



MINISTRY OF FINANCE

# Economic Survey August 2021

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# 2021

Economic Survey, August 2021

Ministry of Finance  
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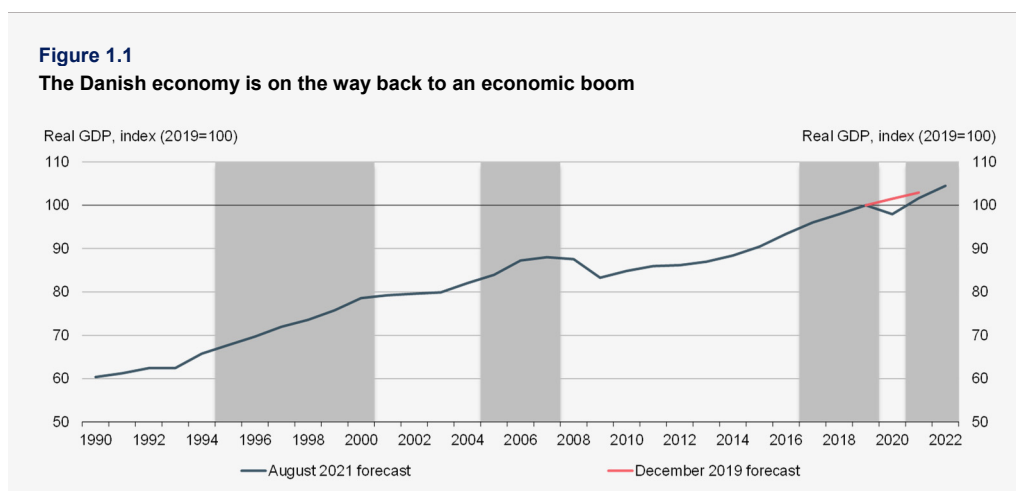
# 1. Summary

## 1.1 The current economic outlook

The Danish economy is currently growing at a brisk pace following the reopening of society after the winter wave of infection. The rapid gains entails that activity and employment now exceed the level before the outbreak of the corona pandemic. Activity has thus returned faster than expected, and given the downturn in the spring of 2020, the economy has recovered extremely quickly. The economic improvement is supported by the vaccine rollout and continued control of the epidemic, as well as the significant economic policy support over the past year and a half, in Denmark and abroad.

Given the marked progress, the Danish economy is on the way back to an economic boom, even though some industries remain affected by the corona pandemic. Currently, many companies are reporting labour shortages. This is partly due to an extraordinarily high recruitment need with the reopening of the economy. At the same time, there is still a significant number of persons employed in corona-related jobs in both the private and public sectors. This employment is a labour reserve, which will become available as more persons are vaccinated resulting in a lower need for tests etc.

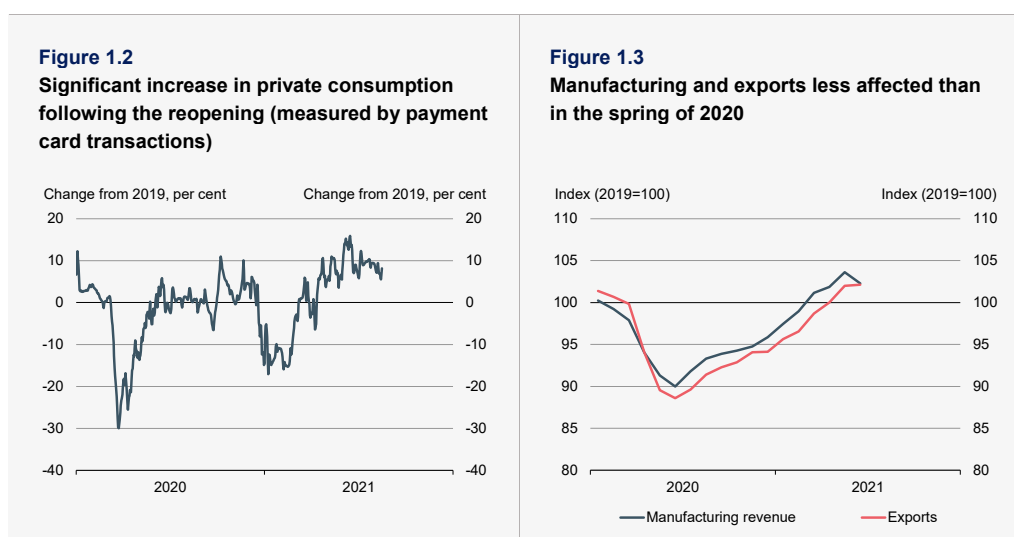
Conditions are in place for a continued upswing. Businesses and consumers currently have the opportunity to catch up on deferred investment and consumption needs, and an expansion of the workforce will support growth in the coming years. Against this background, the Danish economy is set to grow by 3.8 per cent this year and 2.8 pct. next year. Employment is expected to increase by 75.000 persons from 2020 to 2022. As a result, the Danish economy will be back at the trend, which was projected prior to the pandemic, *cf. figure 1.1*.



Note: The shaded areas depict periods of economic booms (defined by a positive and increasing output gap).  
Source: Statistics Denmark and own calculations.

## The Danish economy is on the way back to an economic boom

The Danish economy grew by 2.2 per cent in the second quarter of 2021 according to the GDP-indicator from Statistics Denmark. The growth in economic activity reflects a large increase in private consumption following the reopening, in part due to deferred consumption and significant savings during the pandemic. Moreover, the opportunity to receive the remaining two weeks of frozen holiday pay has increased the spending power of households. During the most recent months the level of payment card transactions has been about 10 per cent above the pre-corona level, *cf. figure 1.2*.



Note: Figure 1.2 shows the level of payment card and MobilePay transactions in both Danish and foreign shops made by approx. 1 million Danske Bank customers with active account, in comparison with the same date in 2019. Cash payments and transfers between accounts are excluded, and the data have not been adjusted for changes in prices. Figure 1.3 depicts a three-month moving average. Exports are calculated as the current receipts in the balance of payments from goods and services and have been seasonally adjusted.

Source: Danske Bank Spending Monitor, Statistics Denmark and own calculations.

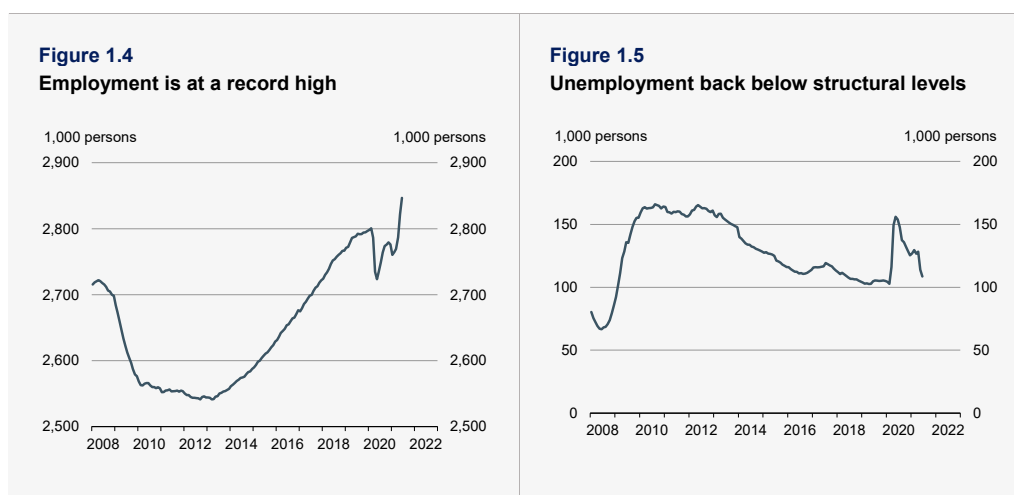
Furthermore, there has been a positive trend in exports for some time. Among other things, this is because the corona pandemic has resulted in a worldwide shift in demand towards goods, while consumption of services has been affected by the risk of infection and restrictions. This has benefited the manufacturing and export industries. Manufacturing sales and exports were not affected to the same extent during the winter 2020-2021 wave of contagion as in the spring of 2020, *cf. figure 1.3*.

Overall, the increase in activity in the second quarter means that GDP now exceeds the level prior to the corona pandemic. The Danish economy is thus on its way back towards an economic boom. The setback has been profound, but only short-lived compared to previous crises. This is because the setback was not due to underlying economic problems. Instead, the downturn was caused by the corona pandemic and the ensuing restrictions on demand and production to bring the infection under control, and to prevent against worse consequences for the economy, which would have materialised if the infection had gotten out of control. A rapid vaccine rollout as well as an expansionary fiscal policy and government aid packages, which limited the damaging effects of the downturn on the economy, have enabled rapid economic normalisation.

Past crises have often required a longer recovery period due to large imbalances and because pessimism and precaution have contributed to prolonging the crises. The financial crisis and the subsequent euro-area debt crisis, for example, led to eight years of activity below potential.

Thus, Denmark has emerged relatively well from the crisis. The drop in activity was lower and shorter than feared in the spring of 2020. Compared to other countries, the Danish economy has weathered the corona crisis well. The 2.1 per cent drop in GDP last year was one of the smallest among the OECD-countries, and by comparison GDP fell in the euro area by 6.4 per cent in 2020.

The current strong growth in the Danish economy has led to a significant upturn in the labour market. Employment has been rising since February, and salaried employment reached its highest level ever in May, rising further in June, *cf. figure 1.4*. Unemployment has fallen by 21,000 persons since February, and the decline in May was the largest drop on record for a single month. The register-based unemployment rate in June was just 6,000 persons above the level before the corona pandemic - and thus also approximately at the level at which unemployment had levelled off before the outbreak of the pandemic, *cf. figure 1.5*. High-frequency data for the number of registered unemployed show further declines in July and August. Unemployment is thus slightly below the estimated structural level.



Note: Employment is measured by the wage-earner employment, while unemployment is gross unemployment based on official registers.

Source: Statistics Denmark and own calculations.

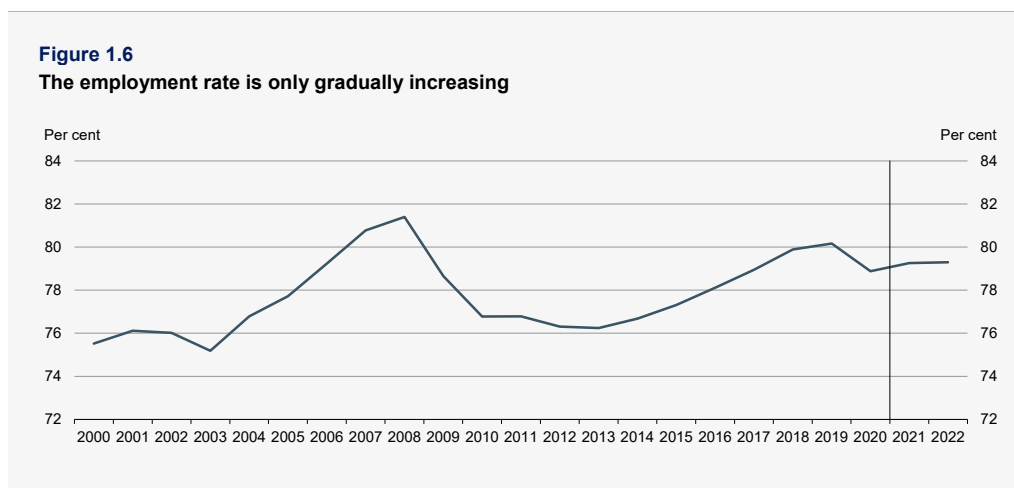
The outlook is good for continued increases in demand and production. Household consumption plunged last year, mainly due to more limited consumption opportunities. In addition, precautionary savings due to more uncertainty affected consumption. Now, consumer confidence is again positive and on par with the levels seen prior to the pandemic. The forecast for consumption growth in 2021 and 2022 is exceeding the growth in income, so that the consumption ratio rises to the same approximately as from before the pandemic.

Denmark's most important trading partners have also generally seen rapidly improved economic conditions and international organisations have raised their overall expectations for growth this year and

next. For a small open economy like Denmark, export developments are of great importance. The positive export outlook and an expectation of greater capacity utilization are set to lead to an increasing volume of investment.

Although employment is already at a record high, there is room for further gains. This is mainly due to the gradual increase in the retirement age, as the age of eligibility for old age pension will increase from 66 in 2020 to 67 in 2022, and the age of eligibility for anticipatory pensions will increase accordingly. The increase in the retirement age will greatly contribute to an expected increase in the workforce of 15,000 persons in 2021 and 17,000 persons in 2022. A growing population and inflow of foreign labour is also set to contribute positively to the development of the workforce and employment. Over the years, foreign labour has become an increasingly important buffer in the labour market, and following a dive in the initial phase of the pandemic, foreign labour has gradually returned to e.g. the construction industry.

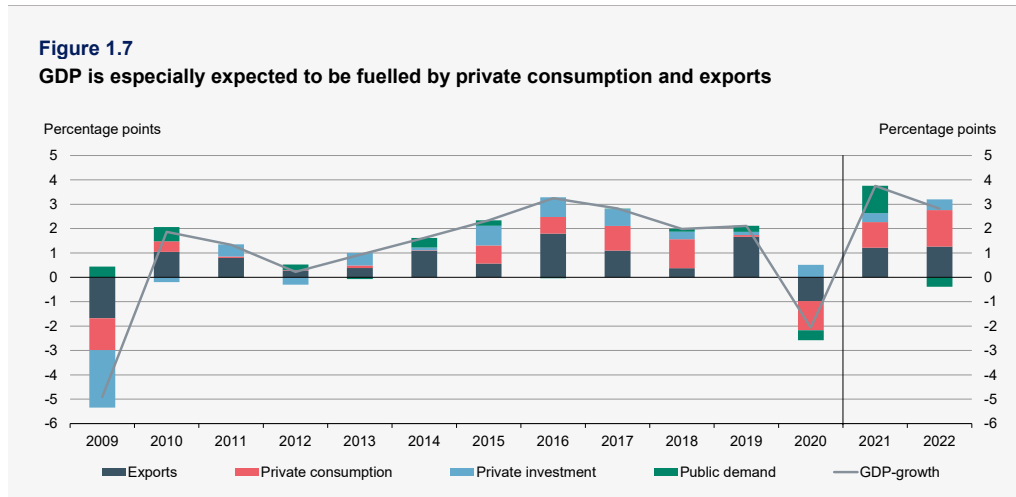
The rise in employment implies that the employment rate will gradually increase, but it will continue to be somewhat below the level in 2007, when the labour market was overheated, *cf. figure 1.6*.



Note: The figure shows the ratio between the number of employed persons and the number of persons between the age of 15 years and the age of eligibility for the old-age pension.

Source: Statistics Denmark and own calculations.

In the forecast, growth in 2021 and 2022 is in particular driven by private consumption and exports in particular, but there will also be a contribution from private investment, *cf. figure 1.7*. In 2021, public demand will also contribute to the increase in activity because of spending related to the corona pandemic. GDP is expected to grow by 3.8 per cent this year, the highest rate of growth since 2006. Next year, growth is set to be 2.8 per cent, which is well above the average growth rate of 1.1 per cent during the past 20 years.



Note: The figure depicts contributions to GDP-growth adjusted for import content.

