment and value added is important background information, since many indicators are calculated in relation to one of these results. It should be noted that 2010 – the base year – was still affected by the financial crisis, which resulted in a relatively low level of value added and employment.

The UNCTAD list also states turnover and net value added as indicators in the economic field. Employment is not mentioned specifically, as it is included in the general company information.

Transition to more sustainable production

This chapter is about research expenditure at enterprises, production of green goods and services as well as grants for social purposes by commercial foundations. These items match proposals on the UNCTAD list in part or in full, though the indicator for "green investments" on the UNCTAD list is somewhat different from the production of green goods and services.

From the UNCTAD list, we have decided not to show total business payment of taxes and duties, nor indicators for local procurement, for which there are no official statistics.

Greenhouse gases and energy consumption

We review the business sector's CO_2 and other greenhouse gas emissions as well as their energy consumption at industry level both in totals and in relation to value added. Compared with the UNCTAD list, we have opted out of showing the enterprises' consumption of sustainable energy, since this is rather a derived consequence of conversions in the energy supply sector than the result of a decision made by the individual company.

Water and waste

In this chapter, we review the business sector's consumption of water, in absolute and relative terms. The UNCTAD list further sets the stage for enterprises to examine their recirculation and pressure on local water resources, for which there is no official set of statistics. In the same way, waste production and waste recycling is examined in accordance with UNCTAD's recommendations.

Safety and health

Accidents at work and sickness absence are in focus in this chapter. In addition to industries, the data is broken down by gender, as there are significant differences between the sexes. Measurement of sickness absence is one of the proposed indicators in the *ESG key figures in the annual report,* whereas UNCTAD's list suggests that this subject is covered by stating expenditure for sickness and accident insurance.

Gender equality and equal pay

This section shows the composition of the workforce, broken down by gender and overall category, in order to assess whether there is a tendency towards a more equal gender distribution. The composition of boards of directors and executive boards is also shown by gender, a subject that belongs under the institutional area according to UNCTAD's list, which suggest a further distribution by age. With regard to equal pay, the development in hourly pay is shown for managers and employees, respectively, broken down by gender in the various industries.

In the social area, UNCTAD further suggests to measure the enterprises' continuing education activities, an area for which there is currently no new statistics. In addition, it also proposes that enterprises assess how many of their employees are covered by collective agreements. However, there are no official statistics for this. Under the institutional area, UNCTAD proposes that the number of meetings of the board and of the audit committee be reported, and how corruption is prevented. There are no matching statistics in these areas.

Future statistics on the business sector and sustainability

If enterprises calculate more sustainability indicators in future, extended options will be made available for analysis of the contributions to increased sustainability by enterprises and the business sector, whether these are on their own initiative or based on legislation. However, there is already a fairly good basis in the existing statistics, and Statistics Denmark is contemplating further examination of sub-areas within the business sector and the sustainable development goals.

2. Employment and the economy

Introduction

This chapter describes the Danish business sector through statistics of employment and value added broken down by industry. The chapter is meant as a backdrop for later chapters, as it shows which industries matter the most in employment terms and in financial terms, thus putting the relation to the SDGs into perspective. However, the clarification is also relevant for the SDGs in itself, as productive jobs and (sustainable) growth must ensure a robust economy as a basis for sustainability in a broad sense.

2.1 Employment

High employment is part of the SDGs

Workplaces and equal access to all types of jobs, together with economic growth, are the core issues of SDG 8. The employment goal is also included in target 8.5 *Achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value*. A message to promote policies that support job creation is specifically mentioned in target 8.3. Other targets mention e.g. progress in productivity, employee rights and sustainability. Other chapters look into these aspects to a certain extent.

Employment statistics

The *enterprise statistics* are the source of this present section. This set of statistics provides a coherent and consistent description of the Danish business development and structure through economic, employment and financial details. We use number of full-time equivalent employees (FTE) as a measure for employment, as it facilitates the most accurate comparison across industries. Self-employed persons are not included in the FTE of the statistics. We have adjusted for this by counting enterprises with commercial activity, but no employees, as one FTE, i.e. the owner himself/herself. This is potentially an over-assessment of the real number of FTEs, since the owners do not necessarily work full time in the company. The definition of employment in statistics varies a little and the statistics apply different delimitations. In the *national accounts*, the total working time spent creating the financial results is calculated.

Table 2.1 **Employment in the business sector by industry**

	2010	2018	2018
	FTE		per cent
Total	**1,393,600**	**1,529,000**	**100.0**
Agriculture, forestry and fishing	51,000	51,100	3.3
Mining and quarrying	3,700	4,700	0.3
Manufacturing	269,800	280,500	18.3
Energy supply	11,300	10,500	0.7
Water, sewerage and waste	10,500	10,200	0.7
Construction	130,900	156,200	10.2
Wholesale and retail trade	315,100	325,300	21.3
Transportation	122,500	122,000	8.0
Accommodation and food service	50,600	67,000	4.4
Information and communication	95,100	104,800	6.9
Financial and insurance	84,800	85,400	5.6
Real estate activities	45,200	52,500	3.4
Knowledge-based services	125,900	152,400	10.0
Business services	77,100	106,400	7.0

Source: www.statbank.dk/GF3.

Note: Only figures for the fourteen industries have been shown.

Magnitude: approx. 1.5m FTE in the private sector

In the period 2010 to 2018, total employment in the private sector has been fairly stable at 1.5m FTEs (full-time equivalent positions) for the fourteen industries involved, though with a clear upward trend. However, there are major differences between the industries' share of the total, as shown in table 2.1. In 2018, the biggest industry in terms of employment was *Wholesale and retail trade* (21 per cent) followed by *Manufacturing* (18 per cent) and *Construction* (10 per cent). At the bottom, you would find *Mining and quarrying, Energy supply* as well as *Water, sewerage and waste*, all less than one per cent of total employment in the industries.

10 per cent more in employment since 2010

Total employment in the private sector has increased significantly since 2010, about 10 per cent, corresponding to 135,000 full-time equivalent positions. However, it should be noted that in 2010, the business sector was still affected by the financial crisis. There have been significant shifts over time. In numerical terms, employment has remained unchanged or declined in *Agriculture, forestry and fishing*, *Energy supply*, *Water, sewerage and waste*, *Transportation* and *Financial and Insurance* by a total of 1,500 FTEs. An increase in the other industries more than make up for this, most notably in *Business services* (29,000), *Knowledge-based services* (26,000) and *Construction* (25,000). In *Accommodation and food serv.*, employment increased by 16,000, whereas the increases for *Manufacturing* and *Wholesale and retail trade* were around 10,000 FTEs.

Highest growth in service industries

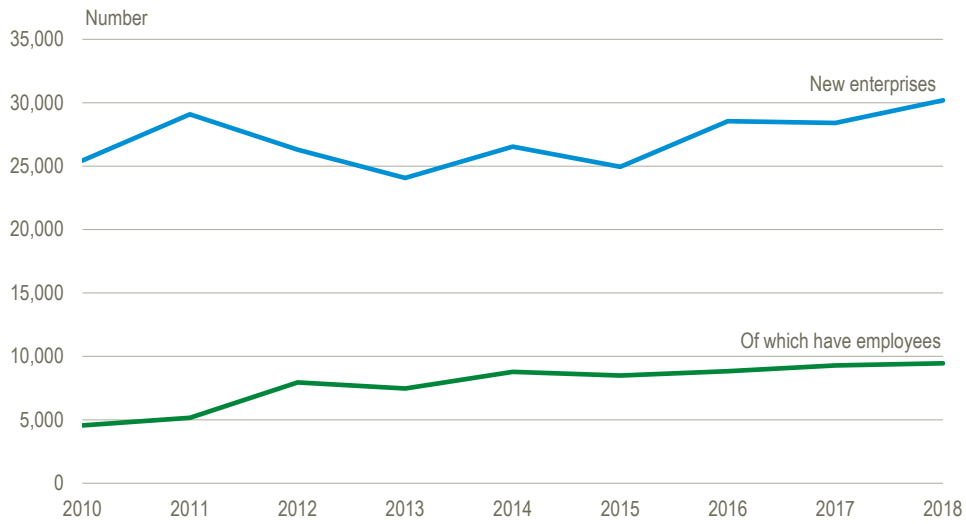
Overall, there has been a slide away from emission- and energy-intense industries towards various types of service industries, which can be relevant background knowledge for the later description of the development in e.g. energy consumption and emission.

More enterprises are creating jobs

A marked change over the period is the fact that more enterprises have employees in 2018 than in 2010. In 2010, as many as 54 per cent of the enterprises in the private sector had no employees. In 2018, this had dropped to 45 per cent. At the same time, the share of enterprises with 1-9 employees increased from 39 per cent in 2010 to 48 per cent in 2018. Accordingly, more enterprises created jobs in 2018 than in 2010.

Figure 2.1

Development in number of new enterprises



Source: www.statbank.dk/DEM01.

Increasing number of new enterprises

Throughout the period, 25-30,000 new enterprises were established each year. Up until 2010, around 5,000 of these enterprises had employees, after which it increased year on year. In 2018, close to 10,000 new enterprises had employees. These figures still appear from the statistics on business demography, which is an annual count of the number of actually new and actually dissolved enterprises and, among other things, providing a picture of entrepreneurship.

Conclusion: More jobs created

In total, the job creation since 2010 is significant. This is partly attributable to the establishment of many new enterprises, of which many have employees. Job creation was most notable in services and to a lesser extent in production. However, jobs in the service sector are typically more sensitive to the economic situation, most recently illustrated by the COVID-19 crisis.

2.2 Value added

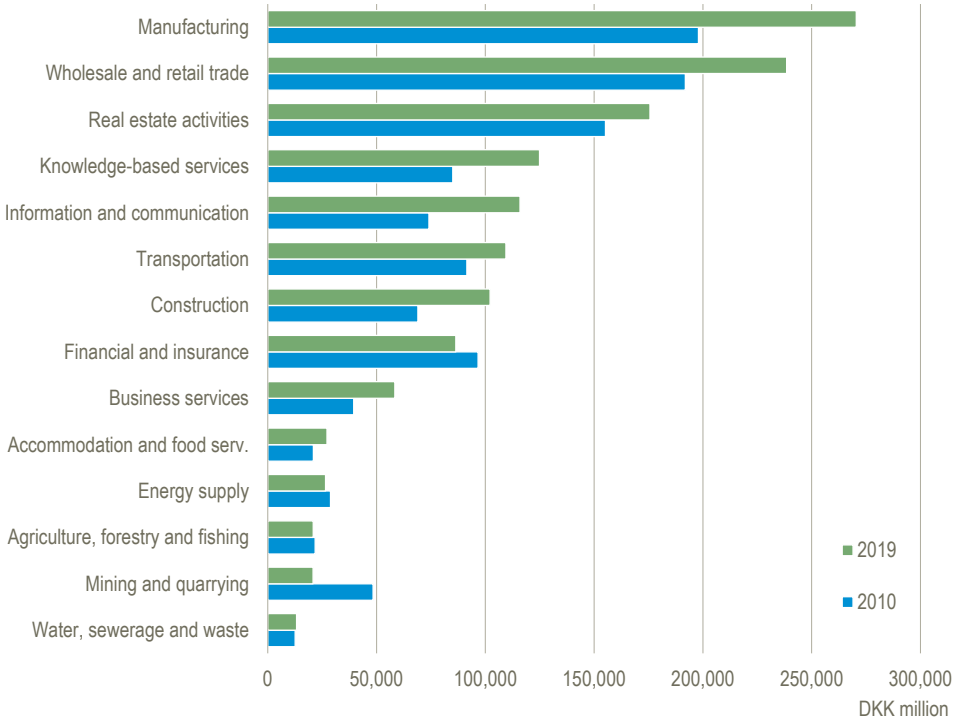
Sustainable growth is part of the SDGs

The SDGs aim for economic growth (especially in the developing countries), and the growth must be sustainable. Target 8.1 states this more accurately, using annual real growth per capita as an indicator. UNCTAD's list of indicators for enterprises includes gross as well as net value added as results, one of the reasons being that environmental impact must be seen in relation to these results.

The national accounts show the value added

The national accounts statistics contain the final compilation of the enterprises' value added and productivity. The national accounts offer a coherent description of the national economy and its development. It allows you to get an overview of the Danish economic trend and a variety of information, such as value added, employment and productivity, e.g. at industry level. Gross value added is sales minus intermediate consumption of goods and services, and it is the amount that can be used for depreciations and investments as well as remuneration of employees and owners. Throughout this publication, the term *value added* is synonymous with gross value added.

Figure 2.2 **Value added at constant prices by industry**



Source: www.statbank.dk/NABP19.

Note: The industries are sorted by their value added in 2019.

Value added of DKK 1,400 billion

In 2019, the value added was DKK 1,400 billion in total for the fourteen industries, stated in 2010-prices. Also in this context, the size of the industries varies a great deal. *Manufacturing* accounted for almost 20 per cent, followed by *Wholesale and retail trade* at 17 per cent and *Real estate activities* at 13 per cent. *Water, sewerage and waste* and *Agriculture, forestry and fishery* were the smallest industries, each with a contribution of less than 1.5 per cent of total value added in the industries.

Increasing value added

The industries have seen an increase of 23 per cent in value added, from DKK 1,133 billion in 2010 to DKK 1,391 billion in 2019 measured in constant prices. The division into sub-industries, also illustrated in figure 2.2, shows that *Manufacturing* and *Wholesale and retail trade* have grown the most, since the value added in these two industries increased by DKK 72 and 46 billion respectively. *Information and communication* has seen the relatively highest growth with an increase in value added of 56 per cent. *Knowledge-based services* and *Business services* as well as *Construction* have also seen a high growth of 47-48 per cent. Added value in *Mining and quarrying* has been halved since 2010, which is due to declining profit from oil production.

Value added has increased more than labour input

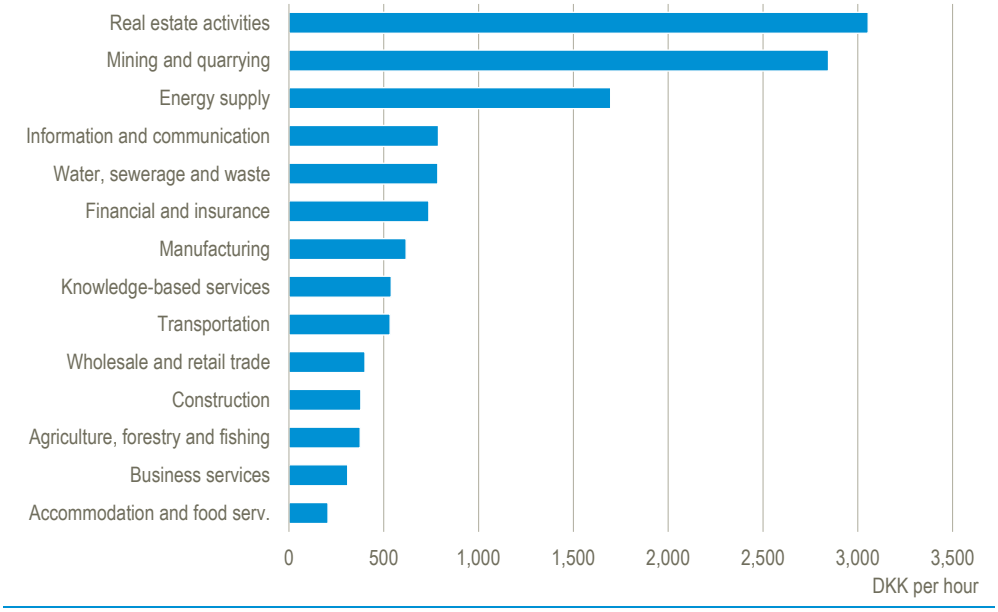
The value added for the fourteen industries has increased by 23 per cent since 2010 in constant prices. The related labour input has only gone up 10 per cent, which is why from an overall perspective, the business sector's production relative to the labour input has become more efficient. A notable exception is *Mining and quarrying*, but also *Accommodation and food serv.* are under the 2010 result.