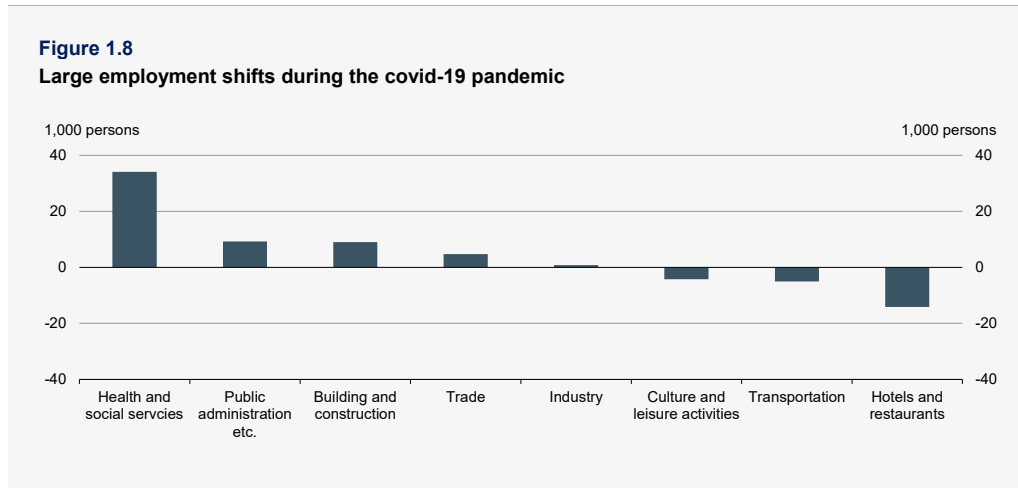
Source: Statistics Denmark and own calculations.

### Aftermath of the corona pandemic and the economy

Although the overall levels of activity, employment and unemployment are back to around the levels from before the covid-19 pandemic the economy is not back at the same starting point. The pandemic has led to shifts in demand and production and thus a different distribution of labour across industries *cf. figure 1.8*. In particular, employment is higher in health and construction, while employment is lower in culture and leisure, as well as hotels and restaurants. For industry and trade, employment is back at and slightly above pre-pandemic levels, respectively, after significant fluctuations along the way. Thus, there have been substantial industry changes since the pandemic hit the Danish economy.

These shifts reflect, among other things, the efforts to safeguard health and the changes in demand resulting from changed behaviour and restrictions during the Covid-19 pandemic. The flexible Danish labour market has facilitated the shift in employment from hard-hit industries to industries that have experienced progress, *cf. Economic Survey, May 2021*.

The changes may be reversed in step with the normalisation of production and demand conditions. For example, a large part of the additional employment in health and social services is expected to decrease during the year. Thus, these employees constitute a potential labour reserve, which may be available for the labour market as more persons are vaccinated and the need for tests, etc. further attenuates. This applies, for example, in relation to increased employment in culture and leisure as well as hotels and restaurants. However, some shifts may be longer lasting, e.g. as a result of greater use of online shopping, reduced travel activity and increased hygiene standards, etc.



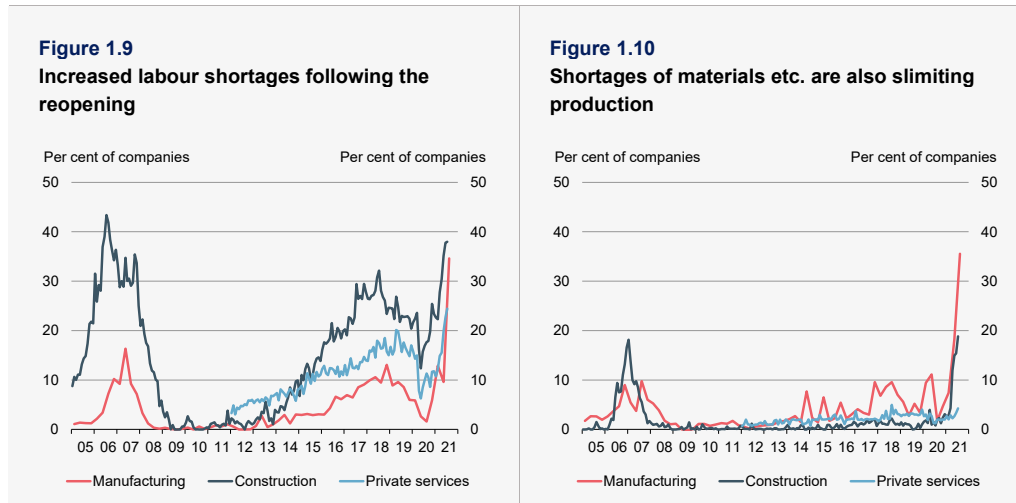
Note: The figure depicts changes in wage-earner employments for selected industries from February 2020 to June 2021.

Source: Statistics Denmark and own calculations.

Following the reopening, there has been a rapid increase in demand in industries that were hard hit by the pandemic. This may have made it difficult for companies to keep up with demand in terms of hiring labour and securing supplies of input to production. For example, an increasing share of companies are experiencing recruitment problems, and labour shortages have recently become more widespread across industries, *cf. figure 1.9*.

The reported labour shortages are due to the currently elevated recruitment need for following the reopening, in order for companies to be able to meet increased demand. In addition, many persons are currently employed in corona-related activities. The reopening also means that many companies have posted jobs at the same time. This makes it harder to find the right candidates. Both companies and job seekers need to find the right job match; a process that can take time. This is contributing to the higher number of companies currently reporting recruitment challenges.



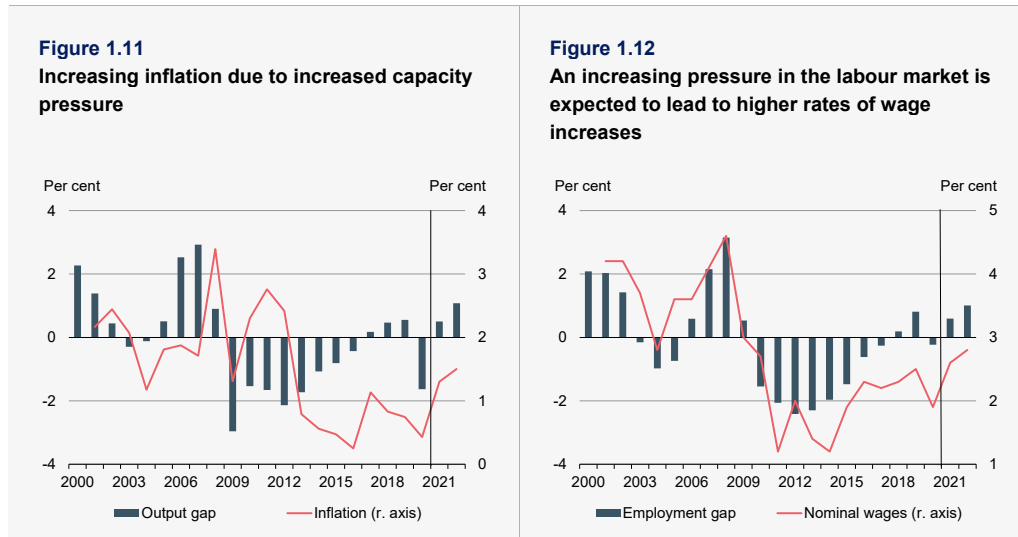


Note: The figures depicts the percentage of firms which report that labour shortages and shortages of materials etc. are limiting production. Own seasonal adjustment.

Source: Statistics Denmark and own calculations.

The need to increase production quickly is also reflected in the reported shortages of materials limiting production, *cf. figure 1.10*. These bottlenecks are due to global conditions, as shutdowns of production and disruptions of supply chains abroad may have contributed to longer delivery times and rising raw material prices.

The current shortages of labour and materials is thus considered to largely reflect temporary conditions, but the Danish economy is also well on its way into a boom, where increasing capacity utilization is gradually expected to increase the level of capacity pressure in the economy and lead to higher prices and wage increases, *cf. figure 1.11 and figure 1.12*. In periods when capacity pressures increase rapidly, e.g. measured by the output gap or the employment gap, the economy can hit a speed limit that leads to rapidly rising prices or wages for a period. If prices and wages continue to rise significantly over a longer period, this could lead to imbalances in the economy, including in the form of weakened competitiveness. This happened, for example, during the overheating in connection with the boom in the 2000s. However, the current pressure in the Danish economy is not expected to reach the same level as during the boom in the 2000s, and both price and wage inflation are estimated in the forecast to continue to be relatively low.

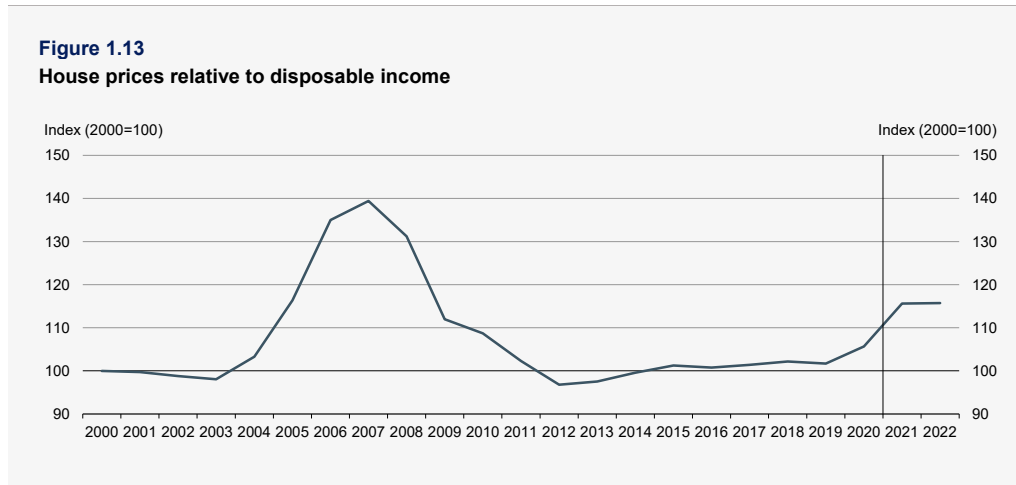


Note: The output gap depicted in figure 1.11 is a measure of the deviation from potential GDP, which is based on the underlying structural level of potential production. A positive and increasing output gap is indicative of increasing capacity pressures.

Source: Statistics Denmark and own calculations.

The corona pandemic has also affected the housing market. The housing market usually follows the business cycle, as deteriorating and uncertainty often also affect demand in the housing market. This was also the case at the beginning of the corona pandemic, but subsequently both turnover and house prices rose very considerably. Among other things, this should be seen in light of the fact that household disposable income has not fallen during the crisis, and that working from home and restrictions in movement during the corona pandemic as well as more limited consumption opportunities in other areas have increased demand in the housing market.

Changed preferences between housing consumption and other types of consumption may lift house prices for a certain period, and in 2020 house prices also rose faster than disposable income, *cf. figure 1.13*. However, there are yet no signs of a bubble-like price trend as the mid-2000s, and the latest data for home purchases and viewings suggest a slowing momentum in the housing market. This should lead to a weaker rate of growth in housing prices. House prices are thus estimated to rise at a significantly lower pace going forward. As a result of the large increase in house prices in the past year, house prices are estimated to grow by just over 13 per cent from 2020 to 2021. In 2022, a lower rate of increases in house prices of almost 4 per cent is expected. This development should be seen in connection with a return to more normal consumption patterns, including a more normal housing demand. At the same time, slightly higher interest rates will also help to dampen house price increases.



Source: Statistics Denmark and own calculations.

### The pandemic continues to pose risks

The coronavirus is still present in society and there is great uncertainty associated with the further spread of infection due to the delta variant and possible new mutations. The vaccine rollout is progressing well in Denmark, but there is a risk that new waves of infection may occur among unvaccinated adults and young persons as well as in the group of almost 700,000 children aged 1-11 years. The forecast assumes that the extent of severe illness will remain under control, so that new comprehensive restrictions do not become relevant. This does not rule out the possibility that economic activity can be affected if, for example, households become more reluctant to spend in the event of increasing infection rate, in particular if new virus variants emerge, which reduce vaccine effectiveness. In such a scenario, exports may also suffer, especially from countries where vaccine rollout is not so far advanced.

The rapid normalisation of demand and production has brought the Danish economy into an economic boom, and confidence indicators indicate increasing optimism. This can lead to even higher consumption growth, especially because the consumption ratio is already low. This can increase bottlenecks in the economy if production capacity cannot keep up with demand.

The current shortage of labour is largely due to an extraordinary recruitment need following the reopening as well as a temporary increase in employment in covid-19-related work. However, longer-term increased capacity pressures cannot be ruled out. Given that unemployment is already low, there is a risk that continued high demand and bottlenecks in the labour market may contribute to wage increases that could prove unsustainable and over time and reduce employment opportunities in industries facing international competition.

The housing market is expected to slow down, but there is a risk that continued low interest rates combined with the prospect of an economic boom along with rising incomes could provide fertile ground for continued high price growth. Furthermore, there is a risk that a period of rising house prices may give rise to excessive expectations of continued rising house prices relative to economic

fundamentals such as income and interest rates. This could lead to unsustainable developments in the housing market and the economy, which risks intensifying an ensuing downturn.

The sharp rise in house prices since the spring of 2020 may in some respects be reminiscent of the development leading up to the financial crisis. However, there are crucial differences. Leading up to the financial crisis, consumption generally increased and many households incurred debt. During the corona pandemic, debt has not increased significantly, and there has been a shift in demand, among other things towards housing, which helps to explain the housing price increases. The impact on the housing market of the corona pandemic is probably not lasting. Recently, as mentioned, sales and viewings have fallen. In addition, there has been a significant tightening of lending rules since the financial crisis. These factors are expected to keep house price developments in check.

Overall, uncertainty surrounding the further course of the corona pandemic continues to dominate the broader risk picture around the forecasts. A scenario in which the Danish economy is hit by a new wave of infections and with an increasing number of severe corona cases cannot be ruled out. On the other hand, the current momentum in the Danish economy points the risk of longer-term pressures emerging in the labour market and the housing market. The assessment is that there is no acute overheating of the Danish economy under way, but the risk of such a course of events has increased.

#### Box 1.1

##### The basis for the forecast and changes since last forecast

The forecast is based on the national accounts covering the second quarter of 2021, as well as a number of economic indicators, which for the most frequent reach into August. Thus, the data cover the reopening of the Danish economy, which grew by 2.2 per cent in the second quarter of 2021, according to the GDP-indicator from Statistics Denmark. The activity gains were in particular driven by returning production in retail trade, restaurants etc. and culture.

Furthermore, since the May *Economic Survey*, Statistics Denmark has released a revision to the annual national accounts. The new set of accounts changes both the estimated GDP-level prior to the covid-19 crisis and the size of the downturn last year as well as the first quarter of 2021. For 2020, the estimated drop in GDP was reduced to 2.1 per cent in stead 2.7 per cent. Furthermore, the decline in GDP in the first quarter of this year is now estimated to be 1 per cent instead of the previous estimate of 1.5 per cent, which was included in the latest forecast. Overall, the revisions suggest a higher rate of growth in 2021 than the previous forecast.

The new data suggest that GDP is already above the level seen prior to the covid-19 pandemic. In the May *Economic Survey*, the assessment was that this would occur at the end of 2021. Thus, the recovery in activity has been rapid, and quicker-than-previously expected. On that basis, the forecast for GDP growth in 2021 is lifted to 3.8 per cent from the 2.4 per cent forecast from May. For 2022, the projected rate of GDP growth is lowered to 2.8 per cent from 3.6 per cent, which reflects the fact that the normalisation of activity has happened already in 2021.

The speedy economic improvement is also seen in the labour market. During the reopening phase in the spring, employment levels rose to record highs. On that basis, the projected employment gains in 2021 and 2022 have been raised, by 25,000 persons and 3,000 person in 2021 and 2022, respectively.

The adjustments imply that the output gap and employment gap, which measures the difference between the actual and the estimated structural level, will turn positive already in 2021 and increase further in 2022. Consequently the Danish economy is assessed to be in a moderate boom.

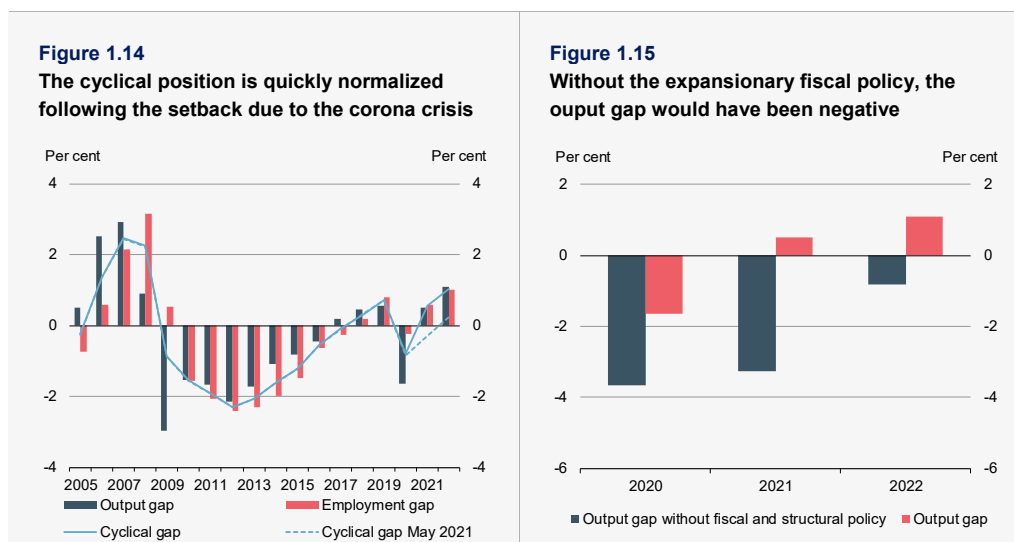
Source: Statistics Denmark and own calculations.

## 1.2 Fiscal policy and public finances

Since the outbreak of the corona crisis, a determined and expansionary fiscal policy has been implemented to support economic activity and employment in the best way possible within a responsible fiscal framework. Together with the current reopening of society, the implemented fiscal policy contributes to a rapid improvement of economic activity in the Danish economy.

In the forecast, the output- and employment gaps are projected to shift from negative in 2020 to positive in 2021. This implies that production and employment are estimated to exceed their structural levels in 2021. The improvement of the cyclical position of the economy is expected to continue in 2022 with output- and employment gaps of approximately 1 per cent. This is slightly larger than the level in 2019, i.e. prior to the outbreak of the corona crisis, *cf. figure 1.14*. The improvement of the cyclical position of the economy is thereby estimated to be faster than expected in the May-survey. Without the expansionary fiscal policy, the estimated output- and employment gaps would, all other things equal, have been negative implying a worse economic situation, *cf. figure 1.15 and chapter 8*.

The current projection of the Danish economy suggests that the fiscal policy next year should be less expansionary than in 2020 and 2021. The fiscal policy is tightened in 2022 relative to the level in 2021. This mainly reflects the expiration of temporary initiatives – including the phase-out of compensation schemes and that there is no payment of frozen holiday allowances in 2022 – but also a tightening of more traditional fiscal policy measures. The one-year fiscal effect – which measures how much changes in the fiscal and structural policy in a given year affect GDP compared to the previous year – is estimated to be -1.9 per cent of GDP in 2022. This supports that activity and employment only moderately exceed the estimated structural levels next year. In 2022, there will however still be positive effects on the economy following the expansionary fiscal policy in the previous years.



Note: The cyclical gap in figure 1.14 is calculated as a weighted average of the employment gap (with a weight of 0.6) and the output gap (with a weight of 0.4). Figure 1.15 shows the effects of the fiscal and structural policy (level effect compared to 2019) on the output gap in a single year.

Source: Economic Survey, May 2021, Statistics Denmark and own calculations.

The structural budget balance is estimated to be -0.5 per cent of GDP in 2021 and -0.2 per cent of GDP in 2022, *cf. table 1.1*. Thus in 2021, the fiscal policy is planned in accordance with the lower limit of the structural deficit set by the Danish budget law. This is similar to the planned fiscal policy in the general government draft budget proposal for 2021 presented in August 2020.

In 2022, the government has planned a less relaxation of the fiscal policy than previously assumed. This is reflected in the estimate of the structural budget balance, which is improved by 0.1 per cent of GDP in 2022 compared to the previous assumptions of the fiscal policy etc. in the May-survey. In particular, this reflects the government's priority of not spending the entire public investment frame.

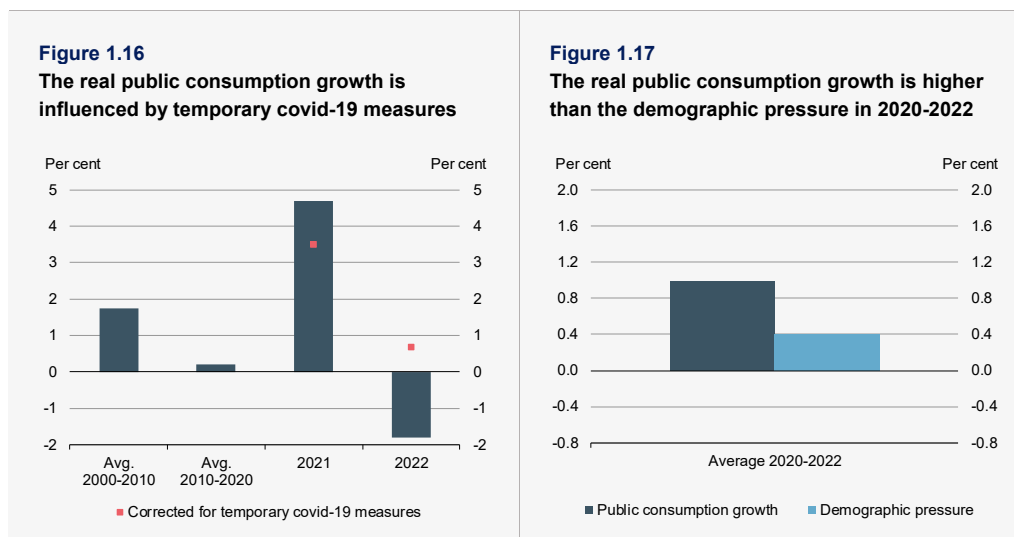
**Table 1.1**  
**Key figures relating to fiscal policy**

	2020	2021	2022
Structural budget balance, per cent of structural GDP	0.5	-0.5	-0.2
Actual budget balance, per cent of GDP	-0.6	-1.9	0.4
Net public debt, per cent of GDP	-11.3	-8.9	-8.9
EMU-debt, per cent of GDP	42.1	40.0	38.5
Public consumption growth, per cent <sup>1)</sup>	0.2	4.7	-1.8
One-year fiscal effect, per cent of GDP <sup>2)</sup>	2.0	1.7	-1.9
Multi-year employment effect, 1,000 persons <sup>3)</sup>	62	101	47
Output gap, per cent <sup>4)</sup>	-1.6	0.5	1.1
Employment gap, per cent <sup>4)</sup>	-0.2	0.6	1.0

- 1) Public consumption is calculated using the input method incl. depreciations. The estimated growth in public consumption is technically assumed to be the same using the input and the output method. The estimated growth rates in the forecast years are strongly affected by extraordinary expenditures related to covid-19.
- 2) The one-year fiscal effect is a measure of how changes in the fiscal and structural policy in a given year affects GDP compared to the previous year.
- 3) Calculated measure of the fiscal policy's demand effects (level effect compared to 2019) on employment, calculated excl. the effect of structural policies on the capacity exploitation. The effect is measured incl. contribution from the temporary compensation schemes, payment of frozen holiday allowances, and publicly initiated investments etc.
- 4) Calculated measure of how far production and employment are from their structural levels. When the gaps are positive, it indicates more scarce resources in the economy than under normal cyclical conditions.

Source: Statistics Denmark and own calculations.

The real public consumption growth is estimated to be approximately 4.7 per cent this year and -1.8 per cent next year based on the proposed budget bill for 2022 and the budget agreements with the municipalities and regions in 2022 etc. The estimated public consumption growth rates are strongly affected by the extraordinary expenditures and other measures related to covid-19. When correcting for temporary measures related to covid-19, the public consumption growth is estimated to be 3.5 per cent in 2021 and 0.7 per cent in 2022, *cf. figure 1.16*. In 2020-2022, the average real public consumption growth rate is 1.0 per cent per year, when public consumption is corrected for extraordinary measures related to covid-19 in 2022. The average real growth rate of public consumption in 2020-2022 exceeds the demographic pressure of 0.4 per cent per year in the same period, *cf. figure 1.17*.



Note: The real public consumption growth is measured by the input method. The public consumption is calculated incl. depreciations. In figure 1.17, the public consumption growth is corrected for extraordinary measures related to covid-19 in 2022.

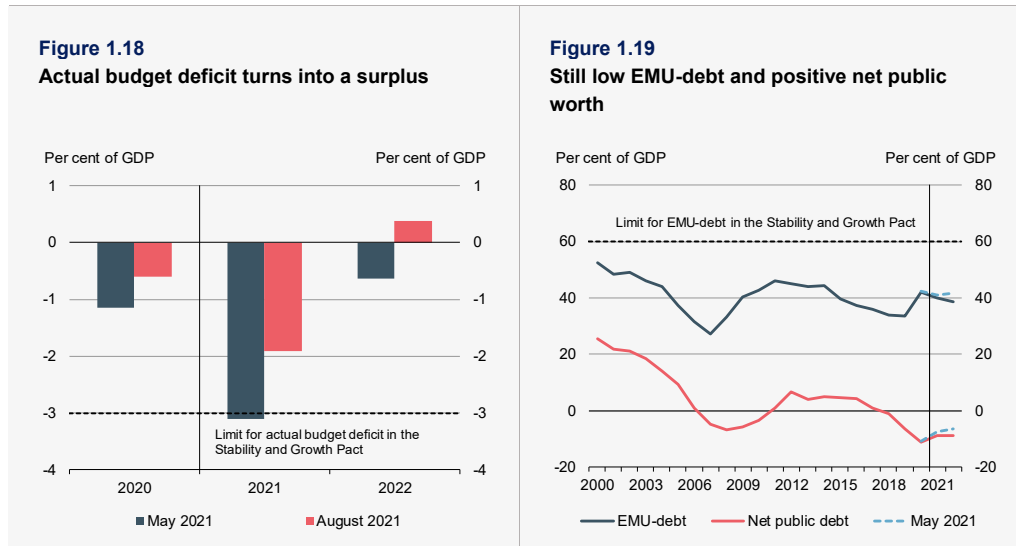
Source: Statistics Denmark and own calculations.

Alongside the August-survey, an updated medium term projection to 2025 has been prepared, which forms the basis for the submitted draft law on expenditure ceilings for year 2025. The updated medium term projection and expenditure ceilings for 2025 are described in further detail in *Opdateret 2025-forløb*, august 2021 and *Dokumentation for fastsættelse af udgiftslofter for 2025*, which is accessible on [www.fm.dk](http://www.fm.dk).

### Public deficit turns into a surplus and debt remains low

The actual budget balance is projected to demonstrate a deficit of 1.9 per cent of GDP in 2021 and a surplus of 0.4 per cent of GDP in 2022, *cf. figure 1.18*. The improvement of the actual budget balance between 2021 and 2022 reflects, among other things, the phase-out of one-off expenses related to the covid-19 compensation schemes etc. and the projected improvement of the cyclical position of the Danish economy.

The estimated deficit of 1.9 per cent of GDP in 2021 corresponds to an improvement of the actual budget balance by approximately 1.2 per cent of GDP compared to the May-survey. This is, among other things, due to an upward revision of the revenue from the pension yield tax and a faster normalization of the cyclical position of the economy than previously expected. The improvement of the actual budget balance in 2021, relative to the May-survey, implies that the deficit on the actual budget balance is expected to keep distance to the lower limit for actual deficits in the Stability and Growth Pact of 3 per cent of GDP, while a deficit of this magnitude was estimated in the May-survey.



Source: Economic Survey, May 2021, Statistics Denmark and own calculations.

Gross general government debt (calculated by the EMU-debt definition) has increased during the corona crisis and amounted to approximately 42 per cent of GDP by the end of 2020 compared to 33½ per cent of GDP by the end of 2019, i.e. before the corona crisis, *cf. figure 1.19*. This reflects the economic downturn, the compensation schemes during the lockdown – including extensive liquidity measures in terms of deferred deadlines for payments of VAT and personal taxes – and other initiatives that supported the Danish economy. The EMU-debt is projected to a level of around 40 per cent of GDP in 2021 and 38½ per cent of GDP in 2022, which is well below the limit set out in The Stability and Growth Pact of 60 per cent for GDP. The EMU-debt is still low in both international and historical perspective, and Denmark has the highest international credit rating (AAA-rating).

Public net debt is the key concept of debt when assessing the long-term sustainability of fiscal policy. Before the corona crisis, Denmark had a negative public net debt corresponding to a public net worth of approximately 6 per cent of GDP in 2019. In spite of the deficit on the actual budget balance, the public net worth increased to 11 per cent of GDP in 2020. This primarily reflected price adjustments on public assets and liabilities, in particular the central government's shareholdings in the energy company Ørsted A/S. Towards the end of 2022, the public net worth is projected to decline slightly to a level of approximately 9 per cent of GDP.

**A healthy economy and strong recovery provide the foundation to look ahead**  
Denmark has come well through the corona crisis. In cooperation with a broad majority of the parties in the Danish Parliament and the social partners, a decisive crisis management has been carried out. On this basis, Denmark is not – as was the case following the financial crisis – faced with a great task concerning economic recovery and a need to consolidate and restore the public finances by introducing new initiatives.

In light of this, the government wants to look ahead with a focus on long-term solutions in terms of reforms, innovation, education, job creation and growth. Structural challenges for the Danish economy



and the Danish society must be handled. That is why the government has initiated an ambitious reform program with a 10-year perspective to increase growth and wealth and bring Denmark towards better times.

The financing of the Danish welfare society is, among other things, conditioned by the fact that a large share of the population works. One element in the government's reform program is to ensure the necessary qualified labor, but also to secure better jobs and make Denmark stronger in other respects.

The government wants to strengthen the Danish economy and the Danish social model in areas that are crucial for the development of Denmark in the next 10 years. Hence, the government launched *Danmark kan mere* in August 2021, which sets the direction for ten significant improvements.