Labour- and capital-intensive industries

In figure 2.3, you can get a picture of which industries are capital-intensive and labour-intensive respectively by comparing the value added in relation to labour input broken down by industry. The most capital-intensive industry is *Real estate activities*, where the value added must first remunerate investments in rental properties, followed by *Mining and quarrying* and *Energy supply*, which are both characterised by extensive use of machinery and other infrastructure in the production. At the other end, you will find labour-intensive industries such as *Accommodation and food serv.* and *Business services*, which are also characterised by relatively low-paid jobs.

Figure 2.3

Value added at constant prices in relation to labour input by industry. 2019



Source: www.statbank.dk/NABB19 and NABP19.

New technology could result in higher capital-intensity

Of the biggest industries, *Wholesale and retail trade* has the most persons in employment, with a high labour-intensity (relatively low value added per hour) at the same level as *Construction* and *Agriculture, forestry and fishing*. *Manufacturing*, which contributes the most to total value added, is in the mid-range together with *Transportation* and *Knowledge-based services*. *Information and communication services* is a capital-intensive industry because e.g. telecom enterprises with accompanying ICT infrastructure are included in this category. Since 2010, the value added per hour worked has grown relatively the most in *Information and communication services* (48 per cent) and *Manufacturing* (35 per cent), which can probably be attributed to technological changes in these industries.

Conclusion: The business sector has provided economic growth

The business sector has lived up to the sustainable development goals in terms of higher value added and productivity and has established (new) growth stimulating activities. However, the development has been quite different in the various industries, and further information is required to decide to what extent the growth has been sustainable.

3. Transition to more sustainable production

The enterprises transition to a more sustainable production is a prerequisite for achieving many of the SDGs. Some of the ways in which enterprises can contribute directly is through research, development of more sustainable products and allocation of funds for social development purposes.

3.1 Research

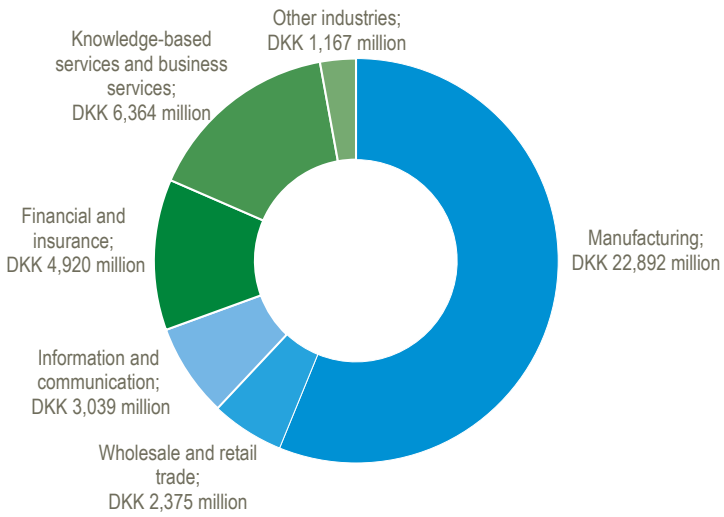
Research and the sustainable development goals

Sustainable development goal 9 about *Industrialisation, Innovation and Infrastructure* features a number of indicators to support the transition to a more sustainable production. Target 9.5, *Enhance scientific research and upgrade the technological capabilities of industrial sectors* is specifically about upgrading the technological capacity of the manufacturing industry, but also about supporting research in general. Indicator 9.5.1 must show the countries' research expenditure as a share of GDP. Research expenditure is also incorporated in the indicators that UNCTAD recommends that enterprises include in their sustainability reporting.

Research and development statistics

Statistics Denmark compiles statistics for research and development activities in the private as well as the public sector, calculated in the form of expenditure and human resource input. The statistics for the business sector's research throw light on the extent of research and development internally in enterprises and their purchase of research from other enterprises. Expenditure is calculated e.g. distributed on industries, although not fully distributed on the fourteen industries, as a few industries have very limited research activity. It should be mentioned that research expenditure in the national accounts is included under investments.

Figure 3.1 **Research expenditure of enterprises by industry. 2017**



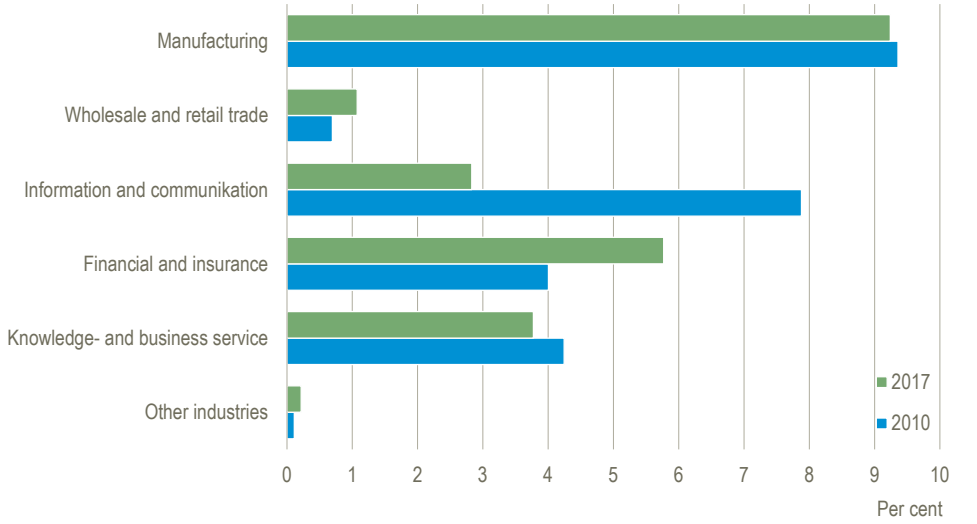
Source: www.statbank.dk/FORSK01.

Expenditure on research and development of DKK 42 billion

Total expenditure of private enterprises for own research and development was DKK 42 billion in 2018. In 2017, which is the most recent year with final breakdown by industries, the expenditure was DKK 41 billion, as shown in figure 3.1. *Manufacturing* had an own research expenditure of DKK 23 billion, corresponding to 56 per cent of total research expenditure. This supports the SDG that research must contribute to upgrade the manufacturing technology. There are also large branches of the manufacturing industry for which new product development is a very significant activity, e.g. pharmaceuticals. Compared with the manufacturing industry, the other industries are significantly smaller in terms of research, with *Knowledge-based services and Business services* and *Financial and insurance* as the biggest. Specialised research enterprises that typically provide research on a contract basis to other enterprises are included under *Knowledge-based services and Business services*. In addition to research and development expenditure, the business sector also has expenditure on innovation of the company's products and processes.

Figure 3.2

Research expenditure in relation to value added by industry



Source: www.statbank.dk/FORSK01 and NABP19.

The manufacturing enterprises are the most research intensive

The manufacturing industry also has the largest research and development expenditure when calculated in proportion to the industries' value added. In 2010, the expenditure accounted for just over 9 per cent of value added, which is largely unchanged in 2017. In the period, research and development expenditure, measured as a share of value added, has dropped sharply in *Information and communication services* from a level close to that of the manufacturing industry in 2010 to 3 per cent in 2017. However, the drop may have to do with a changed statistical distinction between research and innovation, and also the research may have been partly outsourced to other countries. The statistics cannot directly clarify this.

Total research expenditure of 3 per cent of GDP

Target 9.5 also involves research in the public sector. Total research expenditure in Denmark was DKK 66 billion in 2017, corresponding to approximately 3 per cent in relation to society's total value added (GDP). The public research and development expenditure was around 1 per cent in relation to GDP, and private enterprises' expenditure was around 2 per cent. This has been fairly constant the last ten years.

Conclusion: Unchanged level of research expenditure

There is no evident change in the enterprises' R&D activity following the adoption of the SDGs. However, the activity is still at the level recommended in the so-called Barcelona objectives (for the EU-countries), so probably, new knowledge is still being built. Since many enterprises are transnational, national figures do not necessarily give a full picture of the activities.

3.2 Environmental goods and services

Sustainable products and the SDGs

A number of the SDGs aim for transition to a consumption and production that is less damaging to the climate and the environment. This applies especially to the SDGs *6. Clean water and sanitation*, *7. Affordable and clean energy*, *12. Responsible consumption and production*, and *13. Climate action*. UNCTADs recommendations encourage enterprises to report on their green investments, which can involve both new products and improved production processes.

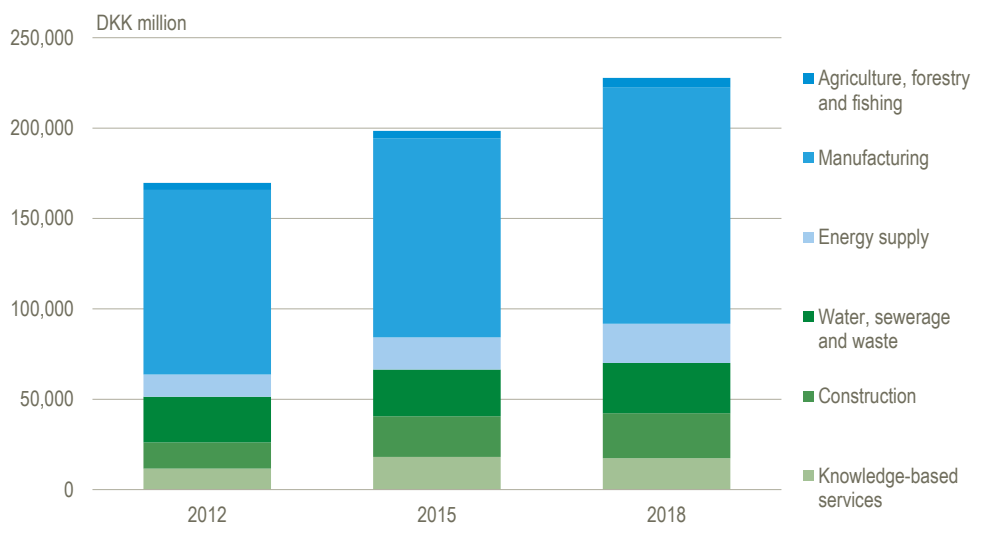
Statistics on green goods and services

Statistics on the production of environmental goods and services, which include figures from 2012 onwards, do no cover direct green investments, but the results can contributes to a clarification of the development in these. The statistics cover the production of private enterprises, which is broken down by environmental purposes and classification of products as direct environmental protection products or resource-saving products. This section only deals with the development in green production as a whole. The statistics cover the industries *Agriculture, forestry and fishery*, *Manufacturing*, *Energy supply*, *Water, sewerage and waste*, *Construction* and *Knowledge-based services*. It is assumed that there is no turnover of green goods and services of any significance in other industries. Other statistics on the green economy, e.g. resource productivity, can complement the picture of what happens in the enterprises with respect to green transition.

Green goods and services worth more than DKK 200 billion

In 2018, enterprises produced green goods and services worth DKK 228 billion. *Manufacturing* accounted for DKK 131 billion, corresponding to 57 per cent, followed by *Water, sewerage and waste* at DKK 28 billion (12 per cent) and *Construction* at DKK 25 billion (11 per cent).

Figure 3.3 **Turnover of green goods and services by industry**



Source: www.statbank.dk/GRON2.

Note: It is estimated that the assessment for 2012 underestimated the actual activity in *Construction* and in *Knowledge-based services*.

Increasing turnover since 2012

The turnover of green goods and services has increased in all industries since 2012. Calculated in absolute figures, as in figure 3.3, the biggest increase is in *Manufacturing*, where turnover increased by almost DKK 30 billion. The major part of this increase is in *Machinery*, which covers e.g. the production of windmills. *Energy supply* has seen the highest relative increase with 76 per cent from 2012 to 2018. This development is due to a transition to more sustainable energy sources. In *Construction*, it is e.g. energy retrofitting that drives the development, whereas the progress in *Agriculture, forestry and fishing* is driven by a transition to organic farming.

Waste management is a significant green activity

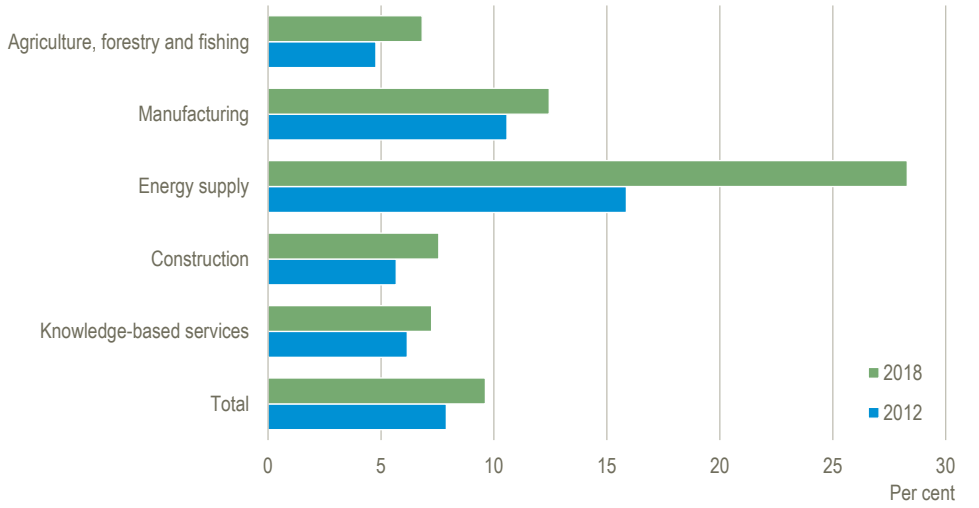
There are major differences between the share of green goods and services in the industries, e.g. measured by the share of employment. Clearly, the highest share of green employment is in *Water, sewerage and waste*, where green goods and services employ 72 per cent of the labour force. The high share is owing to the fact that by definition, the processing of wastewater and waste management and recycling are green activities, whereas water supply on the other hand is not considered as such.

Ten per cent green employment in non-specialised industries

In the other industries with green goods and services, approximately 10 per cent of the employment was green in 2018. This is an increase from 8 per cent in 2012. All industries have progressed, but especially *Energy supply* has seen a major shift in the production, as the share of green jobs has increased from 16 per cent in 2012 to 28 per cent in 2018. *Agriculture, forestry and fishery* has also seen a relatively big increase, as the share has gone up from 5 to 7 per cent.

Figure 3.4

Green employment in relation to total employment by industry



Source: www.statbank.dk/GRON2 and NABP19.

Note: The industry *Water, sewerage and waste* has been left out of the figure, as the green share by definition is much higher than in the other industries. "Total" represents only the five shown industries.

Conclusion: More green products

The range of green goods and services has grown in volume since 2012, which must be said to be a contribution from the business sector to the realisation of the sustainable development goals. The figures show increasing activity in all the industries covered by the statistics.

3.3 Donations for non-profit purposes

The enterprises' donations and the SDGs

The enterprises' work with the SDGs may concern their production, but may also be general *contributions to society*. Under SDG 17, for example, there is an indicator (17.1.2.) for tax revenue from e.g. enterprises, and also target 17.17 encourages effective partnerships. The latter aspect is partly covered by UNCTAD's indicator on *Community Investment*, which is broadly speaking about the company's investments in the surrounding community.

Commercial foundations

There are no official statistics that fully cover enterprises' donations for non-profit purposes. However, you can get an impression of scope and focus areas by looking at the awarding of grants by commercial foundations. Commercial foundations manage the profit from some of the country's largest enterprises and in this way, their grants reflect the private sector's contributions to community activities to a certain degree.

The statistics on the activities of foundations

The statistics on the activities of foundations is a relatively new set of statistics, which was first published with figures for the year 2016. The purpose of this set of statistics is to focus on the activities of foundations in the form of grants and payments, which are broken down by purpose, main area, instruments and types of receivers. The foundations are divided into Commercial foundations and Non-profit foundations. The following deals with grants by commercial foundations, since the purpose here is to focus on private enterprises' grants for non-profit purposes.

Increasing grants

In 2018, commercial foundations awarded almost DKK 12 billion, which is two thirds of the combined grants from the foundations. The amount is at the same level as in 2017, but DKK 1.4 billion higher than in 2016. Variations from one year to the next must be interpreted with caution, as large grants may affect the totals.

Table 3.1

Commercial foundations' grants by purpose

	2016	2017	2018
	million DKK		
All purposes	**9,891**	**11,446**	**11,324**
Scientific purposes	5,834	7,547	6,173
Cultural purposes	1,595	1,404	1,184
Social purposes	290	336	548
Nature and environment purposes	188	386	289
Health purposes	592	465	470
Educational purposes	436	342	950
Business promotion and regional dev. purposes	552	439	607
International humanitarian purposes	82	67	837
Religious purposes	52	9	29
Other purposes	272	451	237

Source: www.statbank.dk/FOND04.

Research accounts for more than half

More than half of the grants by commercial foundations are allocated to scientific purposes, primarily research at the universities. Close to 90 per cent of the research grants are allocated to research in natural and health sciences. The second largest area throughout the three years is cultural purposes with museums as the prime group of receivers. However, donations for cultural purposes declined from DKK 1.6 billion in 2016 to DKK 1.2 billion in 2018.

Grants have been spread out

Scientific and cultural purposes have traditionally been the areas receiving the vast majority of the grants from commercial foundations. In 2018, however, they shifted slightly, so that grants for both of these purposes declined a little, while they increased for most of the other purposes, including social and humanitarian purposes.

Conclusion: Significant donations for non-profit purposes

Commercial foundations make considerable donations for non-profit purposes, i.e. purposes that can be referred to as *Community investments*. It is too soon to say whether it is a general trend that foundations have recently shifted their attention when making grants, but the figures could indicate heightened interest in a wider agenda than the traditional foundation purposes.

4. Greenhouse gases emission and energy consumption

Climate impact is central to sustainability

The emission of carbon dioxide (CO_2) and other climate forcing greenhouse gases is at the core of the work with sustainability. Via both international agreements and national objectives, Denmark is committed to strongly reduce emissions. For most industries, emission is especially linked to the consumption of energy, which is also part of this chapter.

4.1 Greenhouse gases emission

Emission and SDG indicator

In the SDGs and the related indicators, target 9.4 deals with sustainable technologies and indicators, and indicator 9.4.1 deals specifically with the emission of CO_2. The indicator is calculated as emission in relation to the value added, i.e. the economic activity calculated as contribution to GDP. In the breakdown by industry below, focus is on total emission of greenhouse gases as well as emission in relation to value added.

In UNCTAD's recommendations about indicators at company level there are both an indicator for the emission of greenhouse gases that happens directly at the company and the emission to which it contributes to when e.g. purchasing electricity.

Emission accounts

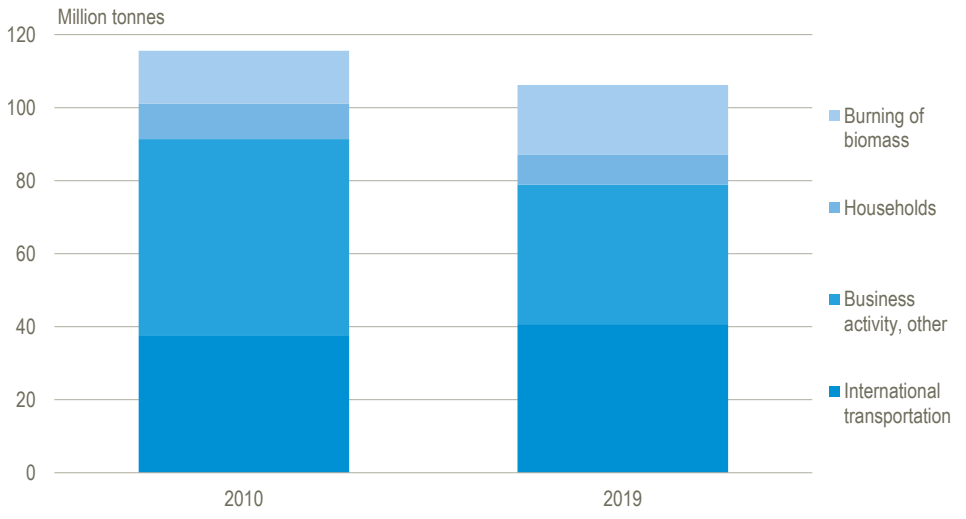
Statistics Denmark compiles the emission of CO_2 and other substances in the *Greenhouse gas accounts*, which is part of the green national accounts. This compilation corresponds to the economic activity contained in the national accounts, which is e.g. also the international transport provided by Danish enterprises.

In the international agreements, the compilations are based on territory and the international transport activities are not included. The following compilations of the emission from the overall Danish activity facilitates comparison of economic results and emission of greenhouse gases.

The emission of greenhouse gases in the form of methane, nitrous oxide etc. is converted to CO_2 equivalents and is included in the figures. The emission from burning of biomass is considered to be CO_2 neutral and is not included in the emission in the international climate agreements.

Figure 4.1

Greenhouse gases emission by source



Source: www.statbank.dk/DRIVHUS.

Note: The figures are stated in CO_2 equivalents. The 2019 figures are preliminary.

General decline in the emission

In 2019, Denmark's total emission of greenhouse gases was approximately 106m tonnes. As shown in figure 4.1, there was a decline from 2010 to 2019. Looking at total emission, there was a decline of 9 per cent. If calculated without including CO2 from the burning of biomass, the decline is 14 per cent. If emission from international transport is also deducted, the reduction was almost 27 per cent since 2010. In the same period, GDP (incl. international transport) grew by 17 per cent in constant prices, which is why there is a clear decline in emission in relation to economic activity.

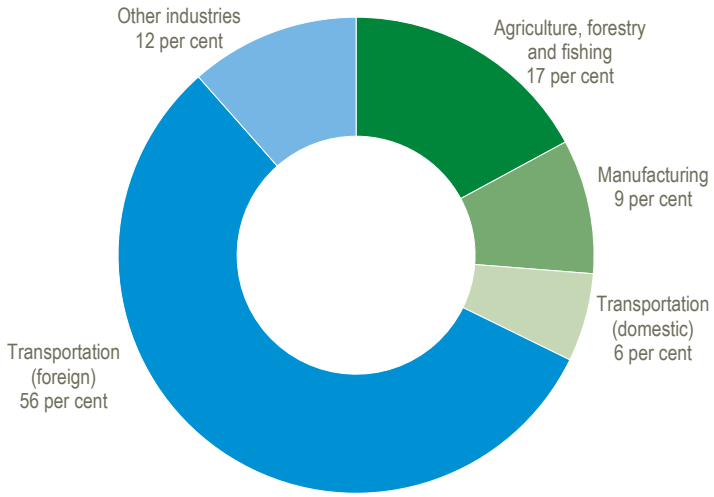
Supplementary statistical compilation

In the primary statistical compilation, the emission of greenhouse gases is included where it takes place, but in a supplementary assessment, the emission associated with the production of electricity and district heating is transferred from the utility industry to the end users, i.e. other industries and households. This assessment is used below. It should be noted that the emission in energy supply has declined significantly in the period, i.e. by more than 70 per cent, when excluding CO2 from the burning of biomass. This decline has great impact on the figures added at the end users.

Major differences between industries

The emission of greenhouse gases varies substantially from one industry to the next. For the non-agricultural sector, it has to do primarily with the economic activity being energy-intensive or not. Figure 4.2 shows a distribution of the approximately 74m tonnes of greenhouse gases (excluding that from the burning of biomass) that the activity caused in 2019 in the fourteen industry groups in question when the emission from production of electricity and district heating is included at the end user. In 2010, the corresponding emission was approximately 78m tonnes.

Figure 4.2 **Greenhouse gases emission by industry. 2019**



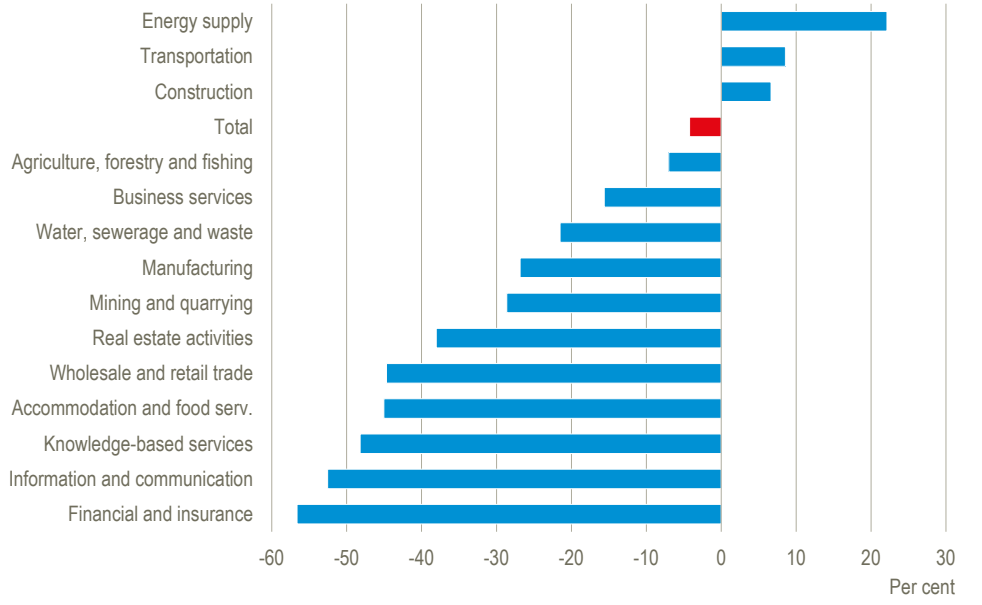
Source: www.statbank.dk/DRIVHUS2.

Note: The figure shows total emission from the fourteen industries, stated in CO2 equivalents. The figures are exclusive of CO2 from the burning of biomass.

Transportation results in high emission of CO2

More than half of the emission from the relevant industries is from international transportation (56 per cent). The domestic part of the industrial transportation is far less dominant, since both *Agriculture, forestry and fishing* (17 per cent) and *Manufacturing* (9 per cent) account for a bigger share than domestic transportation (6 per cent). Among the other industries, the most significant industry groups are *Construction*, *Wholesale and retail trade*, *Mining and quarrying* and *Water, sewerage and waste*. The seven remaining industry groups combined account for less than 3 per cent of the emission. However, if we look only at emission exclusive of international transportation, they account for approximately 6 per cent.

Figure 4.3 **Development in emission of greenhouse gases, 2019 compared with 2010 by industry**



Source: www.statbank.dk/DRIVHUS2.
Note: The figures are stated in CO2 equivalents and are exclusive of CO2 from the burning of biomass.

Reduced emission in most industries

Among the fourteen industry groups combined, the emission of greenhouse gases declined by 4 per cent from 2010 to 2019. The biggest reduction is in industries where the energy consumption is small and to a wide extent purchased from the energy supply, where the emission was significantly reduced. Thus, the positive development can only to a minor extent be ascribed to achievements in the enterprises. In *Manufacturing*, where 30 per cent of the energy consumption consists of electricity and district heating, the emission of greenhouse gases declined 27 per cent, which to some extent is fair to ascribe to decisions in the enterprises. Among the most emission-intensive industries, *Transportation* shows an increase of 9 per cent and *Agriculture, forestry and fishing* a decline of 7 per cent. In the latter industry, emission is primarily linked to the biological processes in the production.

Table 4.1 **Emission of greenhouse gases in relation to value added by industry**

	2010	2013	2016	2019	2019 Index 2010=100
	tonnes per million DKK				
Total	**68.3**	**59.5**	**56.1**	**53.3**	**78**
Agriculture, forestry and fishing	626.9	633.1	728.4	607.0	97
Mining and quarrying	46.0	54.8	63.1	76.3	166
Manufacturing	46.8	36.4	32.5	25.0	54
Energy supply	11.8	11.8	13.5	15.6	133
Water, sewerage and waste	129.7	136.7	113.0	96.9	75
Construction	24.6	17.8	17.2	17.7	72
Wholesale and retail trade	17.7	13.8	10.5	7.9	45
Transportation	464.6	360.8	401.1	421.6	91
Accommodation and food serv.	32.2	23.5	19.8	13.6	42
Information and communication	6.4	4.1	2.9	1.9	30
Financial and insurance	2.6	2.0	1.7	1.2	49
Real estate activities	1.8	1.4	1.2	1.0	55
Knowledge-based services	6.9	4.5	3.5	2.4	35
Business services	11.7	7.7	7.0	6.7	57

Source: www.statbank.dk/DRIVHUS2 and NABP19.
Note: Value added stated in constant 2010 prices.

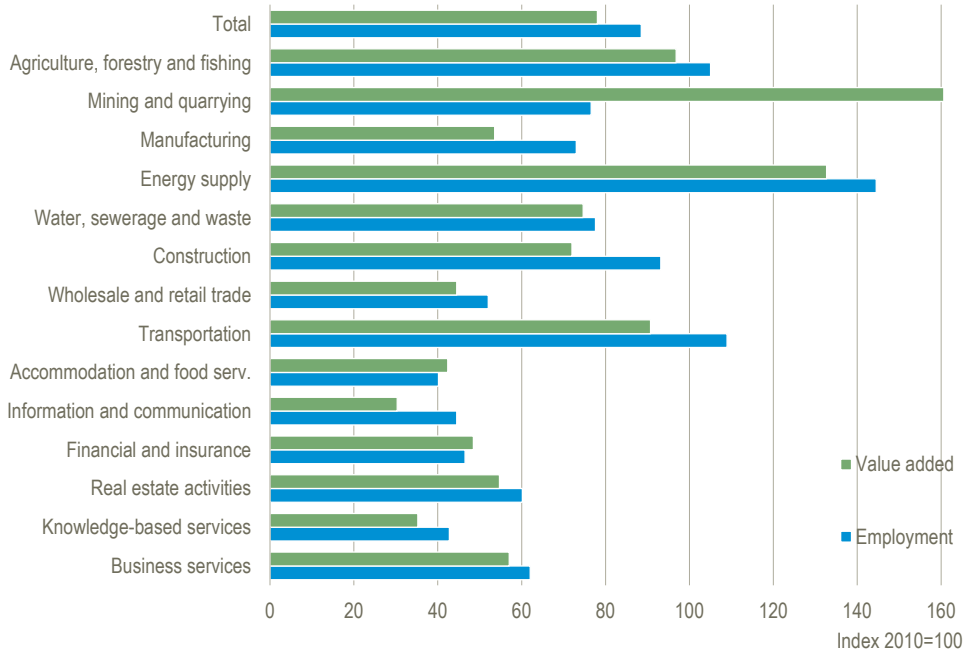
Measured in relation to value added a different picture emerges

Emission of greenhouse gases measured in relation to value added renders quite a different picture between the industries, as shown in table 4.1. Agriculture and transport stand out from the rest as very emission-intensive sectors together with *Water, sewerage and waste* and *Mining and quarrying*. In comparison, the more office-based sectors are at a relatively low level when emission is seen in relation to value added. Among the medium-intensive industries are *Manufacturing*, *Construction* and *Accommodation and food service*.

Figure 4.4 shows whether the development in the emission is connected with the development in the economic activity measured as value added. Here it is worth noting that emission drops significantly in relation to value added in comparison with 2010 for e.g. *Construction* (index 72) and *Transportation* (index 91) – even though the emission increased, as shown in figure 4.3.