## 1.3 Annex tables

**Table 1.2****Key figures from the August survey and comparison with estimates in the May survey**

	2020	2021		2022	
		May	August	May	August
<b>Real change, percent</b>					
Private consumption	-1.3	2.7	3.2	4.3	4.1
Total government demand	-0.4	3.6	4.6	-0.4	-1.8
- of which government consumption	-1.7	3.8	4.7	-0.9	-1.8
- of which government investments	9.8	2.4	3.8	3.3	-1.6
Housing investment	10.1	7.1	13.2	1.3	1.5
Business fixed investment	2.0	-0.2	2.4	5.8	5.3
Inventories (cont. to GDP-growth)	-0.1	0.0	0.0	0.0	0.0
<b>Total final domestic demand</b>	0.0	2.8	4.1	2.8	2.3
Exports	-7.0	5.1	7.1	6.0	5.8
- of which manufacturing exports	-1.9	5.1	9.8	4.9	4.4
Total demand	-2.7	3.6	5.2	4.0	3.7
Imports	-4.1	6.2	8.2	4.9	5.2
- of which imports of goods	-1.5	6.7	10.7	3.2	2.1
<b>GDP</b>	-2.1	2.4	3.8	3.6	2.8
Gross value added	-2.4	2.2	3.6	3.7	3.1
- of which non-farm private sector	-1.9	2.8	4.3	4.5	3.8
<b>Change in 1,000 persons</b>					
Labour force, total	9	5	23	22	23
Employment, total	-21	17	42	29	32
- of which private sector	-25	13	26	25	35
- of which public sector	4	4	16	4	-3
Gross unemployment	29	-11	-19	-7	-10
<b>Cyclical developments, per cent</b>					
Output gap	-1.6	-0.7	0.5	0.2	1.1
Employment gap	-0.2	0.0	0.6	0.2	1.0
Unemployment gap	0.4	0.0	-0.1	-0.1	-0.3

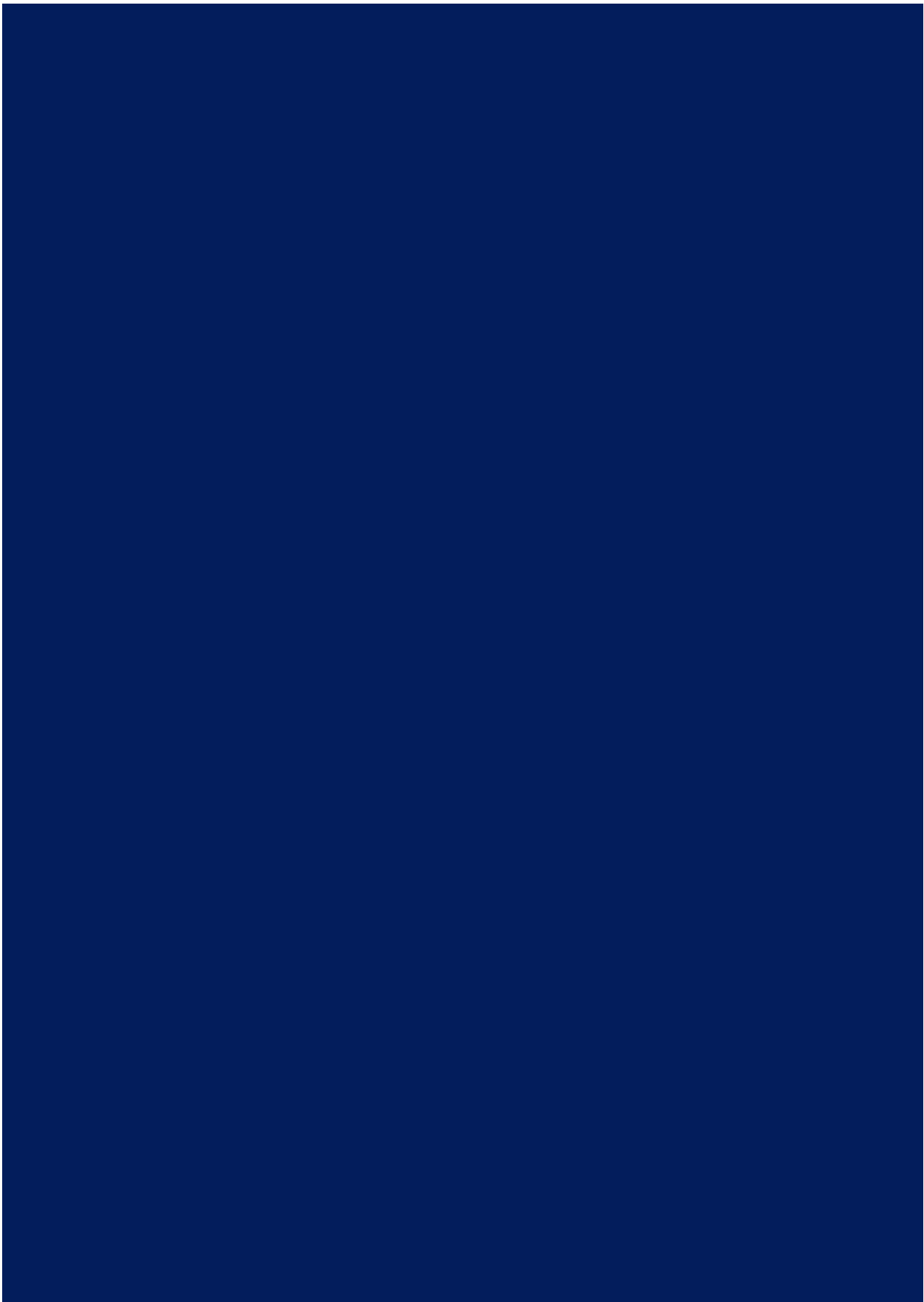
Note.: Governemnt consumption is calculated by the output-method. Calculated by the input-method the government consumption growth is 0.6 per cent in 2020. Governement consumption measured by the output- or input-method is assumed to be identical in 2021 and in future years.

Source: Statistics Denmark and own calculations.

**Table 1.2 (continued)**  
**Key figures from the August survey and comparison with the estimates in the May survey**

	2020	2021		2022	
		May	August	May	August
<b>Change, per cent</b>					
House prices (single family homes)	4.5	11.2	13.1	3.1	3.8
Consumer prices	0.4	1.1	1.3	1.5	1.5
Hourly earnings in the private sector	1.9	2.4	2.6	2.6	2.8
Real disposable income, households	0.1	2.1	2.0	2.6	2.2
Productivity in the private non-farm sector	1.5	2.0	2.7	1.3	1.1
<b>Per cent</b>					
1-year rate loan	-0.5	-0.2	-0.5	-0.1	-0.3
10-year government bond	-0.4	0.0	-0.1	0.2	-0.1
30-year mortgage credit bond	1.2	1.3	1.2	1.7	1.5
<b>Public finances</b>					
Actual public balance (DKK bn.)	-14.0	-74.1	-46.6	-15.9	9.5
Actual public balance (per cent of GDP)	-0.6	-3.1	-1.9	-0.6	0.4
Structural public balance (per cent of GDP)	0.5	-0.5	-0.5	-0.3	-0.2
Gross debt (per cent of GDP)	42.1	40.9	40.0	41.5	38.5
<b>Labour market</b>					
Labour force, total (1,000 persons)	3,113	3,118	3,136	3,139	3,159
Employment, total (1,000 persons)	2,982	2,999	3,024	3,027	3,057
Gross unemployment (yearly average, 1,000 persons)	133	122	114	115	104
Gross unemployment (per cent of labour force)	4.3	3.9	3.6	3.7	3.3
<b>External assumptions</b>					
Trade-weighted international GDP-growth	-4.0	4.1	4.5	3.8	4.1
Export market growth (manufactured goods)	-8.5	8.3	7.1	6.3	6.2
Exchange rate (DKK per USD)	6.5	6.2	6.2	6.2	6.3
Oil price, dollars per barrel	42.6	64.8	68.8	65.4	70.4
<b>Balance of payments</b>					
Current account balance (DKK bn.)	192	160	165	182	175
Current account balance (per cent of GDP)	8.2	6.7	6.8	7.3	6.9

Source: Statistics Denmark, IMF, Macrobond, Danish Confederation of Employers and own calculations.



## 2. Regional growth

This chapter is an investigation into growth in value added across Danish regions in recent years and into the drivers of this growth. Since 2012, there has been economic growth and increases in employment in all parts of the country. Denmark has a diversified industrial structure and production varies across different parts of the country.

The background of this development is among other things that the services sector is increasing in relative size, and that larger cities typically have a higher concentration of services. At the same, young people are moving to the larger cities in great numbers to pursue higher education. The movement of people from the countryside to cities is called urbanisation. It is an international trend, which can be observed in all advanced economies. Urbanisation also reflects factors that are not directly related to growth and employment, and that are therefore beyond the scope of this chapter. In addition to this, the chapter will not address other consequences of urbanisation across different parts of the country, for instance in relation to the housing market.

The chapter takes its point of departure in the partition of the country into 11 geographic provinces in the data from Statistics Denmark. These provinces are subdivisions of the administrative regions of Denmark. The focus is on the development in value creation in the provinces as measured by gross value added (GVA) – since 2012, which marks the beginning of an upturn for the Danish economy as a whole. This demarcation in time should also be viewed in the context of the large structural changes in the preceding decades, including from large infrastructure projects as the Great Belt Bridge, the Copenhagen metro and urban regeneration and the reform of the Danish administrative structure in 2007.

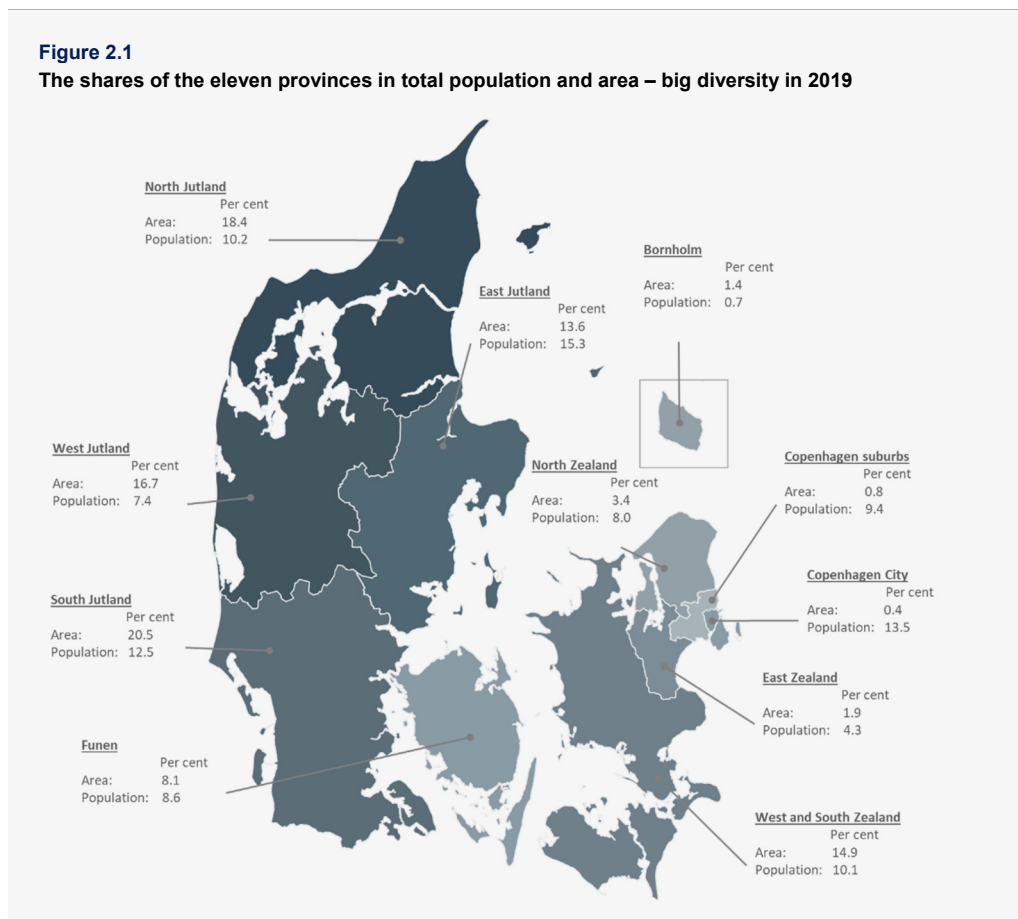
The overall conclusion of the analysis is that all provinces have seen growth in value added from 2012 to 2019. Some other results of the analysis are:

- Since 2012, the labour force has grown in all provinces with the exception of Bornholm. This covers an increase in the labour market participation rate in all provinces while there have been differences in the contribution to the labour force from population growth as a result of differences in the net migration of people.
- A growing labour force has translated into increasing employment across provinces. At the same time, the employment rate has increased in all provinces – and especially where it was initially relatively low. As a result, the differences in employment rates across provinces have become smaller during the upturn from 2012 to 2019.
- Productivity growth has been the primary driver of growth in GVA. The difference in hourly productivity growth across provinces are smaller than suggested by the development in GVA. For instance, hourly productivity growth has been higher on Bornholm than in Copenhagen.
- Industry structure is one determinant of productivity growth. This reflects that growth in GVA per hour worked is typically higher in industries with high capital intensity e.g. agriculture and manufacturing. There are great differences in the relative size of different sectors across regions. For instance, the share of manufacturing in GVA varies from 3½ to 25 per cent.

- There are also differences within industries. For example, there is large variation in the composition of manufacturing across provinces: The pharmaceutical industry is large in the provinces surrounding the capital, while manufacturing of machines (e.g. windturbines) is of great importance in Western Jutland.

## 2.1 Increasing value creation in all provinces since 2012, but growth is highest in and around the capital

The 11 provinces of Denmark are diverse in geographic area and population size. *South Jutland* and *North Jutland* (18.4 per cent) are the largest provinces in area, while *Copenhagen suburbs* and *Bornholm* are the smallest ones. *East Jutland* (15.3 per cent) and *Copenhagen City* (13.5 per cent) had the largest shares of total population, while the lowest population shares were in *Bornholm* (0.7 per cent) and *East Zealand* (4.3 per cent), cf. figure 2.1.

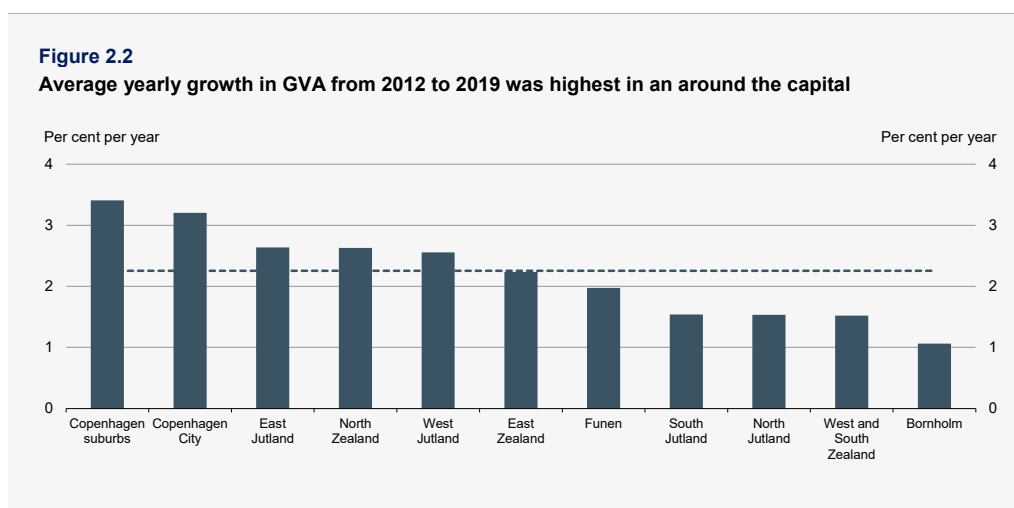


Note: Area and population size are recorded on 1st January 2019.

Source: Statistics Denmark and own calculations.

Since 2012, the Danish economy as a whole has been in an upswing after several years with weak growth in the wake of the Great Recession and the ensuing European Sovereign Debt Crisis. The output gap is a reflection of this. It has been increasing since 2012 and turned positive in 2017, cf. *chapter 4*.

Growth in economic activity has been broad-based. Thus, from 2012 to 2019, value creation of firms has been increasing in all of the 11 Danish provinces. The economic expansion has been largest in the capital area, in the provinces *Copenhagen Suburbs* and *Copenhagen City*, where real GVA (i.e. GVA corrected for inflation) grew by 3.4 and 3.2 percentage points respectively per year from 2012 to 2019. The provinces *East Jutland*, *North Zealand* and *West Jutland* also saw healthy growth in GVA of more than 2.5 per cent per year in the same period. In comparison, for the country as a whole, GVA grew by 2.3 per cent per year in the same period. The lowest increase in the country was recorded on *Bornholm*, where average annual growth in GVA was just above 1 per cent, cf. *figure 2.2*.