Figure 4.4

Development of greenhouse gases in relation to employment and value added respectively, 2019 compared to 2010 by industry



Source: www.statbank.dk/DRIVHUS2, NABP19 and NABB19.
Note: Value added stated in constant 2010 prices.

Value added can vary greatly

The development at industry level may, however, be affected by variations in the value added. This is particularly true of *Mining and quarrying*, where value added from oil production declined strongly over the period, but also *Energy supply* saw a receding value added. *Agriculture, forestry and fishing* often faces considerable variations in earnings between years.

Overall the same tendency regardless of basis of comparison

The emission measured both in relation to value added and to employment shows the same overall tendency in emission measured in relation to the activity, as shown in figure 4.4. Overall, value added has increased more than employment since 2010, which means that the relative decline in emission is bigger in comparison with value added than with employment. However, the picture is reversed when it comes to *Mining and quarrying*, as the value added in the period fell by 57 per cent, whereas employment only fell by 7 per cent. Irrespective of the method of comparison, we must not jump to conclusions, as the activities are very different between and within the industrial groups.

Conclusion: The emission has been reduced, especially measured in relation to value added

Both the total and relative calculations say that the enterprises in the industries overall have reduced the emission of greenhouse gases, especially in comparison with the development in value added. This would also be the conclusion, although to a lesser extent, had we used emission including CO2 from burning of biomass in our calculation. However, we should consider many conditions when assessing enterprises and industry groups by their emission of greenhouse gases.

4.2 Energy consumption

Energy consumption and SDG indicator

The SDGs and related indicators cover energy consumption in target 7.2, which is about increased use of sustainable energy sources, and in target 7.3 about increased energy efficiency. We base the following primarily on indicator 7.3.1, which is about energy intensity, i.e. gross energy consumption in relation to value added. As with emission of greenhouse gases, we use total as well as relative compilations to focus on development in the business sector.

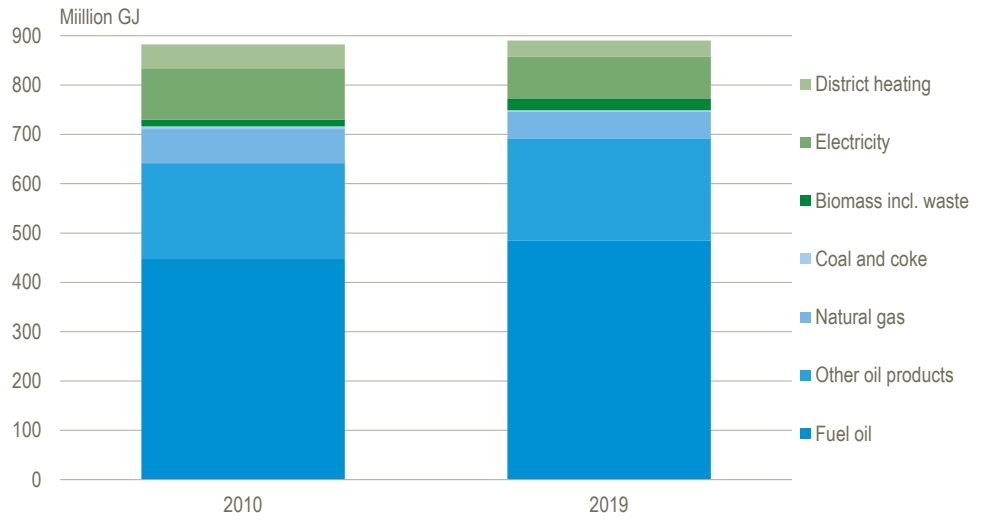
In UNCTAD's recommendations to enterprises, they suggest an indicator corresponding to 7.3.1, and an indicator for the share of energy from sustainable sources. In the following, however, the latter is only briefly examined.

Energy accounts

The business sector's energy consumption is covered statistically by the *energy accounts*, which are compiled as part of the green national accounts. The energy consumption is shown disaggregated on detailed types and industries and both as production and consumption. Overall, the fourteen industries had a gross consumption in 2019 of almost 900m Giga Joule (GJ), which was slightly higher than in 2010. The total Danish energy consumption in 2019 was approximately 1,250m GJ.

Figure 4.5

The business sector's gross energy consumption by type of energy



Source: www.statbank.dk/ENE3H.

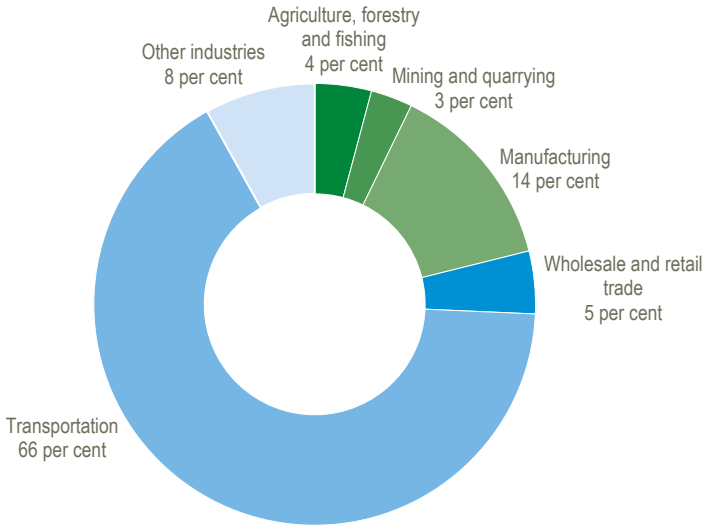
Note: Electricity and district heating are included with the energy content involved in the production, and therefore it is normally higher than the energy content received by the end user. The consumption shown in the figure covers the fourteen concerned industries in total.

Reduction in consumption, if fuel oil is not included

Fuel oil accounts for half of the business sector's energy consumption, and the major part of the fuel oil is used in international water transport services. The consumption excluding fuel oil shows a small decline in energy consumption. The consumption of natural gas declined a little, and the consumption of biomass increased. It is worth mention that the fuel consumption in the production of electricity and district heating has shifted substantially towards increased use of renewable energy sources. This is a prime reason that the gross energy consumption can remain more or less unchanged while the CO2 emission in the same period declines significantly.

Figure 4.6

Gross energy consumption by industry. 2019



Source: www.statbank.dk/ENEH3.

Note: The consumption shown in the figure covers the fourteen industries in total.

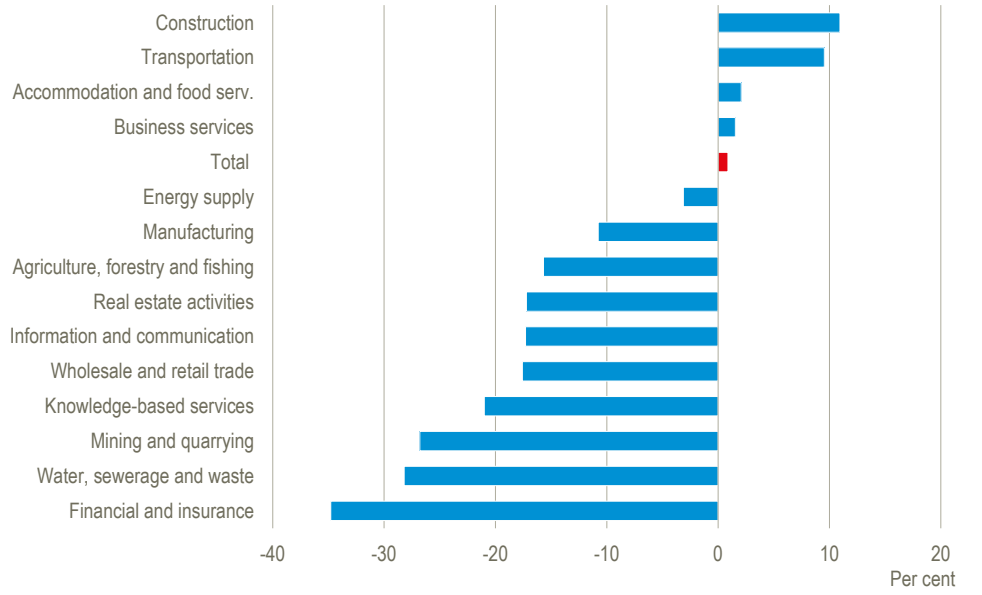
Transportation has the highest energy consumption

The transport sector accounts for almost two thirds of the energy consumption, which is a slightly bigger share than the share of greenhouse gas emission. An important part of the explanation is that other processes in production than energy consumption cause the significant emission of greenhouse gases from *Agriculture, forestry and fishing*. In addition to this, a number of other factors have the effect that you can only partly equate gross energy consumption with emission.

Many industries with low energy consumption

Other industries account for 8 per cent of total energy consumption and consist of nine industry groups in all. *Construction* accounts for 2.8 per cent and *Accommodation and food serv.* for 1.1 per cent, while seven of the fourteen industry groups each account for less than 1 per cent of the energy consumption, though altogether 4.2 per cent. Hence, there is also room for saving energy here.

Figure 4.7 **Development in gross energy consumption, 2019 compared with 2010 by industry**

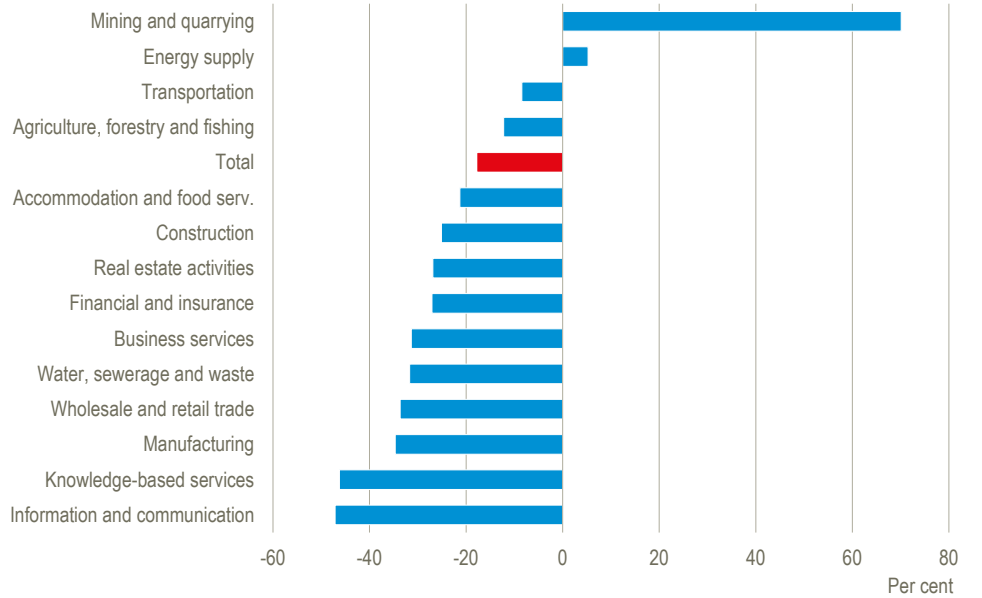


Source: www.statbank.dk/ENEH3.

Declining consumption in most industries

As mentioned, there was a minor increase in the business sector's gross energy consumption of 0.9 per cent from 2010 to 2019. As it appears from figure 4.7, four industry groups increased their energy consumption, and of these, *Construction* increased the most with 11 per cent. On the other hand, ten industry groups reduced their consumption, and of these, *Financial and insurance* reduced theirs the most with 35 per cent. The largest energy consumer, *Transportation*, saw an increase of 10 per cent, whereas the second largest, *Manufacturing*, saw a decline of 11 per cent.

Figure 4.8 **Development in gross energy consumption in relation to value added, 2019 compared with 2010 by industry**



Source: www.statbank.dk/ENE3H and NABP19.
Note: Value added stated in constant 2010 prices.

Also declining energy intensity

If energy consumption is assessed like the SDG indicator in energy intensity, i.e. consumption in relation to value added, the energy intensity was reduced in almost all industries (figure 4.8). Two of the industries show a relative decline in consumption of more than 40 per cent, an additional eight industries more than 20 per cent, while only two industries show an increase. However, the figures overstate the enhanced energy efficiency in the enterprises, since electricity in the period was produced with a steadily declining fuel consumption and increased production from windmills.

The major reduction in value added in *Mining and quarrying* has resulted in a marked increase in energy intensity. *Agriculture, forestry and fishing*, which shows a decline of 12 per cent in 2019 over 2010, would have shown an increase, if measured against the drought year 2018, where the value added was low. Thus, we have reason to pay attention to special circumstances when evaluating the development.

Conclusion: Energy efficiency has improved

The actual gross energy consumption in the fourteen industries is more or less unchanged from 2010 to 2019, whereas the economic activity, measured by value added, has increased by 23 per cent. In this way, a clear relative improvement has happened, which is also reflected in most industries. The gross energy consumption of the business sector except from Transportation (including international transportation) was overall reduced by 13 per cent. This emphasizes both the transportation industry's share of the energy consumption, but also that it makes sense to look at individual industries for identification of progress and issues.

5. Water consumption and waste production

Environmental impact of water consumption and waste management

Enterprises use and discharge water and in most types of production, there is a derived production of waste products, which may for one thing be polluting, for another be possible to manage more or less sustainably. Accordingly, both factors are important to environmental and resource considerations. This chapter offers an overview of the business sector in relation to water and waste products, matters that are also dealt with in the SDGs.

5.1 Water consumption and wastewater

Water and SDG indicators

Sustainable development goal 6 and the related eight targets are all about water: About ensuring adequate supplies of clean water for all and securing future water resources. Indicator 6.4.1 on water use efficiency, measured as water consumption in relation to value added, can be directly linked to the business sector. By contrast, enterprises have limited influence on indicator 6.3.1, which is about the safe treatment of wastewater, since very few enterprises in Denmark discharge water themselves to the surrounding environment. The other indicators are primarily at community level and cannot be meaningfully dealt with for the separate industries.

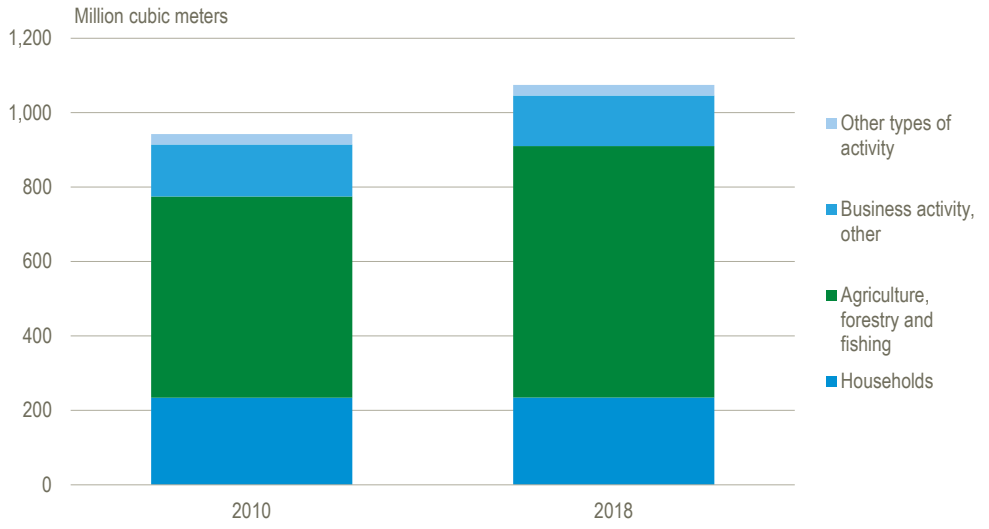
The UNCTAD recommendations include three indicators for water. One of them corresponds to 6.4.1., while further suggesting that the volume of water that the company recycles, i.e. reuses, be reported. Finally, there is an indicator about any impact on local water resources. The two latter are in addition to what the official statistics can contribute at industry level.

Water accounts

Focusing on the use and treatment of water, Statistics Denmark assesses *water abstraction and consumption* as well as *wastewater discharge*. The two assessments are part of the green national accounts and correspond to the economic activity included in the National Accounts. In the following, we focus only on the consumption of water, since there is significant coincidence – also in terms of industry – between the volume of water used and the volume of wastewater and other discharge.

Figure 5.1

Consumption of abstracted water by industry



Source: www.statbank.dk/VANDRG2.

Stable water consumption, except in agriculture

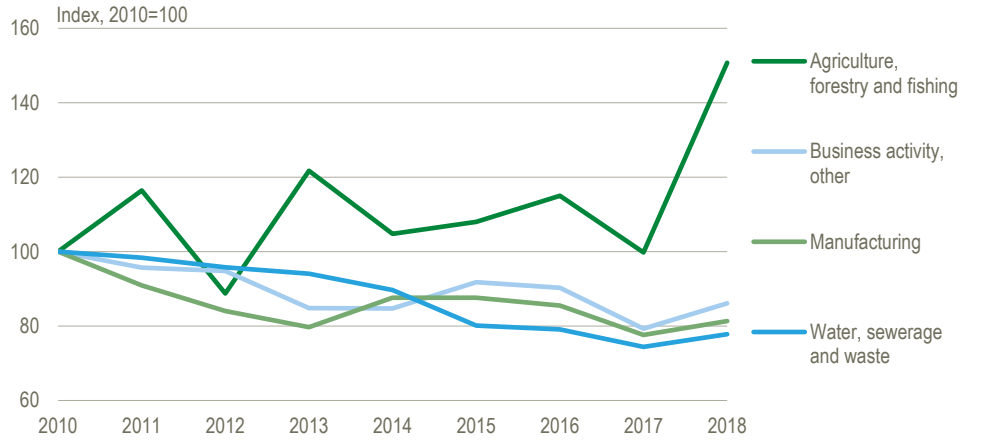
Each year, we use approximately 1 billion cubic metres (m^3) of water through abstraction. Agriculture, forestry and fishing (primarily agriculture and horticulture) account for around 60 per cent, varying with the need for irrigation. In 2018, which can be described as a drought year, the consumption was extraordinarily high, whereas 2010 was closer to the normal consumption. The remaining thirteen industry groups in the publication account for approximately 15 per cent of the consumption. Households account for about a quarter.

Manufacturing is the biggest user in the non-agricultural sector

The thirteen non-agricultural industries use approximately 135 million m^3 of water. Hereof, approximately 35 million m^3 are used in the *Water, sewerage and waste* industry, primarily in the actual water sector. Of the remaining 100 million m^3, approximately 60 per cent are used in manufacturing, especially in the food industry. In addition, *Mining and quarrying* and *Accommodation and food serv.* have a substantial consumption in their production. In a number of other industries, water consumption is mainly linked to staff facilities and all-round cleaning.

Figure 5.2

Development in water consumption in relation to value added by industry



Source: www.statbank.dk/VANDRG2 and NABP19.
Note: Value added stated in constant 2010 prices.

Declining water consumption in relation to value added – in the non-agricultural sector

The general indicator, 6.4.1, consumption of water in relation to value added, varies a great deal across industry groups. There are major fluctuations for *Agriculture, forestry and fishing*, and an extraordinary increase in 2018. The consumption in *Manufacturing* indicates increased water efficiency, as the water consumption was reduced by 20 per cent in relation to value added. The same applies to other parts of the non-agricultural sector, where the reduction was approximately 15 per cent. The decline in *Water, sewerage and waste* can be attributed to less use of water in the actual water supply while the value added remained constant.

For some parts of the non-agricultural sector, it is less meaningful to compare value added and water consumption, as the consumption is mainly linked to the staff. However, it is noteworthy that the water consumption has been constant through a period where employment increased about 10 per cent. There is no answer in the statistics as to the mechanisms used to make the water consumption efficient, whether it is owing to changes in production processes, more recycling, use of rainwater or other initiatives.

Conclusion: Water efficiency has increased, especially in the non-agricultural sector

Based on the figures, we can conclude that most industries use relatively less water than in 2010 – notwithstanding that the water (and wastewater) expenditure in many industries is a very modest expenditure, as shown in the economic part of the water accounts. In the grand scale of things, there is mainly reason to examine the consumption in agriculture, where the conditions of production are special. However, it is beyond the scope of this analysis to go deeply into this.

5.2 Waste

Waste and SDG indicator

Focus on waste in a sustainability context relates to environmental considerations. For one thing, it is relevant to try to reduce pollution caused by waste, for another, it is resource saving to produce less waste or to recycle as part of a circular economy. Goal 12 of the SDGs deals with waste, and indicator 12.5.1 shows the recycling rate, while indicator 12.4.2 is an assessment of highly environmentally hazardous waste. In the following, however, the focus is on the actual volume of waste from the enterprises and the primary sorting, as this is where the individual enterprises can first of all make an impact in their operations.

The recommendations from UNCTAD propose that enterprises report on three indicators. One dealing with the volume (measured in relation to value added), one dealing with the recycling rate of waste, and one dealing with the volume of hazardous waste.

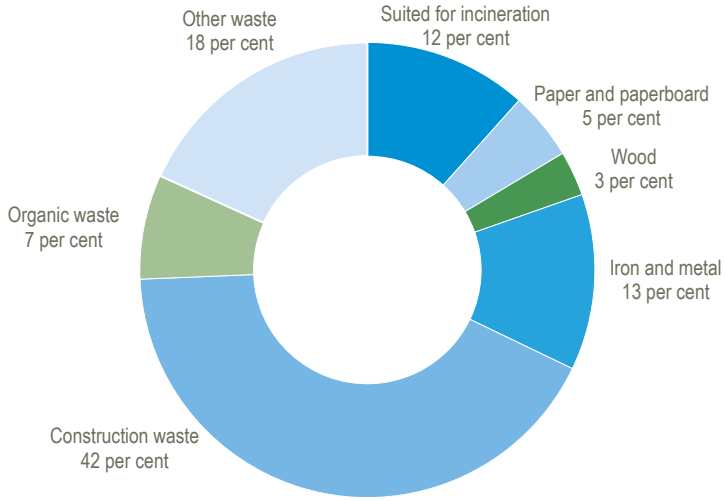
Waste accounts

The production and use of waste is statistically assessed in a combined set of accounts as part of the green national accounts. The main source for the assessment is data collected by the Danish Environmental Protection Agency as the competent authority. The statistics show the distribution on waste fractions and treatment, just as there is a breakdown by hazardousness. Volumes and categories are registered when the waste is collected. The waste accounts are currently available from 2011 to 2017. The most detailed levels of data are associated with some uncertainty.

The production of waste in total

In the most recent year compiled (2017), there was around 20 million tonnes of waste. Hereof, approximately 8 million tonnes was soil moved in connection with construction. Of the remaining volume, approximately 30 per cent was waste generated by households, while 70 per cent was from business sector activities predominantly from the fourteen industries covered in this publication. The following deals only with volumes of waste excluding soil.

Figure 5.3 **Industrial waste by waste fraction. 2017**



Source: www.statbank.dk/AFFALD.

Note: The figures are for the fourteen industries only and exclusive of soil.

Many types of waste

Figure 5.3 shows an overall distribution of the industrial waste from the fourteen industries calculated in volumes. The assessment is based on the categorisation of the waste at the time where enterprises have it picked up or deposits it themselves. This means that *other waste* may contain specific categories that are separated out later in the processes, typically by enterprises specialised in the treatment of waste.

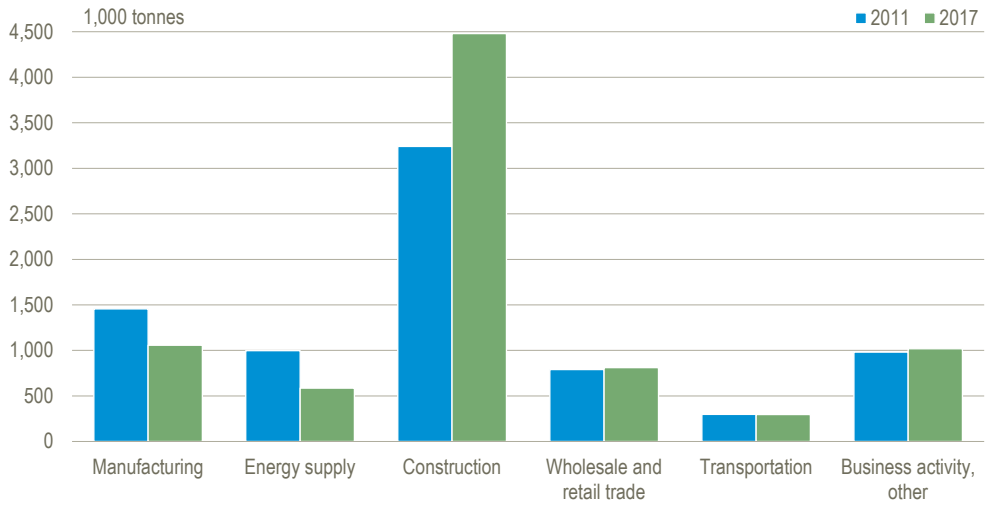
The assessments show that the business sector generated approximately 8 million tonnes of waste in 2017, which was almost 7 per cent more than in 2011. In 2017, the major part of the waste was construction waste, which accounted for 42 per cent, while iron and metal accounted for 13 per cent, and paper and cardboard just under 5 per cent. In the category of waste suited for incineration, there are large volumes of unspecified waste. Plastics, which has great environmental attention, only accounted for 1 per cent as a specific waste fraction, but probably constituted vast volumes in the broad categories.

Major differences between industries

More than half of the industrial waste (excl. soil) was generated by the *Construction* industry, while *Manufacturing* was the second largest with 13 per cent, followed by *Wholesale and retail trade* with 10 per cent. Next is *Energy supply* (7 per cent) and *Transportation* (4 per cent) and *Agriculture, forestry and fishing* (2 per cent). Five industry groups each accounted for less than 0.5 per cent of the total volume. Accordingly, the effect of relative changes is very different from one industry to the next, just as it is important to keep in mind that the effect of initiatives in some industries, e.g. when it comes to packaging, must be measured by the volume of waste at the consumers.

The distribution on the fractions is somewhat different from one industry to the next, but e.g. *Manufacturing* and *Wholesale and retail trade* account for substantial shares, whether it be plastics, iron and metal or paper and paperboard.

Figure 5.4 **Volume of waste by industry**



Source: www.statbank.dk/AFFALD.

Note: The group *Business activity, other* is among the fourteen industries. The figures are exclusive of soil.

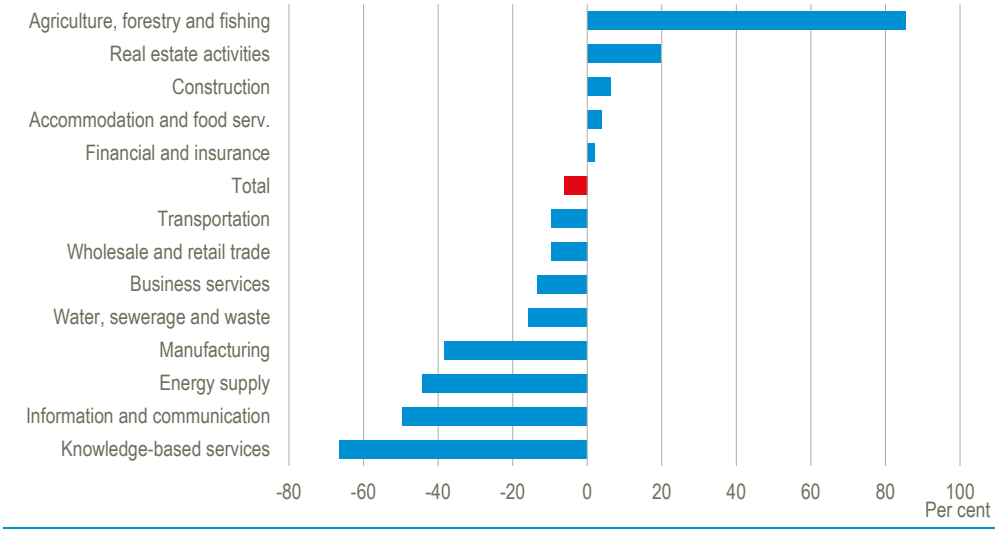
Decline in waste volumes in manufacturing and energy supply

As mentioned, the total volume has increased by almost 7 per cent from 2011 to 2017. The increase is attributable to the *Construction* industry, whereas *Manufacturing* and *Energy supply* reduced their volume of waste by 27 and 41 per cent respectively. The other industries only account for marginal changes.

Reduced waste intensity in most industries

Since 2011, the waste volumes measured in relation to value added have been reduced by 6 per cent, and most industries have seen a decline rather than an increase, as shown in figure 5.5. The big change in some industries must be interpreted with caution, however. E.g., when looking at the increase in *Agriculture, forestry and fishing*, we must bear in mind that manure for biogas plants in the statistics may be counted as waste.

Figure 5.5 **Development in waste volume in relation to value added, 2017 compared to 2010 by industry**



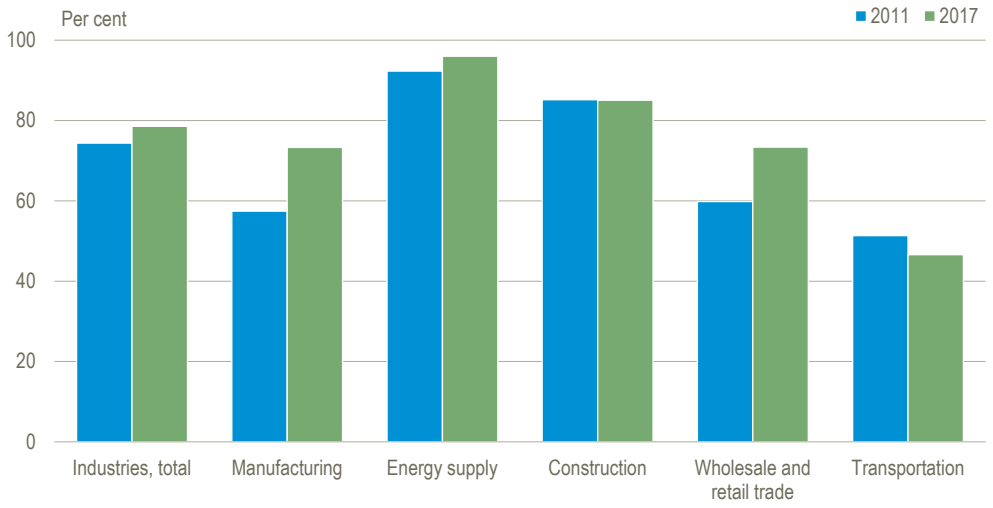
Source: www.statbank.dk/AFFALD and NABP19.

Note: The Mining and quarring industry has been left out from the figure. Value added stated in 2010 prices.

Volume of hazardous waste unchanged

For the industries combined, approximately 6 per cent is categorised as hazardous waste, which has been fairly constant throughout the period. Most of the nearly 500,000 tonnes of hazardous waste are generated in *Construction* (46 per cent), *Manufacturing* (24 per cent) as well as *Wholesale and retail trade* (8 per cent) and *Transportation* (7 per cent).

Figure 5.6 **Recycling of waste by industry**



Source: www.statbank.dk/AFFALD.

Note: Shows only the industries that are most significant in terms of waste. *Industries, total* shows the fourteen industries together.

Increased recycling of industrial waste

According to the waste accounts, by far the majority of the industrial waste in 2017 was recycled for other purposes than incineration. The share of recycling is calculated at almost 79 per cent, which is 4 percentage points higher than in 2011. Especially in *Manufacturing* and *Wholesale and retail trade*, this share has increased, whereas *Transportation* has seen a small decline.

Several reasons for more recycling

The enterprises themselves can influence the development through better sorting and through their choice of materials, while further sorting and recycling are activities in the waste industry. The statistics cannot show to what extent the increased recycling is owing to decisions made by the enterprises themselves and to what extent it can be put down to other operators dealing with waste.