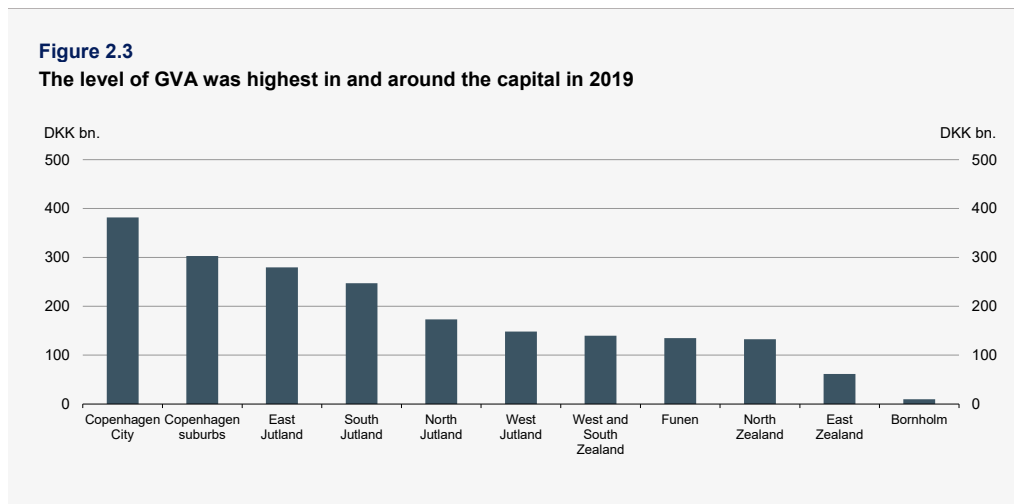
Note: The regionally disaggregated national accounts records production and employment at the location of the workplace. The dashed line shows average yearly growth for the whole country in the period, as computed on the basis of the available regionally disaggregated national accounts. The available accounts are not yet brought up to date with the June revision of the national accounts for the period 2018-2020. This revision resulted in a downward adjustment of the average yearly growth rate of the whole country from 2.3 to 2.1 per cent.

Source: Statistics Denmark and own calculations.

Looking at levels, significant differences in value creation across provinces emerge. In 2019, *Copenhagen City* was the biggest province in terms of value creation with a GVA of well over 380 DKK bn. *Copenhagen suburbs* and *East Jutland* arrived in second and third place with GVAs upwards of 300 DKK bn. and just under 280 DKK bn. respectively. The smallest provinces in terms of GVA were Bornholm with a value just under 10 DKK bn. and East Zealand with a value upwards of 60 DKK bn., cf. *figure 2.3*. These differences should be viewed in the context of the vast differences in size of the provinces, especially population.

Jointly, the increase in value added in the provinces and their relative sizes can be used to compute the contribution of every province to the total value added in the country. All other things being equal, a province with comparatively higher growth contributes a larger amount to the increase in national

value added, whereas provinces that make up a relatively smaller share of the Danish economy carry a smaller weight in the computation.



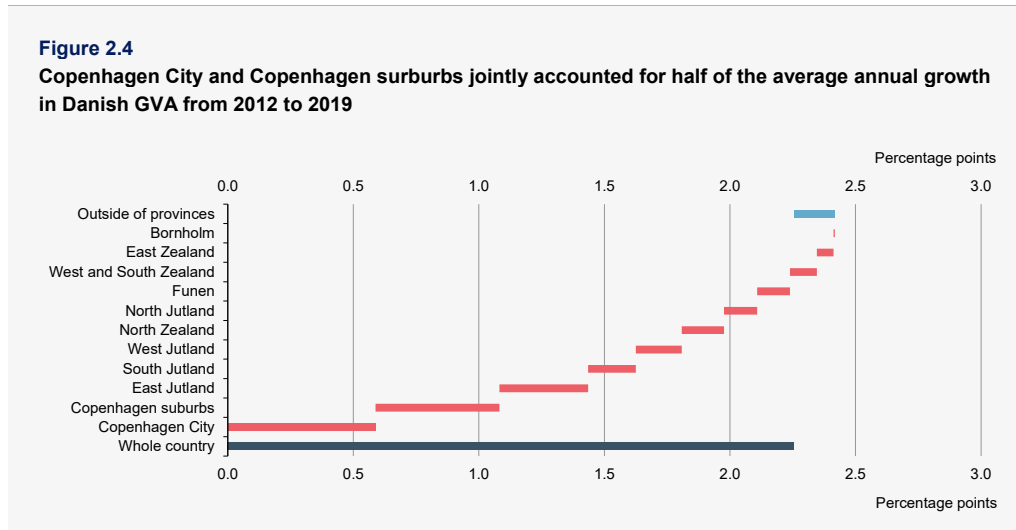
Source: Statistics Denmark and own calculations.

Total value added increased on average by well over 2.3 per cent per year from 2012 to 2019. A breakdown of this growth into the contributions from individual provinces shows that upwards of half of is attributed to *Copenhagen City* and *Copenhagen suburbs*, each of which contributed with 0.5-0.6 percentage points. *East Jutland* is attributed the third largest contribution of 0.4 percentage points.

The smallest contributions came from *Bornholm* with a contribution under 0.01 percentage points and *East Zealand* with a value just under 0.1 percentage points. Production that did not take place in any of the provinces had a negative contribution of just under 0.2 percentage points in the period, which reflects declining energy production in the North Sea, cf. figure 2.4.

Even though the province *North Zealand* had the fourth highest growth rate in GVA from 2012 to 2019, *East Jutland*, *South Jutland* and *West Jutland* all made larger contributions to aggregate growth in Danish GVA by virtue of their larger shares of the Danish economy in the initial year.





Note: *Outside of provinces* mostly reflects mining and quarrying, and the negative contribution hereof should be seen in the context of decreasing energy production in the North Sea. See also the note of figure 2.2.

Source: Statistics Denmark and own calculations.

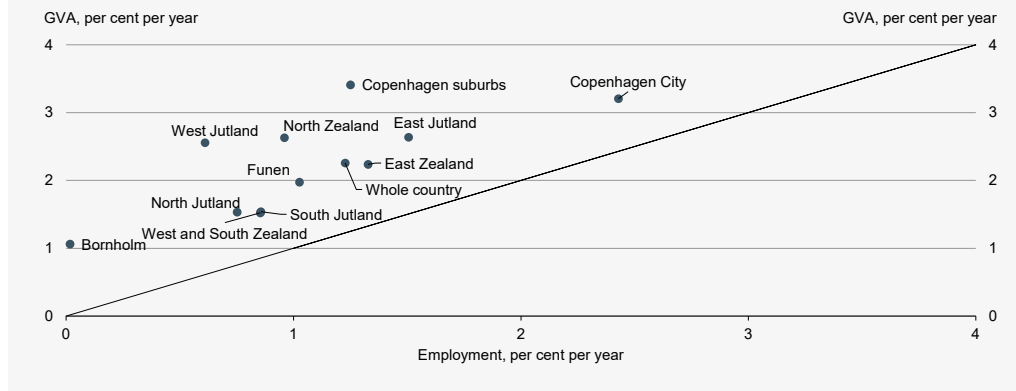
## 2.2 Increasing production and employment go hand in hand in all provinces

For most of the period, the evolution of employment has followed that of production. From the middle of 2013 to 2019, employment rose steadily, and in 2019, it reached an all-time high of more than 3 million employed persons in the country as a whole.

Labour is an essential production factor that is essential for growth in output. At the same time, a high level of production typically results in a high demand for labour. The positive relationship between output and employment is seen across provinces, but there are large differences in the strength of this relationship. This is *inter alia* due to differences in industry composition and in productivity growth of firms across provinces, *cf. section 2.4 below*.

In all provinces, the growth rate of GVA has been larger than the rate of employment growth since 2012, reflecting growing productivity in the same period. *Copenhagen City* has seen the second largest GVA growth rate and the highest growth rate in employment over the period from 2012 to 2019. On the other hand, *West Jutland* has seen a significantly lower growth rate of employment but an almost equally high growth rate of GVA, *cf. figure 2.5*.

**Figure 2.5**  
**Employment and GVA have increased across provinces from 2012 to 2019**



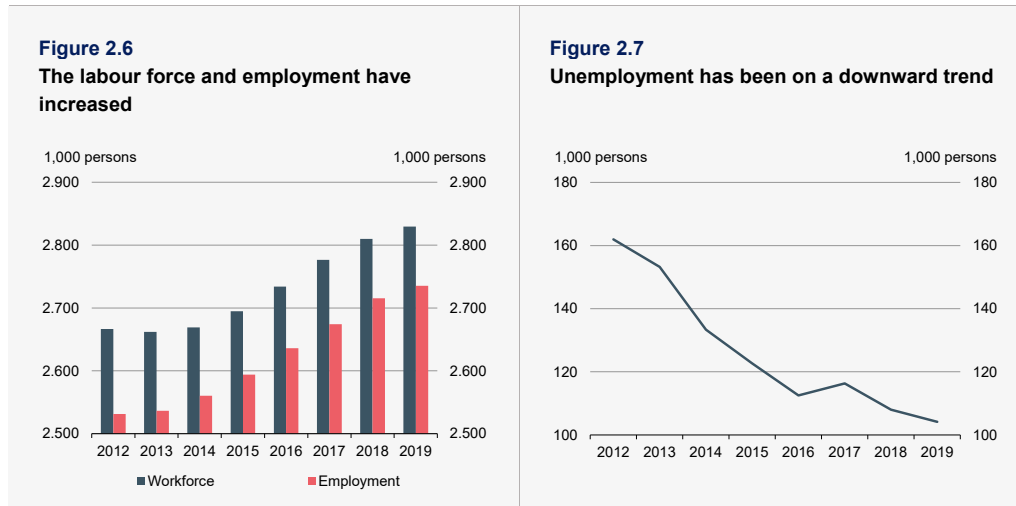
Note: Based on the register based labour force statistic (RAS) and the regional national accounts. A 45 degree line has been inserted, corresponding to a situation of equal rate of growth in GVA and employment. See also the note of figure 2.2.

Source: Statistics Denmark and own calculations.

### Both population growth and higher participation contribute to the expanding labour force

A precondition for lasting employment growth is an expanding labour force. The size of the labour force depends on the number of persons that are in the working age as well as the share of these persons who are available for the labour market, i.e. the labour market participation rate. Thus, on a national level, the size of the labour force depends partly on demographic trends and partly on the evolution of the participation rate.

The period from the middle of 2013 to 2019 saw progress in the labour market with employment growth nearly every year. The first calendar year with rising employment after the financial crisis was 2014 and since then growth in employment has generally been slightly faster than growth in the labour force, with the exception of the years from 2017 to 2019, cf. figure 2.6.



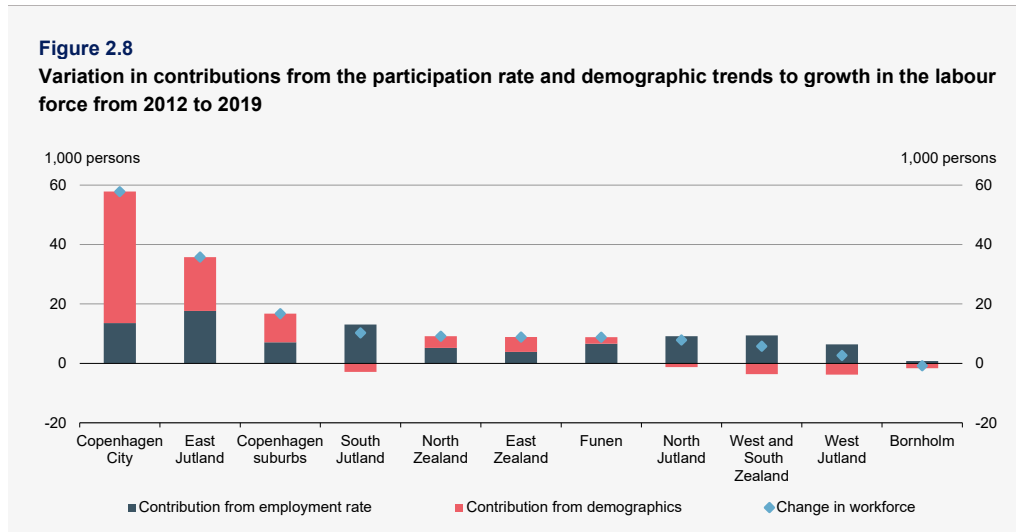
Note: The labour force in figure 2.6 is defined as employed and unemployed persons as measured in RAS.  
Source: Statistics Denmark and own calculations.

Equivalently, the growing workforce has resulted in higher employment while unemployment has dropped, *cf. figure 2.7*.

On a national level, the demographic trend and the increasing participation rate alike have contributed to the growing labour force since 2012, but there are significant differences across provinces.

In all provinces, the participation rate has increased, especially among the youngest and oldest age groups as well as among immigrants and their descendants. This should be seen against the backdrop of the markedly lower initial participation rate of these groups compared to the remaining labour force. The largest growth in the labour force has taken place on *Bornholm* where the participation rate has increased by 3.5 percentage points from 2012 to 2019, followed by *Copenhagen City* where the participation rate in the same period increased by 2.8 percentage points.

The contribution of demographic trends is more heterogeneous across provinces and depends on both the age distribution within provinces and the movement of people across province borders. From 2012 to 2019, *Copenhagen City* has seen a significant increase in the working age population of nearly 60,000 persons between the ages of 16 to 64 years. All other things being equal, this means that the demographic trend has made a contribution of around 44,000 persons to the growth in the labour force. Seen in isolation, the demographic development of other provinces has contributed negatively to the size of the labour force, especially in *West and South Zealand* where the number of persons of working age has dropped by 5,000. This has reduced the labour force by almost 4,000 persons. In total, all provinces except for *Bornholm* have seen an increase in the number of people in the labour force in the period, but with varying contributions from the participation rate and demographics, *cf. figure 2.8*.



Note: The labour force in figure 2.6 is defined as employed and unemployed persons as measured in RAS. The measure is based on place of residence and can therefore not be translated one-to-one to employment in the regionally disaggregated national accounts, e.g. due to commuters.

Source: Statistics Denmark and own calculations.

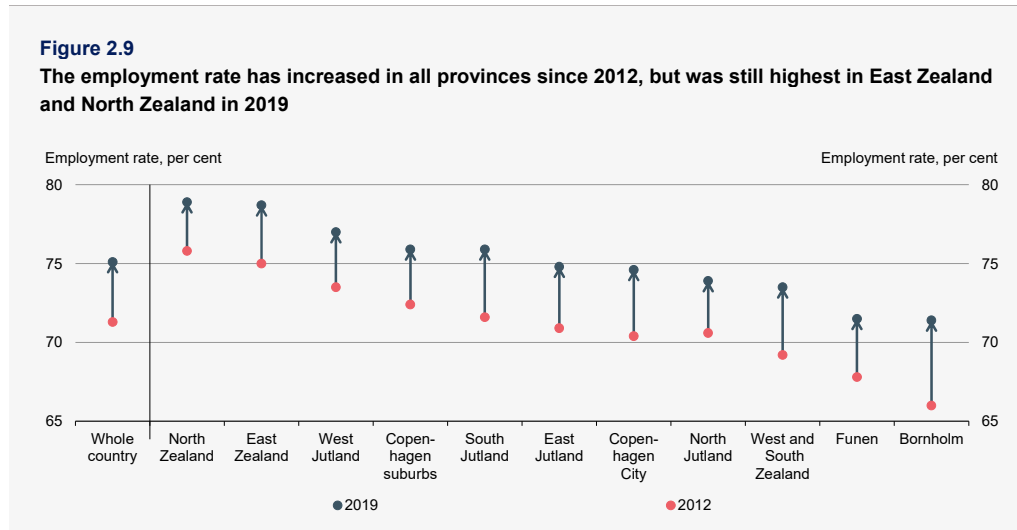
### A growing labour force has enabled higher employment across provinces

As the labour force and employment have increased, so has the share of employed persons in the working age (the employment rate). Employment growth is therefore not only due to an increase in the labour force, but also to the increasing employment rate while unemployment has dropped.