Conclusion: The waste area is developing towards sustainability

Overall, the figures show that the challenge of industrial waste has become comparatively smaller in recent years. The volume of waste has grown less than the production, and the recycling rate has increased. However, there are still large volumes of waste that are collected partly unsorted. The statistical results do not point out where the enterprises can take action to increase sustainability. Increased recycling of waste is high on the political agenda, also when it comes to reducing the emission of greenhouse gases.

6. Safety and health

Safe and healthy workplaces

The extended sustainability agenda created with the SDGs also includes safety and health. From a company perspective, this involves the creation of safe working conditions that minimize the risk of accidents and work-related sickness as much as possible. This chapter focuses on the development in accidents at work and sickness absence.

6.1 Accidents at work

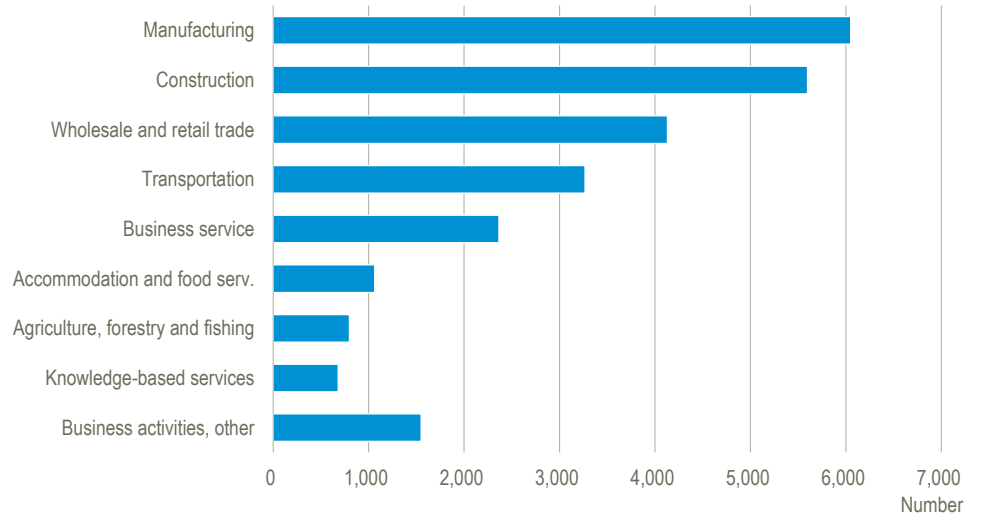
Accidents at work and the SDGs

SDG target 8.8 is about protecting labour rights and promoting safe and secure working environments for all workers. Indicator 8.8.1 assesses the frequency of fatal and non-fatal accidents at work broken down by gender and with migrant status. In the statistics, it is possible to follow the number of accidents at work by industry and by gender. UNCTAD's overview suggests that we calculate the number of working days lost for the company. This aspect can be followed up to a point in statistics of sickness absence.

Statistics of accidents at work

We have used two statistical sources to clarify accidents at work. Both are based on the Danish Working Environment Authority, which – as the competent authority – receives reports of accidents. One source is Statistics Denmark's representation of the table of reported accidents disaggregated by industry and gender, which can be found in Statbank Denmark from 2015 onwards. Accidents at work are included in these statistics if they involve more than one day of absence. The other source is the assessment reported by the Danish Working Environment Authority to the European statistics under the auspices of Eurostat. This exists in a comparable time series from 2008. It includes only accidents at work causing at least three days of absence, and the figures are adjusted for estimated under-reporting of accidents. The Danish Working Environment Authority indicates that the under-reporting could be up to 40 to 50 per cent in some industries.

Figure 6.1 **Reported occupational accidents by industry. 2018**



Source: www.statbank.dk/LIGEHB11.

Note: An accident at work must be reported if it results in a minimum of one day of absence from work.

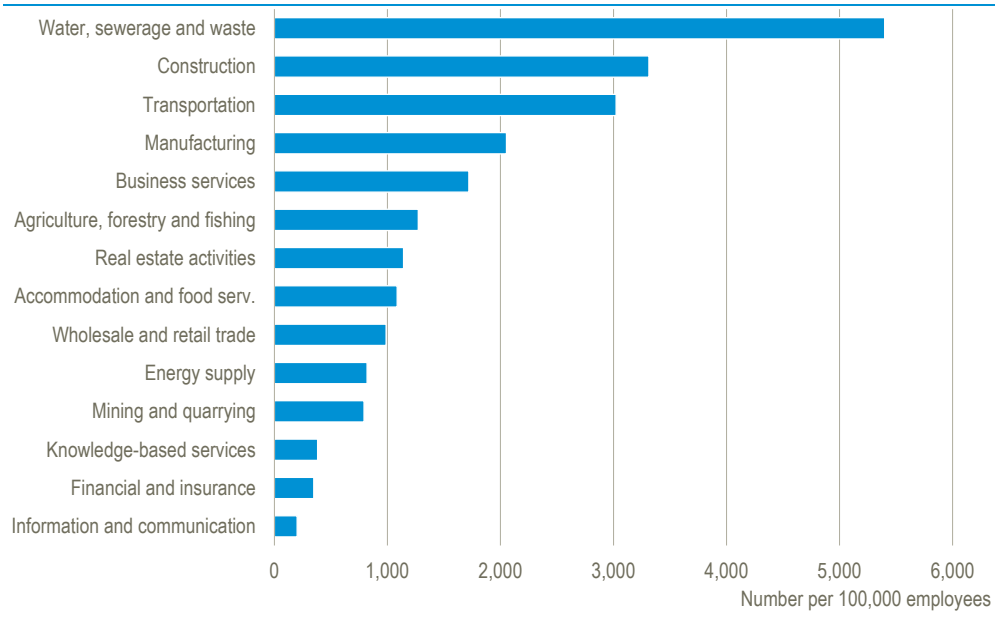
Over 40,000 reports annually

The most recent figures for reported accidents at work are from 2018 and show, as in figure 6.1, that 42,789 occupational accidents on land were reported in Denmark, of which 25,001 involved men and 17,649 involved women. The accidents may involve physical as well as mental harm caused by a brief incident. Looking only at the fourteen industries covered by this publication, there were 25,505 reported accidents at work, distributed on 19,893 men (78 per cent) and 5,490 women (22 per cent). In terms of industries, as shown in figure 6.1, the majority of reports were in *Manufacturing* with 6,051, *Construction* with 5,599 and *Wholesale and retail trade* with 4,131, while the industries with the lowest number of reports were *Mining and quarrying* with 31 and *Energy supply* with 64 accidents in 2018. In recent years, there have been around 30 fatalities a year due to accidents at work.

Highly varying frequency of accidents at work

Figures for accidents at work in relation to employment can be found in Eurostat's database. The most dangerous industry is *Water, sewerage and waste* with 5,400 accidents per 100,000 employees, bearing in mind that there are only around 10,000 employees in the industry. Measured by accident rate, the second-most dangerous industries are *Construction* with 3,300 and *Transportation* with 3,000 accidents per 100,000 employees. In the mentioned industries, there is a high level of physical activity involved in the handling of materials.

Figure 6.2 **Accidents at work in relation to employment by industry. 2017**



Source: Eurostat/eurobase: Non-fatal accidents at work by NACE Rev. 2 activity and sex.

Note: The statistics cover accidents involving at least three days of sickness absence. The figures are adjusted for estimated under-reporting.

Low risk in office workplaces

Among the industries with the lowest risk of accidents are *Information and communication services* with only 200 accidents per 100,000 employees and *Financial and insurance* with 350 accidents per 100,000, according to the definition applied by Eurostat. The small figures probably reflect the fact that jobs in these industries are mainly desk jobs.

Differences between men and women

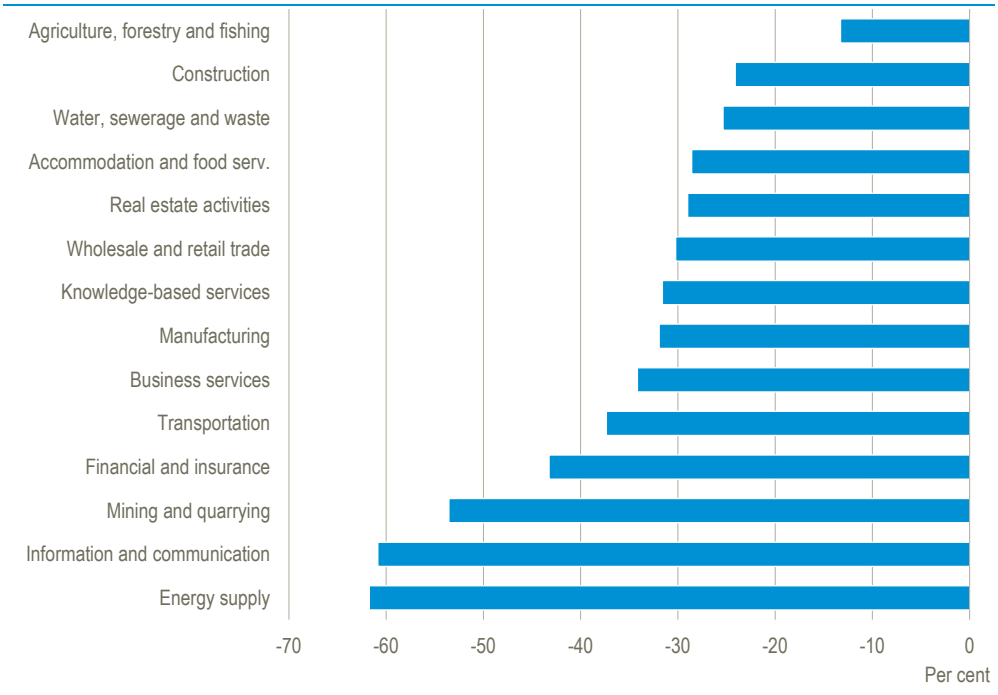
There is a big difference between the accident rates of men and women. In ten of the fourteen industries, there were comparatively more accidents among men than women. In 2017, the biggest relative difference was in *Water, sewerage and waste*, which had 6,100 accidents among 100,000 men against 1,400 among 100,000 women. In *Construction*, the accident rate for men (3,500) was three times as high as for women (1,100) and in *Manufacturing*, the rate was twice as high for men (2,400) as for women (1,100). The large differences are probably due to differences in work functions. For example, the typical garbage collector is a man, whereas women often have administrative functions.

Industries with many accidents among women

In four of the fourteen industries, relatively more women are involved in accidents at work. Comparatively, women are overrepresented in *Financial and insurance*, *Information and communication services* and *Accommodation and food serv*. Comparing the accident rate for women across industries, it is the highest in *Transportation* (2,500), followed by *Agriculture, forestry and fishing* (1,400) and *Accommodation and food serv*. (1,200).

Figure 6.3

Development in accidents at work per 100,000 employees, 2017 compared to 2010 by industry



Source: Eurostat/eurobase: Non-fatal accidents at work by NACE Rev. 2 activity and sex.

Positive tendency since 2010

There is progress when it comes to the rate of accidents at work. The figures in the European statistics show, as in figure 6.3, a clearly declining rate of accidents at work resulting in at least three days of absence. It has declined in all industries, typically around 30 per cent since 2010, but for a few industries, there has been a more than 50 per cent reduction. However, the figures on reported accidents only partly confirm this trend. The difference may e.g. be caused by uncertainty in the adjustment for under-reporting.

Conclusion: The workplaces seem to be getting safer

The figures for accidents at work indicate that things are moving in the right direction, i.e. that the rate of accidents at work has declined since 2010. However, the size of the fall is more uncertain. It is also clear that some industries have a high number of accidents at work, and thus special need for improved working conditions.

6.2 Sickness absence

Sickness absence and the sustainable development goals

Measurement of sickness absence is not directly included as an indicator for achieving the SDGs and is not among the indicators recommended by UNCTAD. However, target 8.8 in the SDGs says *Protect labour rights and promote safe and secure working environments*, which must also be about minimizing sickness absence in the interest of employees as well as employers. Keeping count of sickness absence is recommended as an indicator in the report *ESG key figures in the annual report* prepared by the CFA Society Denmark, the Institute of Public Accountants in Denmark (FSR) and Nasdaq Copenhagen. It must be stressed that sickness absence is not influenced only by the conditions in the workplaces.

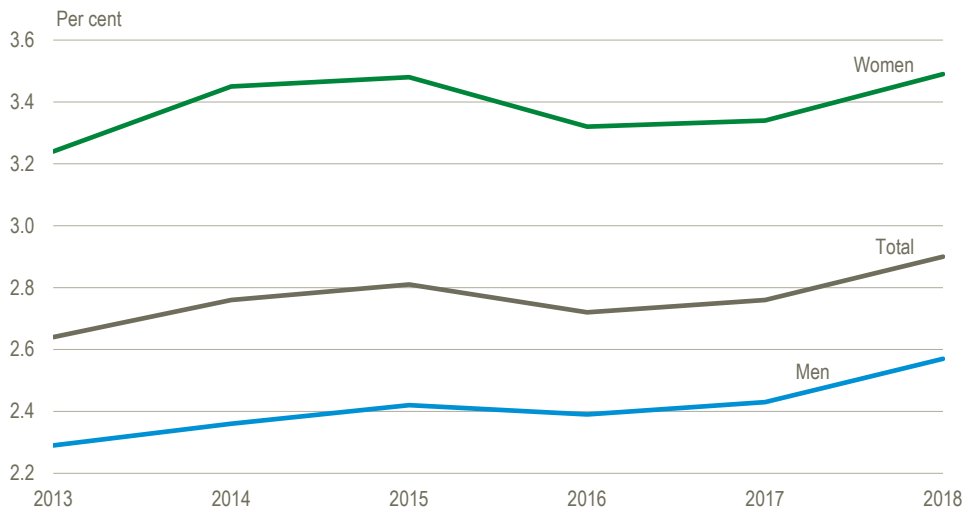
Sickness absence statistics

Statistics Denmark compiles a comprehensive set of absence statistics. The absence statistics include public as well as private workplaces. For the private sector, the findings are based on a sample of 2,600 enterprises (out of approximately 23,000) with more than ten employees, and in the following, we only consider the findings from this sector. We only look into absence caused by own sickness. The statistics exist in comparable form from 2013.

Absence due to own sickness

In 2018, employees in the private sector workplaces (incl. organisations) had an absence rate of 2.9 per cent, corresponding to just under seven annual days of absence. As it appears from figure 6.4, the absence was higher than in 2013, as the yearly sickness absence per employee had increased by approximately the equivalent of half a day. The increase (though with a decline from 2015 to 2016) happened in a period with increasing employment.

Figure 6.4 **Absence in business workplaces, own sickness by gender**



Source: www.statbank.dk/FRA022.

Difference in absence when breaking down by gender

There is a clear difference in sickness absence between the two sexes, as sickness absence for women is nearly one percentage point higher than that of the men. From 2013 to 2018, sickness absence has been increasing among men as well as women. However, it should be noted that the relative increase for women was just 8 per cent against 12 per cent for men.

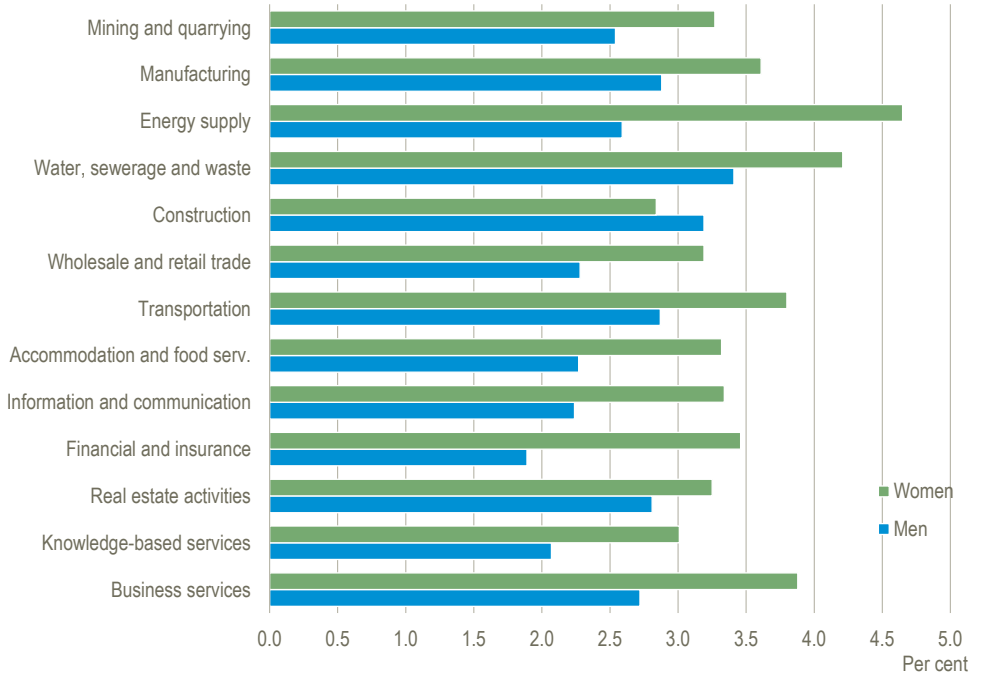
Industrial comparison must take gender into consideration

The structural differences between the sickness absence of women and men means that it is more meaningful to examine the development disaggregated by gender when diving into the individual industries – since the gender composition varies.

Big differences between industries for men

There are major variations between industries in the sickness absence rate for men. In 2018, sickness absence was the highest in *Water, sewerage and waste* with 3.4 per cent and *Construction* with 3.2 per cent, and the lowest for *Financial and insurance* (1.9 per cent) and *Knowledge-based services* (2.1 per cent). To some extent, the industries at the top and bottom of the sickness absence spectre correspond to some extent to the findings for accidents at work; notwithstanding the fact that sickness absence due to accidents at work is not included in the applied figures.

Figure 6.5 **Absence, own sickness by gender and industry. 2018**



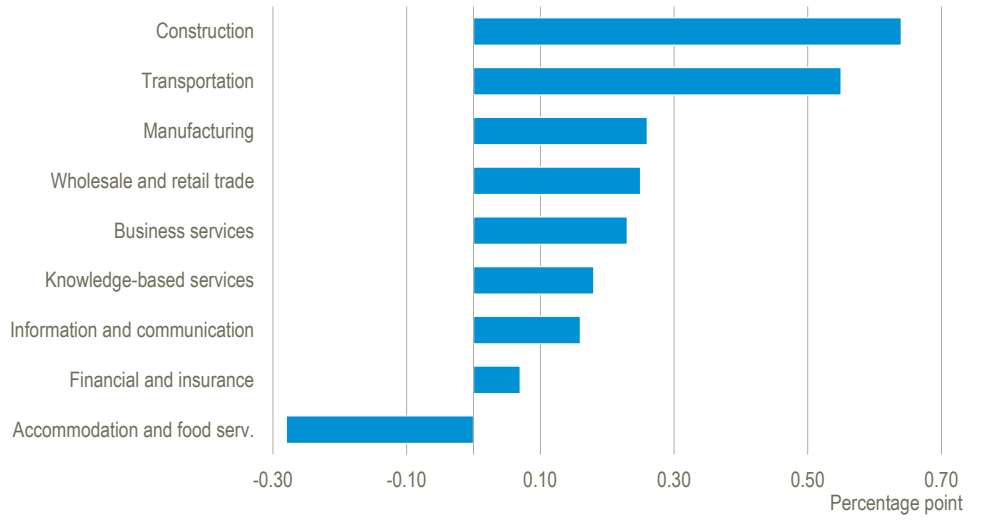
Source: www.statbank.dk/FRA022.

Note: There are no valid results in Statbank Denmark for *Agriculture, forestry and fishing*.

Sickness absence of women the lowest in construction

The absence rates for women are slightly more homogeneous between the industries than those for men, and the lowest rate is in *Construction* (2.8 per cent) and *Knowledge-based services* (3.0 per cent). The highest absence rates in 2018 were in *Water, sewerage and waste* (4.2 per cent) and *Energy supply* (4.6 per cent). However, the latter is somewhat higher than previous years and could just be a coincidence, since there are relatively few women employed in the industry.

Figure 6.6 **Development in men's absence, own sickness, 2018 compared with 2013 by industry**

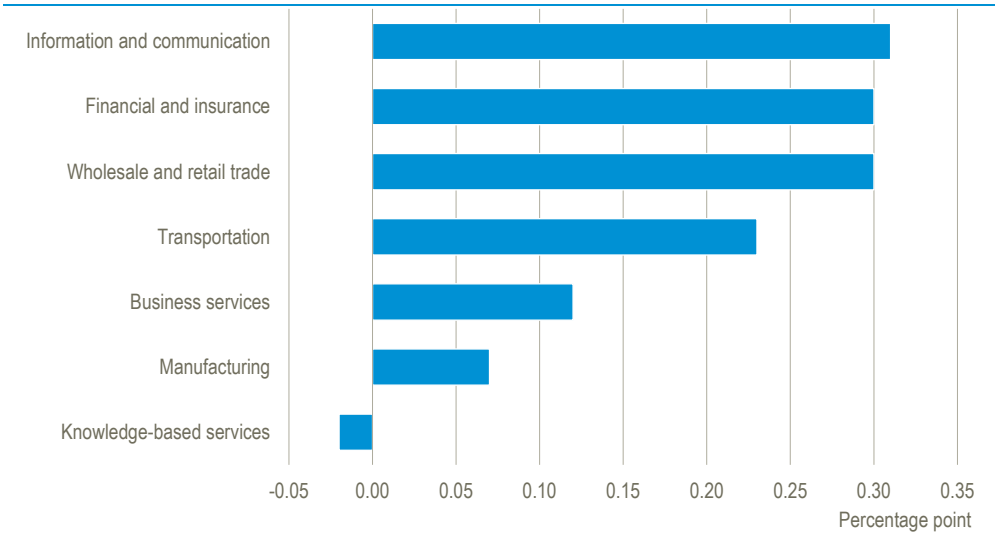


Source: www.statbank.dk/FRA022.
Note: Only industries with at least 20,000 men are shown in the figure.

Men: Biggest increase in sickness absence in Construction

The sickness absence of men has generally increased since 2013, as you can see in figure 6.6 showing a selection of industries. Especially in *Construction* and *Transportation*, where the increase is at approximately 0.6 percentage points, which in relative terms are increases of 25 and 24 per cent respectively. *Accommodation and food serv.* saw a decline in men's sickness absence of 0.3 percentage points. Accordingly, the development is quite different at industry level.

Figure 6.7 **Development in women's absence, own sickness, 2018 compared with 2013 by industry**



Source: www.statbank.dk/FRA022.
Note: Only industries with at least 20,000 women are shown in the figure.

Women: Small decline in absence in knowledge-based services

The tendency among men to generally increasing sickness absence also applies to female employees, although the increase is generally smaller. Among women, the biggest increase is in *Information and communication services* at 0.3 percentage points corresponding to a relative increase of 10 per cent. In *Knowledge-based services*, there is a small decline in sickness absence among women.

Conclusion: Sickness absence has a negative trend

In terms of the sustainable development goals, the trend in sickness absence is not favourable. Since 2013, sickness absence for both men and women has been increasing among business sector employees, while it has only increased

marginally, although at a significantly higher level, in the public sector. On the face of it, the figures do not suggest that the working conditions in the private sector have developed towards safer and more secure working environments, as aimed for in target 8.8.

7. Gender equality and equal pay

Focus on gender equality

For many years, gender equality has been in focus in Denmark and in the EU, supported by e.g. legislation in the area, and it is also an objective in the SDGs. It is generally phrased as a goal of diversity in the labour market, so that it is inclusive and accommodates everyone irrespective of gender, origin and other characteristics. In addition, it is a specific goal to increase the number of women in management. There are also goals to reduce economic inequality, which also involve the business sector. Below, we focus on the composition and pay conditions in the fourteen industries.

7.1 Equal participation in the labour market

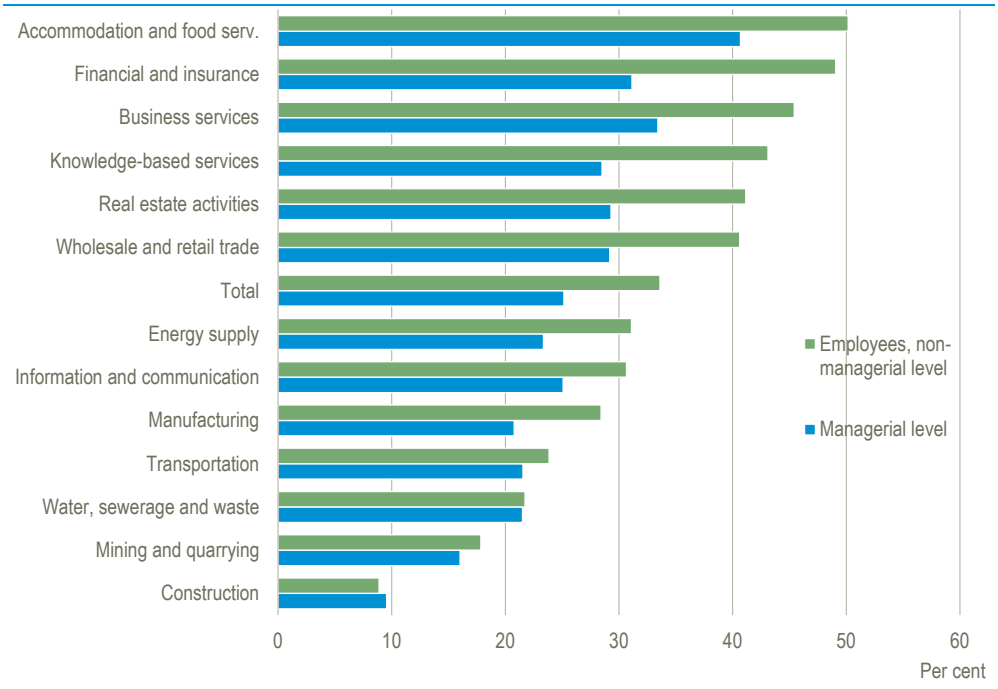
Composition of employees and the SDGs

Target 8.5 in the SDGs is about achieving full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value. Accordingly, there should be no barriers for persons of any status to become part of the labour market. UNCTAD proposes indicators that show the gender equality in top management, corresponding most directly to SDG indicator 5.5 on more women in management. In the following, we throw light on the gender composition in all its aspects.

Employee composition statistics

From the many sets of employment statistics, we have chosen the gender-disaggregated earnings statistics, where members of staff are also disaggregated as employees with and without managerial responsibilities, as it already uses the applied industrial grouping, even though other sets of statistics could yield more details. The results for the private sector only covers enterprises with at least ten employees and does not include *Agriculture, forestry and fishing*. The figures are available in comparable form from 2013. As for the composition of executive boards and boards of directors, this is covered by a separate set of statistics with figures from 2014 onwards.

Figure 7.1 **Share of women with and without managerial responsibility by industry. 2019**



Source: www.statbank.dk/LONS40.

Note: The industries are sorted according to their share of female employees without managerial responsibility.

No industries with a majority of women

There is a clear majority of men in almost all industries in the private sector when analysing the composition of payroll staff, as shown in figure 7.1. The share of women without managerial responsibility is the lowest in *Construction* with less than 10 per cent and *Mining and quarrying* with 18 per cent. An even gender distribution can be found among employees in *Accommodation and food serv.* and in *Financial and insurance*. *Business services*, *Knowledge-based services*, *Real estate activities* as well as *Wholesale and retail trade* all have a share of just over 40 per cent of women among employees without managerial responsibility. In total, the share of women in the shown industries is a third, whereas women account for more than two thirds in the public sector.

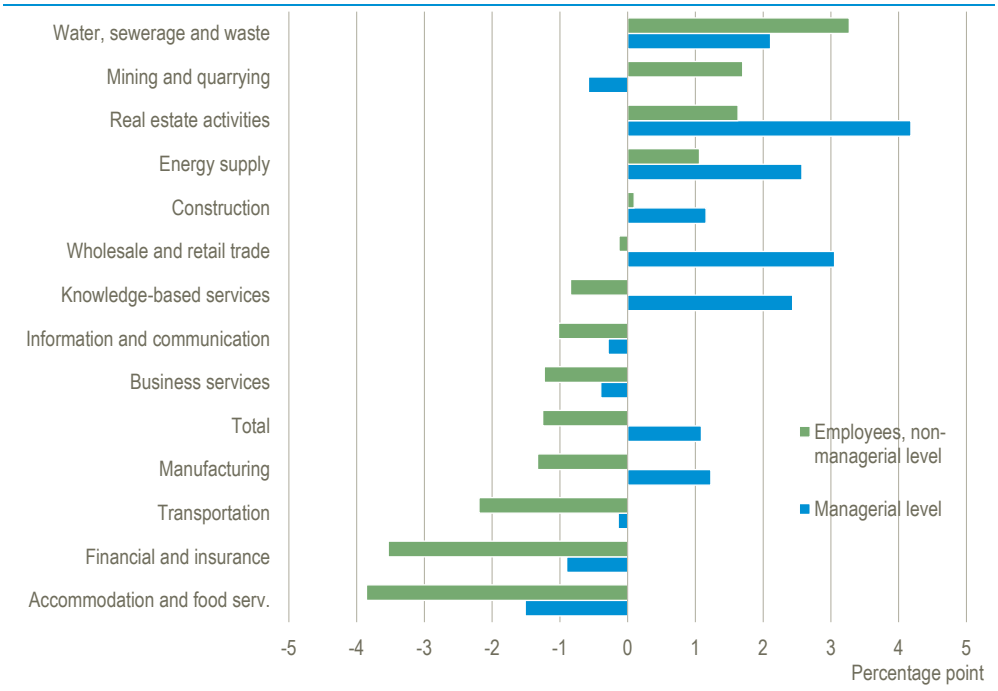
Bigger imbalance in positions with managerial responsibility

The gender distribution among managers is even more lop-sided, as only one in four are women, totally, and in twelve of the thirteen industries, there is a smaller share of women in management than among the employees in general. The only exception is *Construction*, where the share of female managers is marginally higher than the share of women among the remaining employees.

Fewer women since 2013

Since 2013, the private sector employs relatively fewer women, as the share of female employees without managerial responsibility has declined by 1.3 percentage points. The biggest decline happened in *Accommodation and food serv.*, where 50 per cent were women in 2019 against 54 per cent in 2013, which, however, reflects an improvement in gender equality since 2013. There is also a visible decline in the share of women in e.g. *Financial and insurance* as well as *Transportation*.

Figure 7.2 **Development in share of women with and without managerial responsibility, 2019 compared with 2013 by industry**



Source: www.statbank.dk/LONS40.

Note: The industries are sorted according to their share of female employees without managerial responsibility.