The employment rate typically fluctuates with the business cycle, as employment possibilities improve during upswings and equivalently deteriorate during recessions. This is also true across provinces. The employment rate has seen the biggest increases in the provinces that had the lowest employment rates in 2012, while provinces where the employment rate was already relatively high have seen slightly slower progress. For instance, *Bornholm* has seen a rise in the employment rate of over 5 percentage points, but in 2019, employment as a share of the working age population was still lower than the national average of 75 per cent. On the other hand, growth in the employment rate in *North Zealand* and *West Jutland* have been lower during the period, although the levels were initially higher, cf. *figure 2.9*. Thus, the upswing from 2012 to 2019 contributed to a reduction in the differences in employment rates across provinces.

In addition to the business cycle, a number of regional conditions, e.g. related to the demographic composition, also affect employment in different provinces. For instance, all other things being equal, a larger share of students reduces the employment rate.

Differences in industry composition across provinces can also affect the cross-province pattern of employment growth. Some industries have progressed faster than others have, leading to more job creation. At the same time, production in some industries is more labour intensive than in others.

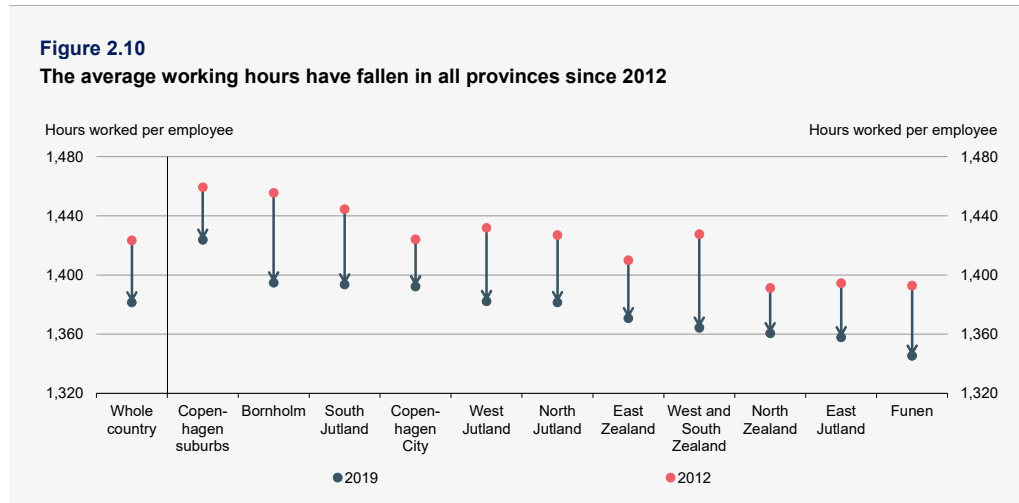


Note: The employment rate is measured as the share of the population between 16 and 64 years who are employed according to RAS. See also note to figure 2.8.

Source: Statistics Denmark and own calculations.

### Average working hours have dropped in all provinces

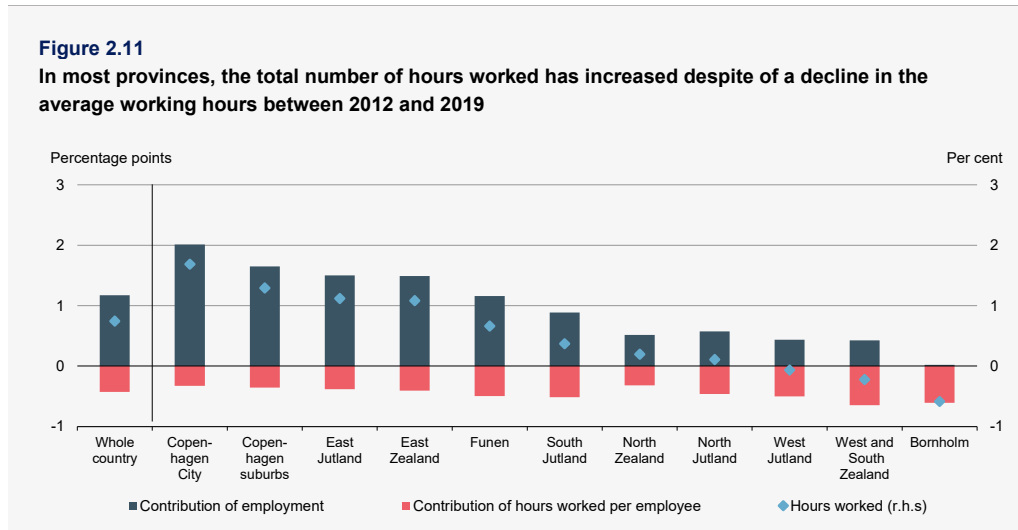
The production by enterprises does not solely depend on the number of employees, but also on their working hours. For instance, in some industries, there are many part-time employees. All other things being equal, this implies a lower production per employee. Thus, the total number of hours worked depends partly on the number of people working and partly on their average working hours. For Denmark as a whole, the average working hours per person have dropped while employment has risen. All provinces have seen a drop in average working hours, with the largest decline seen in *West and South Zealand* and *Bornholm*, cf. figure 2.10.



Note: The figure shows the average working hours calculated as the number of actual hours worked divided by the number of employed persons in the regionally disaggregated national accounts.

Source: Statistics Denmark and own calculations.

In most provinces, the growth in employment dominates, such that the total number of hours worked has increased. However, this is not true for *West Jutland* and *West and South Zealand* where the numbers of actual hours worked was lower in 2019 than in 2012 despite of the increase in employment. The largest decrease in actual hours worked was recorded on *Bornholm* due a relatively large drop in average working hours and largely unchanged employment, cf. figure 2.11.



Note: The average working hours are calculated as the number of actual hours worked per employee in the regionally disaggregated national accounts. The cross product (the residual) has been allotted in equal parts to the two components.

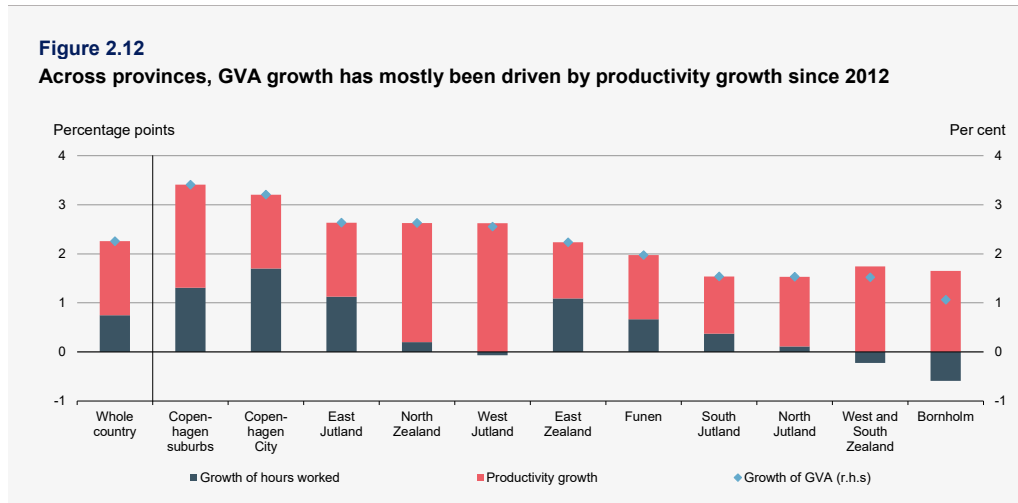
Source: Statistics Denmark and own calculations.

## 2.3 Productivity growth is a key determinant of the increasing value creation in all provinces

In addition to increasing the number of hours worked, production can rise through a higher output per unit of input, i.e. through productivity growth. In this chapter, productivity is measured as real GVA per hour worked (hourly productivity).<sup>1</sup>

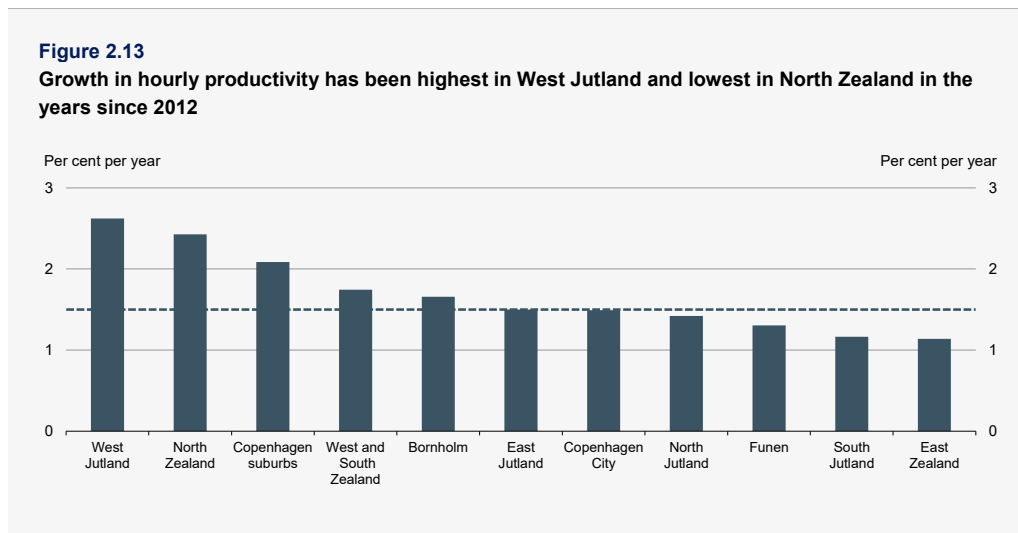
For each province, the growth of GVA can be broken into two parts, a contribution from the number of hours worked and another from hourly productivity. For the period from 2012 to 2019 seen across provinces, increases in hourly productivity accounted for most of GVA growth. However, in some provinces, the contributions of the number of hours worked were moderate or even negative. Increased hourly productivity has driven almost all of the growth of GVA in a number of provinces such as *North Zealand*, *North Jutland*, *West and South Zealand* and *Bornholm*. In several of these, the number of hours worked dropped, cf. *the previous section*, which, viewed in isolation, reduces potential production. On the other hand, in some provinces, there was a relatively large and positive contribution of increasing numbers of hours worked, especially in *Copenhagen City* and *East Zealand*, cf. *figure 2.12*.

<sup>1</sup> Another measure for productivity is total factor productivity (TFP), which also takes the use of capital, education etc. into account.



Note: The cross product (the residual) has been allotted in equal parts to the two components.  
 Source: Statistics Denmark and own calculations.

Focusing only on hourly productivity, the cross-province differences since 2012 in productivity growth have been markedly smaller than the differences in GVA growth. The ranking of the provinces also differ. For example, hourly productivity growth has been stronger on *Bornholm* than in *Copenhagen City*. Average annual growth in hourly productivity was highest in *West Jutland* (2.6 per cent) and *North Zealand* (2.4 per cent), while it was lowest in *South Jutland* (1.2 per cent) and *East Zealand* (1.1 per cent), cf. figure 2.13.



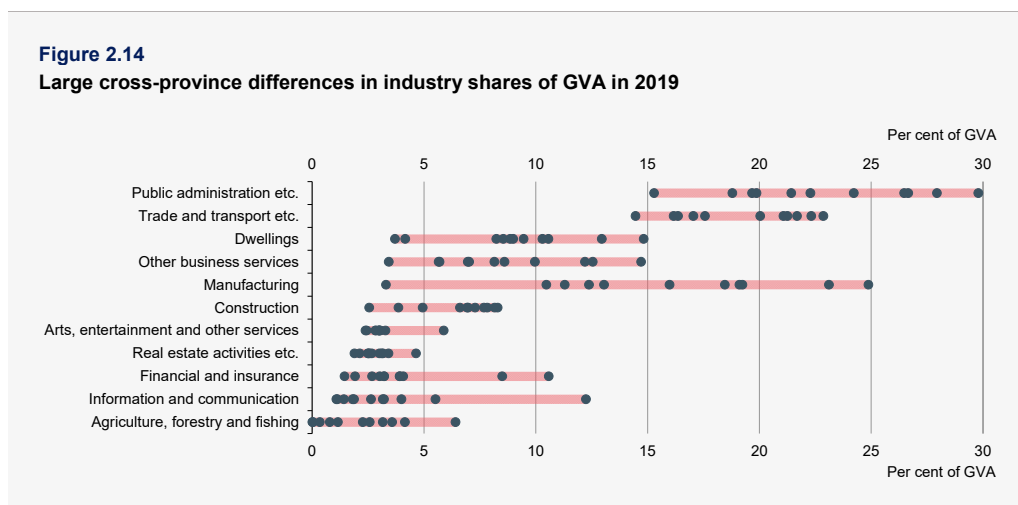
Note: Hourly productivity is defined as real GVA per hour worked. The dashed curve shows the average yearly productivity growth for the whole country in the period from 2012 to 2019.  
 Source: Statistics Denmark and own calculations.



## 2.4 Differences in industrial structure play an important role in explaining the evolution of GVA in the provinces

In the previous sections, it was described how GVA growth in the individual provinces can be broken into contributions from employment, working hours and hourly productivity. The developments in each of the three contributions depend partly on the industrial structure in the individual province because industries differ in employment, working hours and hourly productivity. Among other things, the reason why different industries contribute most to GVA growth across provinces is variation in industrial structure.

The industries *public administration etc.* and *trade and transportation etc.* constitute large shares of the economy in all provinces, each of at least 14 per cent of GVA in 2019. Conversely, the industries *agriculture, forestry and fishing; construction; real estate activities etc.* and *arts, entertainment and other services* made up less than 10 per cent of value creation in all provinces. The largest difference in industry shares was seen with respect to *manufacturing*, with a share of 3.3 per cent in *Copenhagen City* in 2019 while it was 24.9 per cent in *Copenhagen suburbs*. The cross-province difference in industry shares is least pronounced with respect to the industries *real estate activities etc.* and *arts, entertainment and other services*, cf. figure 2.14.



Note: GVA is in current prices. Each dot represents the relevant industry's share of GVA in one of the 11 provinces. The coloured area reaches from the smallest to the largest share. The 10a3-grouping applies. The industries *mining and quarrying* and *utility services* are excluded. *Trade and transport etc.* also covers hotels and restaurants. *Public administration etc.* also covers education and health.

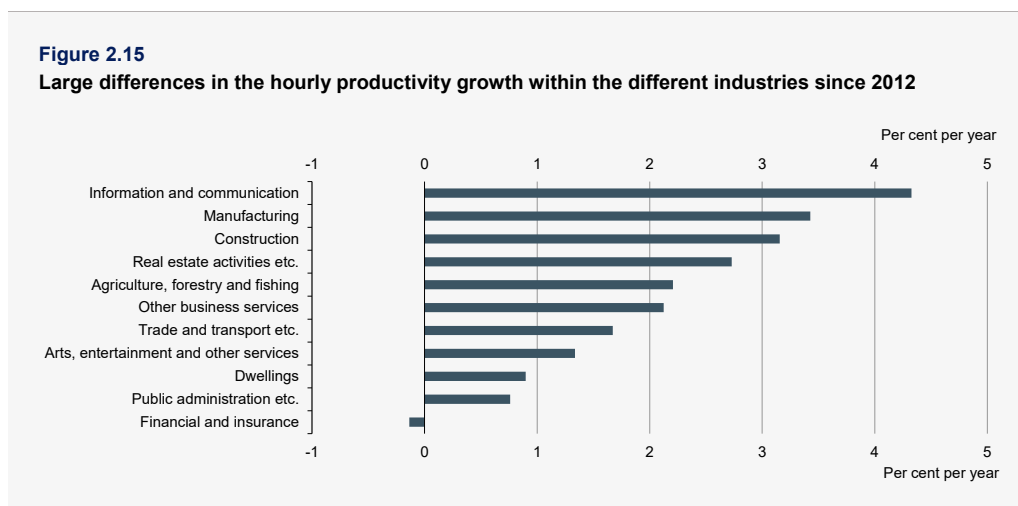
Source: Statistics Denmark and own calculations.

Among the private industries (i.e. excl. the industry *public administration, education and health*), it is for all provinces either *manufacturing* or *trade and transportation etc.*, which made up the largest share of GVA in 2019, cf. appendix table 2.1. The largest share of industry in each province relative to the national average is seen in appendix table 2.2. For instance, in *Copenhagen Suburbs* and *West Jutland* a relatively large share of the value creation comes from *manufacturing* as compared to other

provinces, while *Copenhagen City* has a relatively large contribution to GVA from *information and communication*.

Differences in the industry structures across provinces affect productivity developments and thus the potential value creation in each province. This is a result of significant variation in productivity growth across industries.

At the national level, more capital intensive industries, such as agriculture and manufacturing, have had a higher growth in GVA per hour worked since 2012, while the hourly productivity in a number of service industries – which are less capital intensive – has increased at a slower pace, *cf. figure 2.15*. Provinces with a large or increasing share of actual hours worked within for instance *information and communication* or *manufacturing* will therefore have higher productivity growth – all other things being equal.



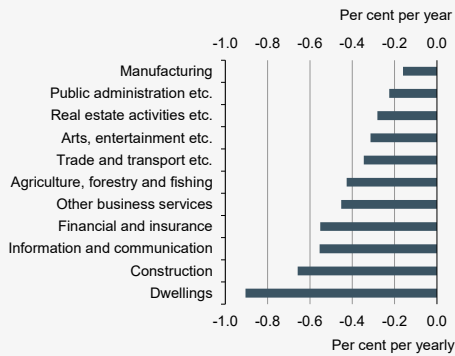
Note: The figure shows the average yearly growth in hourly productivity for the individual industries from 2012 to 2019. The hourly productivity is measured as the real GVA per hour worked. Measured by the 10a3-grouping. Omitted from the figure are the industries *mining and quarrying* and *utility services*. *Trade and transport etc.* includes hotels and restaurants. *Public administration etc.* includes education and health.

Source: Statistics Denmark and own calculations.

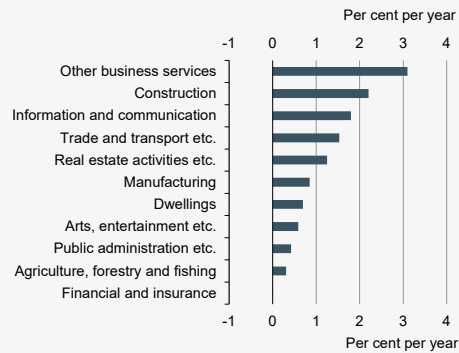
The industrial structure in a province can also affect the development in the number of actual hours worked. An explanation for this, among other things, is that the average number of hours worked per employee have developed differently across industries. Even though the average working hours has been declining in general since 2012, the decline per year has been markedly smaller in *manufacturing* (-0.2 per cent) than in e.g. *construction* (-0.7 per cent) and *information and communication* (-0.6 per cent), *cf. figure 2.16*.

**Figure 2.16**

**From 2012 to 2019, the smallest decline in average hours worked across industries was in manufacturing**

**Figure 2.17**

**In the same period, the largest employment increase was in the service industries**



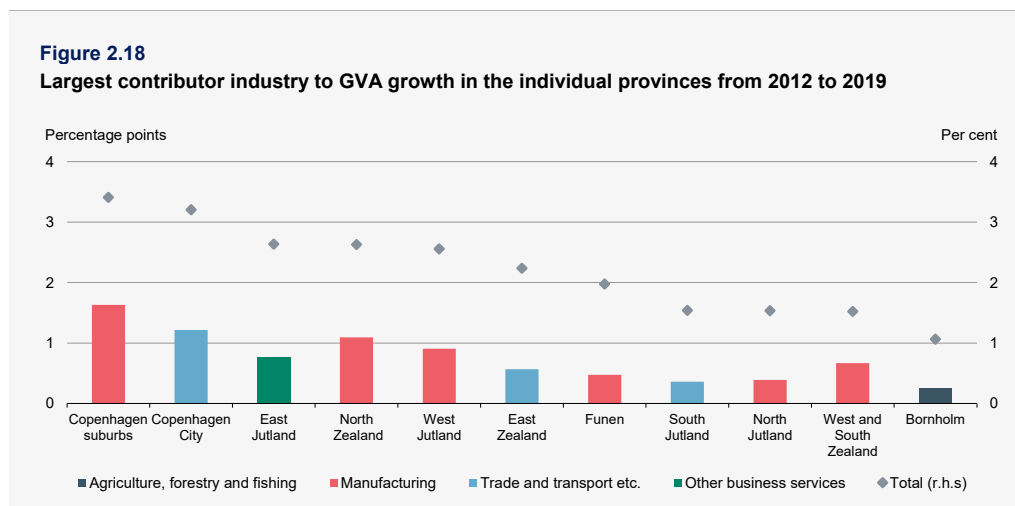
Note: Hourly productivity is measured as real GVA per hour worked. *Arts, entertainment etc.* is identical to *Arts, entertainment and other services*. See also the note of figure 2.15.

Source: Statistics Denmark and own calculations.

Employment trends also differ across industries. At the national level, large annual growth rates in employment have been seen particularly in the industries *other business services* (3.1 per cent), *information and communication* (1.8 per cent) and the cyclical *construction* industry (2.2 per cent) from 2012 to 2019. At the opposite end, annual employment growth has been more subdued for e.g. *manufacturing* (0.9 per cent) and *agriculture, forestry and fishing* (0.3 per cent), cf. figure 2.17.

Thus, industrial structure of the provinces affects the development in all of the three constituents of GVA (employment, actual hours worked per employee and hourly productivity).

In each province, GVA growth can be broken into contributions of individual industries as shown in figure 2.2 above. For a number of provinces, *manufacturing* was the largest contributor to growth from 2012 to 2019. This is because of the generally high productivity growth in manufacturing as well as the large GVA share of manufacturing in every province – with the exception of *Copenhagen City*. Thus, *manufacturing* was a key driver of growth in both *Funen*, *North Jutland*, *West Jutland* and particularly *Copenhagen suburbs*, *West and South Zealand* and *North Zealand*, where almost half of GVA growth came from *manufacturing*. In *Copenhagen City*, *East Zealand* and *South Jutland*, the largest growth contribution came from *trade and transportation etc.*, cf. figure 2.18.



Note: Sorted based on total real GVA growth as shown in figure 2.2. The 10a3-grouping applies. *Trade and transport etc.* includes hotels and restaurants.

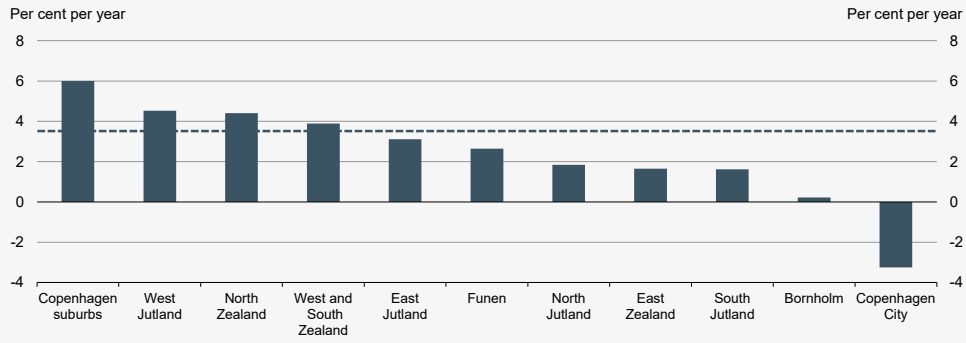
Source: Statistics Denmark and own calculations.

## 2.5 Differences in the composition of manufacturing

Hence, from 2012 to 2019, manufacturing made a significant contribution to growth in GVA in many provinces. However, manufacturing can reflect different activities in different provinces, i.e. there are rather large differences in composition of the manufacturing industry.

This composition has an effect on growth in hourly productivity in manufacturing across provinces. For instance, since 2012, *Copenhagen suburbs*, *West Jutland* and *North Zealand* have all seen growth rates above 4 per cent per year, while productivity progress has been under 3 per cent per year in several other provinces, cf. figure 2.19. In *Copenhagen City*, hourly productivity even declined in the period. However, the *level* of productivity in manufacturing in *Copenhagen City* was approximately on par with the national average in 2019, so the decline should be seen in the context of a high level in 2012. In addition to this, the negative evolution in productivity could be due to the departure of one or more highly productive firms from the city in the period.

**Figure 2.19**  
**Cross-province differences in growth in hourly productivity in manufacturing from 2012 to 2019**



Note: Hourly productivity is defined as real GVA per hour worked. The dashed curve shows average yearly productivity growth in manufacturing for the whole country in the period from 2012 to 2019.

Source: Statistics Denmark and own calculations.

As mentioned, differences in the rate of productivity growth across provinces should be seen in the context of the composition of manufacturing. The manufacturing industry is a very broad category that covers e.g. manufacture of food products (bakeries and butcheries), electronics, toys, furniture and pharmaceuticals. Productivity growth varies vastly across these subindustries. The pharmaceutical industry has had an especially fast growth in hourly productivity during the period, cf. figure 2.20.

**Figure 2.20**  
**The pharmaceutical industry has seen higher productivity growth than other manufacturing industries from 2012 through 2019**



Note: Hourly productivity is defined as real GVA per hour worked. The 69-grouping applies. Omitted from the figure are oil refinery etc. where productivity growth was significantly negative in the period. Negative productivity can reflect a number of factors e.g. a change in the character of the industry.

Source: Statistics Denmark and own calculations.

In addition to this, its share of the aggregate Danish economy increased significantly from 2012 to 2019, regardless whether employment, GVA or investments are considered.

The pharmaceutical industry is highly concentrated in *Copenhagen suburbs*, *North Zealand* and to a lesser extent in *West and South Zealand*. This is part of the explanation of why productivity growth was high in these provinces.

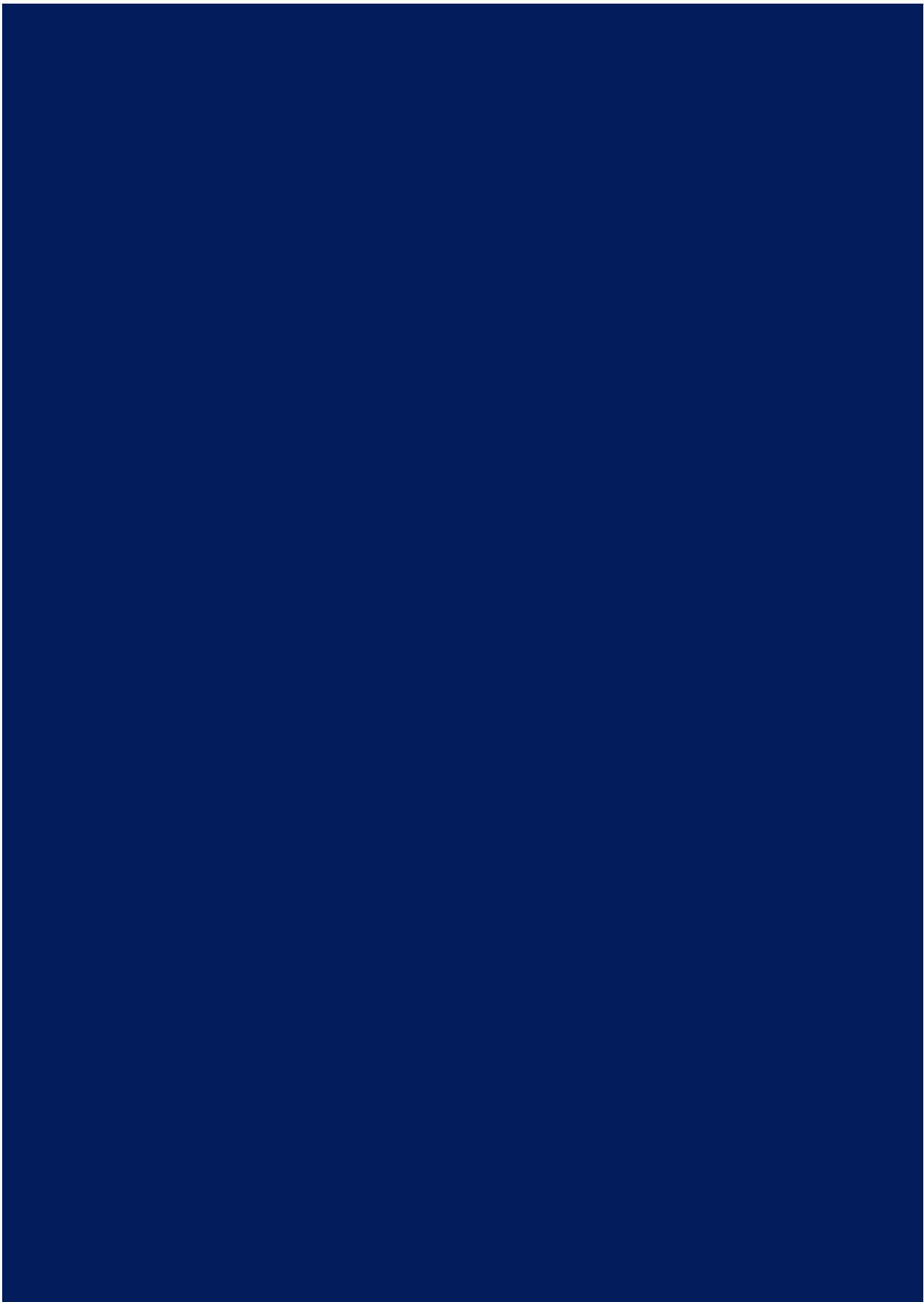
In other provinces, other industries dominate manufacturing. For instance, the manufacturing of food, beverages and tobacco looms relatively large in North Jutland, South Jutland, West and South Zealand and on Bornholm, while manufacture of machinery has a significant presence in West Jutland, East Jutland and on Funen.

The composition of the manufacturing industry also changes over time. For instance, during the considered period Bornholm has seen an increase in the share of the manufacture of plastic, glass and concrete, while the share of the manufacture of basic metals and fabricated metal products has been on the rise in West Jutland.

The geographic concentration of similar firms is also called clustering. Thus, the pharmaceutical industry around the capital is a cluster. Clusters of firms tend to be self-reinforcing because of spill over effects (for instance the concentration of qualified workers or the easier diffusion of knowledge and ideas).

Specialisation is not a process, which is only at work regionally within a country. It also operates across country borders. In comparison with other European countries, there are signs that Denmark has specialised in more manufacturing industries as the manufacture of food and pharmaceuticals cf. *Economic Survey, December 2020, chapter 2*.