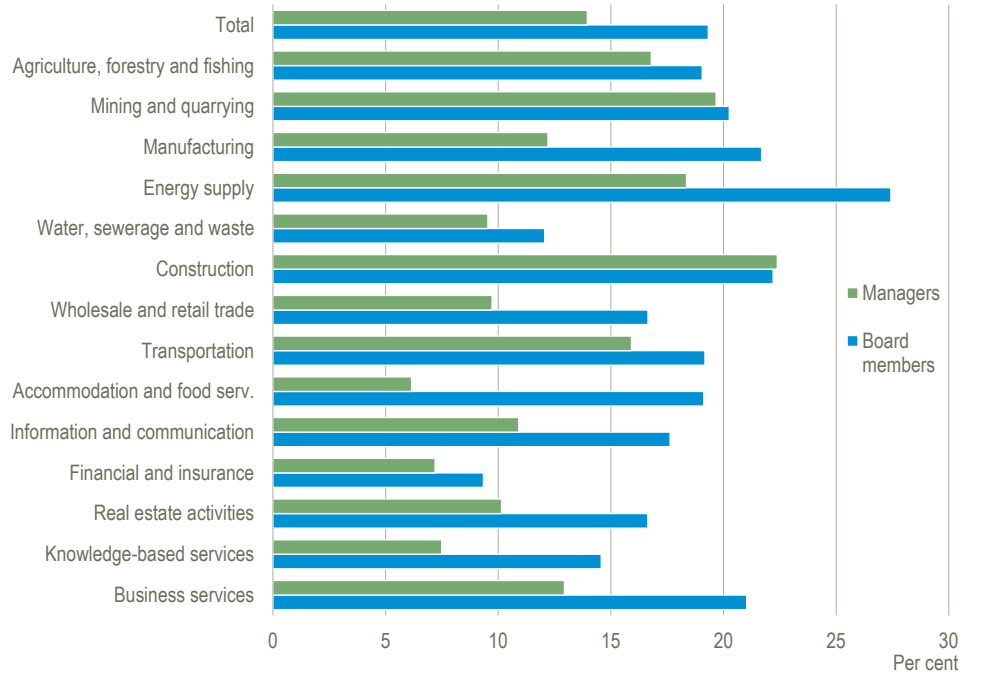
More female managers

The opposite is the case for women with managerial responsibility, where the share of women increased from 24 to 25 per cent from 2013 to 2019. Increasing shares can mainly be attributed to *Real estate activities*, *Wholesale and retail trade*, *Energy supply* as well as *Water, sewerage and waste*, whereas *Accommodation and food serv.* and *Financial and insurance* show a decline in the share of female managers. In the latter industries, the share of female employees in general has also declined.

Low representation of women in top management

A relatively new set of statistics compiles the number of men and women in executive boards and boards of directors in enterprises that are either public limited enterprises, private limited enterprises or entrepreneurial limited enterprises. As shown in figure 7.3, women constitute an average of 19 per cent of members of boards of directors, while the women's share of members of executive boards is 14 per cent. No industries have over 30 per cent female members in boards of directors, and the highest share of women in executive boards is 22 per cent.

Figure 7.3 **Share of women in boards of directors and executive boards by industry, 2018**



Source: www.statbank.dk/BEST4.

Disproportionate with the composition of employees

As mentioned, there is a considerable difference in the composition of employees, broken down by industries (figure 7.1). This difference is hardly reflected in the composition of boards of directors and executive boards. *Construction*, with less than 10 per cent women among the employees, is above average in terms of women in boards of directors and executive boards, whereas *Accommodation and food serv.*, with overall gender parity, has the lowest share of women in executive boards, while the share in boards of directors is close to average.

Lower share in executive boards of large enterprises

Especially enterprises with more than 50 employees have few women on the executive board, while enterprises with less than 10 employees have the relatively highest number of women on their executive boards. As for the boards of directors, the differences between the company size groups is less conspicuous, though it can be noted that the lowest share is in enterprises with 10 to 250 employees. The differences may be because some, especially small, enterprises are family-owned.

Conclusion: No clear development towards gender parity

Women are generally under-represented in the business sector both among employees without managerial responsibility and among managers. This is particularly the case in *Construction*. Since 2013, there has been a small increase in the share of women with managerial responsibility, whereas their share among employees in general has declined. The business sector has a poor representation of women in executive boards and boards of directors.

7.2 Equal pay

Equal pay is specifically mentioned in the SDGs

Equal pay for work of equal value is most specifically addressed in the same target as labour market equality in general (8.5). Moreover, equality is the headline of SDG 5. SDG 10 is about reducing inequality and is most specifically mentioned in target 10.1 on reducing income inequality. It is part of UNCTAD's proposal for indicators that enterprises should report on pay broken down by function and gender.

Statistics on the structure of earnings

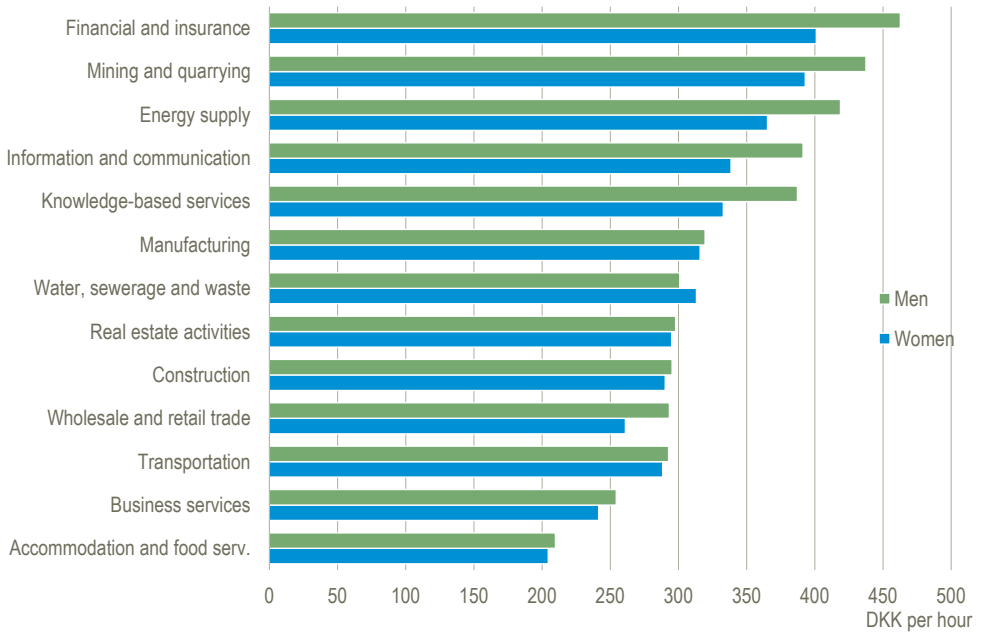
The statistics on equal pay broken down by industries use the same source as for clarification of the employee composition. The statistics show the average hourly earnings by overall category and broken down by gender. It must be stressed that the statistics show the structure of earnings and that the figures cannot be used directly to determine whether we have equal pay for work of equal value, but they can give us a picture of differences between industries and development over time.

Close to pay parity among employees without managerial responsibility

There is a high degree of equality in the hourly earnings for men and women for employees without managerial responsibility. For example, in industries with many employees, such as *Manufacturing*, *Construction* and *Transportation*, the remuneration is nearly the same, irrespective of gender, whereas e.g. *Wholesale and retail trade* stands out with 12 per cent lower pay for women. Only in *Water, sewerage and waste* do women earn more.

Figure 7.4

Hourly earnings, employees without managerial responsibility by industry and gender. 2019



Source: www.statbank.dk/LONS40.

Note: The data is sorted according to the hourly earnings for men.

High earnings and major difference in some industries

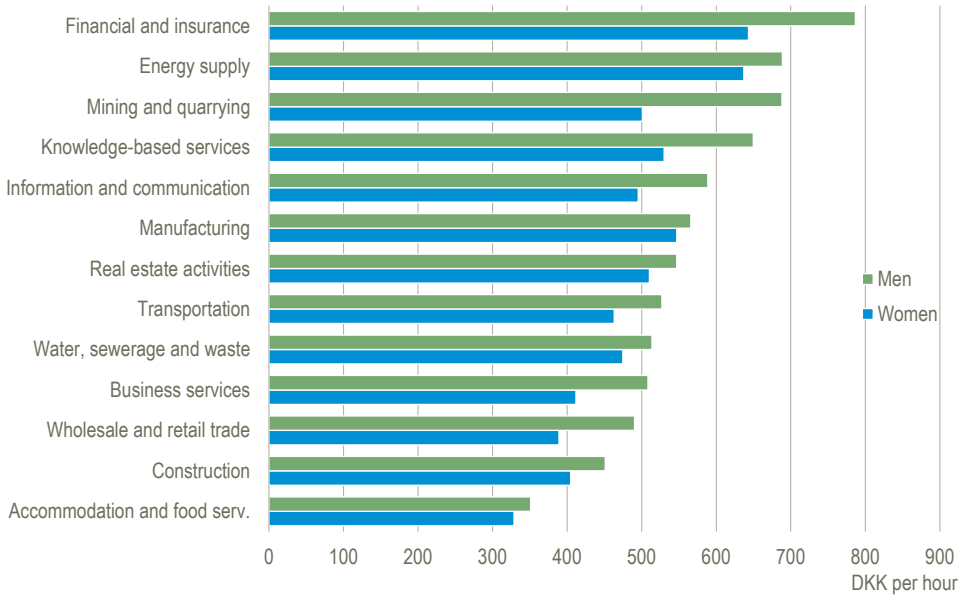
Earnings are relatively high in some industries, e.g. *Financial and insurance*, *Mining and quarrying* and *Energy supply*, probably due to the nature of the work and the high educational attainment of the employees. In these industries, the hourly earnings in 2019 were approximately twice of the earnings in *Accommodation and food serv.*. The situation was roughly the same in 2013. From a gender perspective, it is worth noticing that the high-paying industries also had the biggest difference in hourly earnings between men and women, in absolute as well as relative terms.

Higher gender inequality among employees with managerial responsibility

The remuneration of managers broken down by industries (figure 7.5) generally shows a bigger difference between men and women than for other employees. In all the industries, earnings of female managers is lower than that of male managers. The statistics cannot explain whether this could be owing to seniority or individual negotiations of pay. Once again, it is characteristic that the gender pay gap seems to be increasing with the pay level in the industry in general.

Figure 7.5

Hourly earnings, managers by industry and gender 2019



Source: www.statbank.dk/LONS40..

Note: The data is sorted according to the hourly earnings for men.

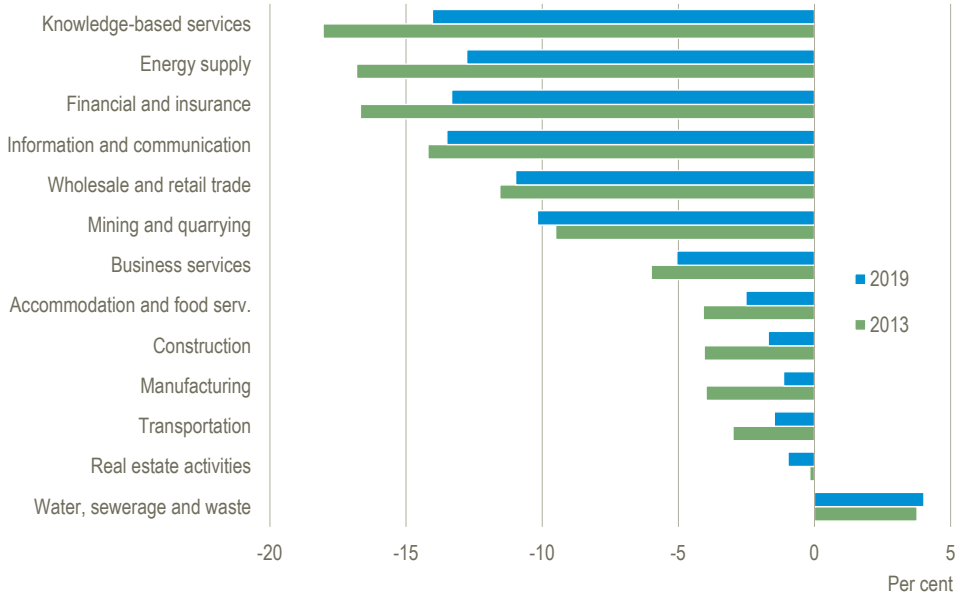
Uniform structures of earnings in the industries

The hourly earnings for employees with and without managerial responsibility respectively (figures 7.4 and 7.5) show more or less the same ranking of the industries. The difference in remuneration level between managers and everyone else in the industries is also roughly the same. Basically, only *Construction* stands out with relatively high hourly earnings for employees without managerial responsibility, whereas the hourly earnings for managers is at the low end of the scale.

Gender pay gaps reduced since 2013

From 2013 to 2018, the pay gaps in the private sector have narrowed. The pay gap among employees without managerial responsibility has narrowed in the vast majority of industries. In five industries, there are still major pay gaps of more than 10 per cent. In *Mining and quarrying*, the pay gap has widened a little, which may be due to statistical uncertainty, however, as this is a small industry in terms of employment.

Figure 7.6 **Hourly earnings of women compared with men's, employees without managerial responsibility by industry and gender**



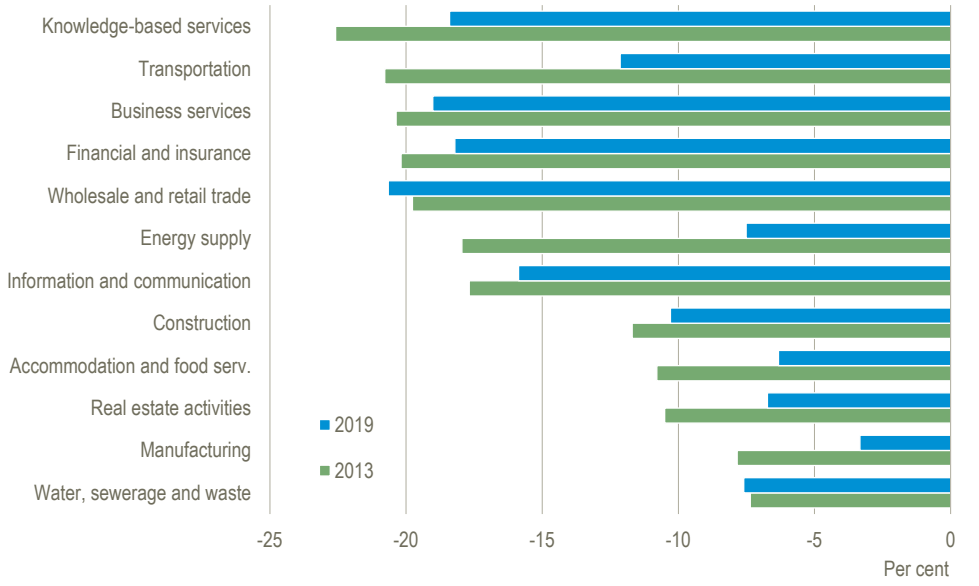
Source: www.statbank.dk/LONS40.

Note: The data is sorted according to women's pay lag 2013. The figures reflect by how many per cent women's hourly earnings lagged behind those of men.

Also among managers, the pay gap was reduced

Also among employees with managerial responsibility, there is a trend towards a smaller pay gap across industries, as it appears from figure 7.7. Only in *Wholesale and retail trade* and *Water, sewerage and waste,* the gap has widened. However, in seven out of the twelve industries, the remuneration of the female managers in 2018 is still lagging more than 10 per cent behind that of the men.

Figure 7.7 **Hourly earnings of women compared with men's, managers by industry and gender**



Source: www.statbank.dk/LONS40.

Note: The data is sorted according to women's pay lag 2013. The figures reflect by how many per cent women's hourly earnings lagged behind those of men. There were no valid figures for *Mining and quarrying* in 2013.

Conclusion: Trend towards smaller gender pay gap

For the industries in general, the statistics show that the gender pay gap has been reduced since 2013. With the reservation that the statistics show the structure of earnings and cannot be used directly to determine whether we have equal pay for work of equal value. However, there are still considerable differences, especially for women with managerial responsibility, which may in part be justified by less seniority. The data does not show clear tendencies towards greater equality in earnings between industries or between groups of employees.

DANMARKS STATISTIK

Danmarks Statistik
Sejrøgade 11
2100 København Ø

Tlf. 39 17 39 17
www.dst.dk
dst@dst.dk