# Annex 2.1

## Industry composition of GVA for individual provinces in 2019

**Annex table 2.1**

**Industry composition of GVA for individual provinces in**

Province	Largest industry	Second largest industry	Third largest industry
Bornholm	Trade and transportation (17.6 per cent)	Dwellings (14.8 per cent)	Manufacturing (10.5 per cent)
Copenhagen City	Trade and transportation (22.3 per cent)	Other business services (14.7 per cent)	Information and communication (12.2 per cent)
Funen	Trade and transportation (16.2 per cent)	Manufacturing (13.1 per cent)	Dwellings (10.3 per cent)
Copenhagen Suburbs	Manufacturing (24.9 per cent)	Trade and transportation (21.1 per cent)	Other business services (12.2 per cent)
North Jutland	Trade and transportation (16.4 per cent)	Manufacturing (16 per cent)	Dwellings (10.6 per cent)
North Zealand	Trade and transportation (21.2 per cent)	Manufacturing (19.1 per cent)	Other business services (10 per cent)
South Jutland	Trade and transportation (22.9 per cent)	Manufacturing (19.2 per cent)	Dwellings (8.5 per cent)
West and South Zealand	Manufacturing (18.5 per cent)	Trade and transportation (14.5 per cent)	Dwellings (12.9 per cent)
West Jutland	Manufacturing (23.1 per cent)	Trade and transportation (17 per cent)	Dwellings (8.9 per cent)
East Jutland	Trade and transportation (20 per cent)	Other business services (12.5 per cent)	Manufacturing (12.4 per cent)
East Zealand	Trade and transportation (21.7 per cent)	Manufacturing (11.3 per cent)	Dwellings (9.5 per cent)

Note: GVA in current prices. The industries mining and quarrying, utilities, public administration and education and health are excluded (the 10a3-industry level categories from Statistics Denmark has been used). *Trade and transportation etc.* Also encompass hotels and restaurants.

Source: Statistics Denmark and own calculations.

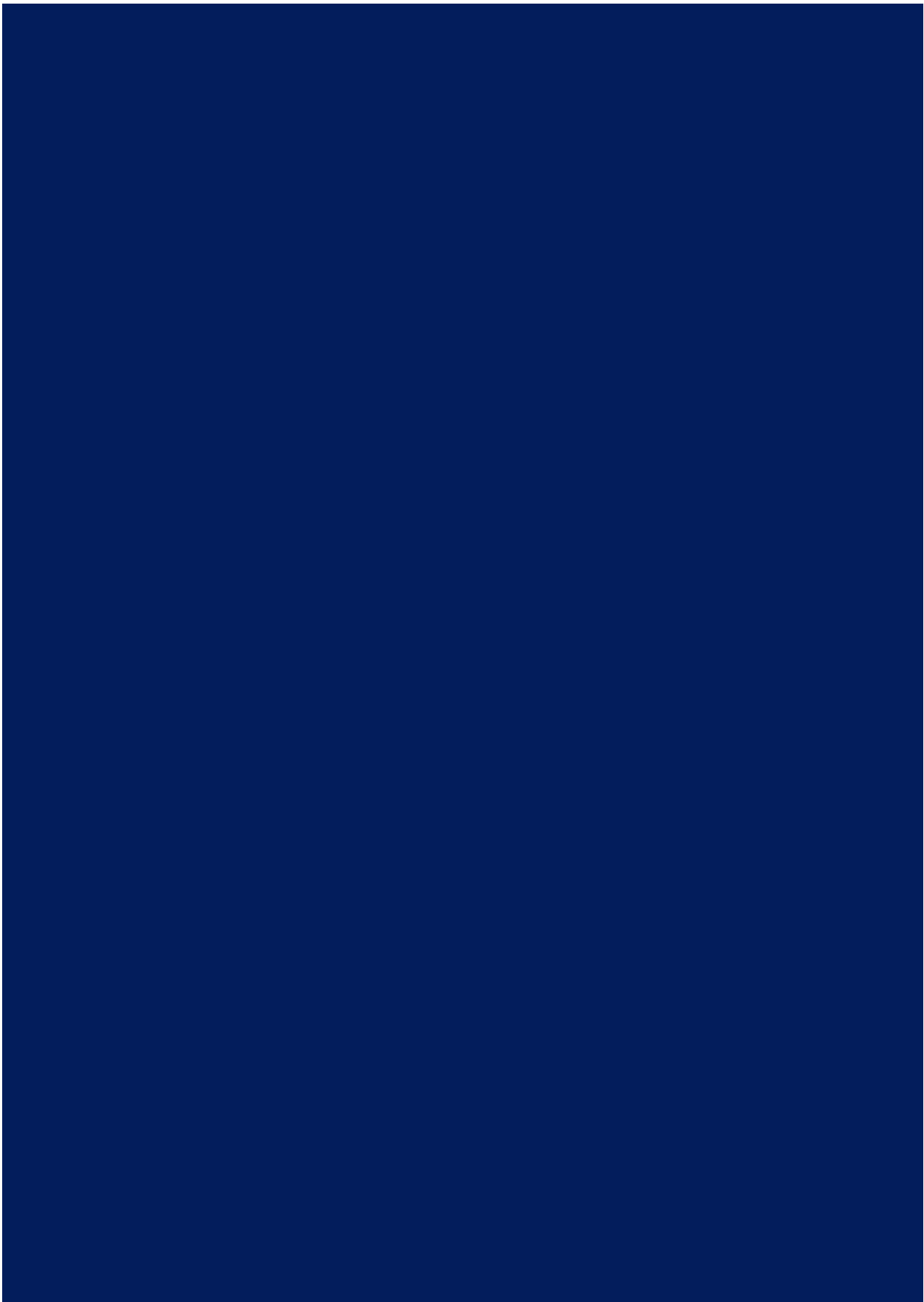
**Annex table 2.2****Relative industry deviation in contributions to GVA in 2019 for individual provinces**

Province	Largest 'positive' deviation	Second largest 'positive' deviation	Third largest 'positive' deviation
Bornholm	Dwellings (+7.3 percentage points)	Agriculture (+4.9 percentage points)	Construction (+1 percentage points)
Copenhagen City	Information and communication (+7.5 percentage points)	Financial and insurance (+5.2 percentage points)	Other business services (+4.7 percentage points)
Funen	Dwellings (+2.7 percentage points)	Construction (+2.3 percentage points)	Real estate activities (+1.8 percentage points)
Copenhagen Suburbs	Manufacturing (+9.7 percentage points)	Financial and insurance (+3.1 percentage points)	Other business services (+2.2 percentage points)
North Jutland	Dwellings (+3 percentage points)	Construction (+2.2 percentage points)	Agriculture (+2 percentage points)
North Zealand	Manufacturing (+4 percentage points)	Trade and transportation (+1.6 percentage points)	Dwellings (+1.4 percentage points)
South Jutland	Manufacturing (+4.1 percentage points)	Trade and transportation (+3.2 percentage points)	Agriculture (+1 percentage points)
West and South Zealand	Dwellings (+5.4 percentage points)	Manufacturing (+3.3 percentage points)	Construction (+1.7 percentage points)
West Jutland	Manufacturing (+8 percentage points)	Agriculture (+2.6 percentage points)	Construction (+1.9 percentage points)
East Jutland	Other business services (+2.5 percentage points)	Construction (+0.9 percentage points)	Dwellings (+0.7 percentage points)
East Zealand	Trade and transportation (+2 percentage points)	Dwellings (+1.9 percentage points)	Construction (+1.3 percentage points)

Note: See note to annex table 2.1.

Source: Statistics Denmark and own calculations.





# Annex tables

**Table B.1**  
**Demand, import and production**

	2020	2021	2022	2020	2021	2022	2020	2021	2022
	DKK bn.			Volume, per cent			Prices, per cent		
Private consumption	1,071	1,119	1,183	-1.3	3.2	4.1	0.5	1.3	1.5
Public consumption <sup>1)</sup>	574	607	602	0.2	4.7	-1.8	2.8	0.9	1.1
Public investments <sup>2)</sup>	83	88	87	9.8	3.8	-1.6	0.8	1.7	0.9
Residential investment	129	149	153	10.1	13.2	1.5	0.9	1.7	1.3
Fixed business investment	309	323	343	2.0	2.4	5.3	0.0	2.4	0.6
Domestic demand excl. inventory investment	2,169	2,290	2,371	0.0	4.1	2.3	1.6	1.4	1.2
Inventory investment <sup>3)</sup>	10,4	10,4	11,2	-0.1	0.0	0.0			
<b>Total domestic demand</b>	<b>2,179</b>	<b>2,300</b>	<b>2,382</b>	<b>0.0</b>	<b>4.1</b>	<b>2.3</b>	<b>1.6</b>	<b>1.4</b>	<b>1.2</b>
Exports of goods and services	1,278	1,411	1,507	-7.0	7.1	5.8	0.5	3.0	1.0
Total demand	3,458	3,711	3,890	-2.7	5.2	3.7	1.2	2.0	1.1
Imports of goods and services	1,128	1,275	1,359	-4.1	8.2	5.2	-1.7	4.5	1.3
<b>Gross domestic product</b>	<b>2,330</b>	<b>2,436</b>	<b>2,530</b>	<b>-2.1</b>	<b>3.8</b>	<b>2.8</b>	<b>2.6</b>	<b>0.8</b>	<b>1.0</b>
Taxes on products, net	302	315	320						
Gross value added	2,027	2,121	2,211	-2.4	3.6	3.1	2.8	1.0	1.2
- Non-farm private sector <sup>4)</sup>	1,376	1,445	1,518	-1.9	4.3	3.8	1.2	0.7	1.1
Gross national income	2,411	2,502	2,594						

Note: The division into volume and price components is made based on a fixed price calculation in the previous year's prices.

- 1) The change in volume for public consumption is calculated using the input method. For 2021-2022, growth in public consumption using the input method is assumed to equal growth using the output method.
- 2) Public investments exclude general government net purchases of buildings, and therefore the figures will deviate from public investments in table B.7.
- 3) The volume figures reflect changes in inventories compared to GDP.
- 4) Non-farm private sector consists of manufacturing, construction and private service excl. shipping.

Source: Statistics Denmark and own calculations.

**Table B.2**  
**Interest rates, oil price and exchange rates and external assumptions**

Interest rates, per cent		2018	2019	2020	2021	2022
USA	Federal Funds Target Rate	1.9	2.3	0.5	0.3	0.3
	3-month LIBOR	2.3	2.3	0.7	0.2	0.2
	10-year government bond	2.9	2.1	0.9	1.5	1.8
Euro area	Main Refinancing Operations Rate	0.0	0.0	0.0	0.0	0.0
	3-month EURIBOR	-0.3	-0.4	-0.4	-0.5	-0.5
	10-year government bond (Germany)	0.5	-0.2	-0.5	-0.4	-0.3
Denmark	Certificates of deposit rate	-0.7	-0.7	-0.6	-0.5	-0.5
	3-month CIBOR	-0.3	-0.4	-0.2	-0.2	-0.2
	1-year adjustable mortgage rate	-0.5	-0.6	-0.5	-0.5	-0.3
	10-year government bond	0.5	-0.2	-0.4	-0.1	-0.1
	30-year mortgage interest rate	2.1	1.6	1.2	1.2	1.5
<b>Oil price</b>						
Dollar per barrel		71.1	64.4	42.6	68.8	70.4
DKK per barrel		448.7	429.2	278.6	426.1	443.2
<b>Exchange rate</b>						
DKK per 100 dollar		631.5	666.9	654.2	619.5	629.6
DKK per 100 euro		745.3	746.6	745.4	743.7	743.8
Effective Krone Rate Index (1980=100)		103.6	102.9	102.9	104.4	104.1
<b>Real growth, per cent</b>						
<b>External assumptions</b>						
Export market growth <sup>1)</sup> , per cent		3.9	1.4	-8.5	7.1	6.2
Trade weighted GDP-growth <sup>2)</sup> , per cent		2.4	1.7	-4.0	4.5	4.1

Note: The projections are based on data through August 2, 2021. Annual averages are own calculations. For monetary policy interest rates, the estimate is based on an assessment of the latest announcements by central banks and market expectations. For money market rates and the yield on 10-year government bonds, estimates are based on market expectations, which are based on the prices of swap interest rates. For the 1-year and 30-year mortgage rate, historical data is from Finans Danmark and the forecast is based on spreads to the 3-month money market rate and the 10-year government bond rate respectively. Projections for exchange rates are made by assuming that the exchange rate corresponds to the average during the last ten days prior to the estimation for the remainder of the forecast period. Estimates for the oil price are based on scenario from the International Energy Agency, World Energy Outlook, October 2020, and futures prices.

- 1) Calculated as the weighted average of import growth in Denmark's 36 most important trade partners. The weights reflect the countries' share of Danish manufacturing exports in 2019.
- 2) Calculated as the weighted average of the GDP-growth in Denmark's 36 most important trade partners. The weights reflect the countries share of Danish export of goods and services in 2019.

Source: Macrobond, Nordea Markets, The International Energy Agency, European Commission (European Economic Forecast Summer 2021) and own calculations.

**Table B.3**  
**Population and labour market**

	2018	2019	2020	2021	2022
<b>1,000 persons</b>					
Total population	5,794	5,814	5,831	5,849	5,870
- Labour force	3,068	3,105	3,113	3,136	3,159
- Total employment	2,963	3,003	2,982	3,024	3,057
- Ordinary employment <sup>1)</sup>	2,879	2,914	2,833	2,927	2,955
- Subsidised employment <sup>2)</sup>	84	89	90	97	102
- Gross unemployment (incl. activation) <sup>3)</sup>	108	104	133	114	104
- Net unemployment	87	86	120	96	89
- Outside the labour force	2,725	2,710	2,718	2,713	2,711
- Recipients of unemployment benefits and cash benefits in activation outside the labour force	103	97	92	98	97
- Disability pensioners outside the labour force	178	183	192	205	214
- Voluntary early retirement	49	46	48	51	34
- Persons under 15 years	959	955	951	946	942
- Pensioners outside the labour force	989	989	971	959	947
- Others outside the labour force	447	440	464	453	477

Note: Recipients of education assistance benefit, the special education benefit and other temporary benefits (kontantydelse) are included as cash benefit recipients.

- 1) Calculated as the difference between employment as determined in the national accounts and subsidised employment, which is based on data from AMFORA. Due to differences in the definition of employment in the two sources, the data is subject to a degree of uncertainty.
- 2) Includes persons in employment with wage subsidies (including flexi-jobs and sheltered jobs).
- 3) The number of unemployment benefit recipients in activation and labour-market-ready cash benefit recipients includes persons in subsidised employment.

Source: Statistics Denmark and own calculations.

Annex tables

**Table B.4**  
**Employment by industry incl. leave**

	2018	2019	2020	2021	2022
<b>1,000 persons</b>					
Employment, total	2,963	3,003	2,982	3,024	3,057
- Service industries	1,558	1,583	1,562	1,576	1,601
- Construction	188	192	195	205	209
- Manufacturing	305	311	304	305	312
- Agriculture	70	68	70	69	69
- Public sector	824	830	833	849	846

Note.: The industry division is based on the definition in the ADAM model, which are not identical to that of the national accounts.

Source: Statistics Denmark and own calculations.

**Table B.5**  
**Unemployment**

	2018	2019	2020	2021	2022
<b>1,000 persons</b>					
Gross unemployment	108	104	133	114	104
- per cent of workforce	3.5	3.4	4.3	3.6	3.3
Net unemployment	87	86	120	96	89
LFS unemployment (per cent)	5.3	5.1	5.8	5.4	4.9

Note.: Differences in the definition of the labour force between the Ministry of Finance and Statistics Denmark mean that the gross unemployment rate in per cent of the workforce is estimated at a lower level.

Source: Statistics Denmark and own calculations.



**Table B.6**  
**Benefit recipients etc.**

	2018	2019	2020	2021	2022
<b>1,000 persons</b>					
Unemployment benefits (excl. activation)	69	71	102	85	78
Cash benefits (excl. activation)	87	80	85	78	80
Recipients of unemployment benefits and cash benefits in activation <sup>1)</sup>	34	34	24	33	30
Holiday benefit	5	4	3	1	1
Disability pensioners <sup>2)</sup>	199	203	214	228	238
Resource assessment benefit	37	38	36	35	38
Early Retirement Pay	49	46	48	51	34
Early retirement	0	0	0	0	24
Flexi-job scheme benefit	3	3	3	3	3
Revalidation benefit <sup>3)</sup>	4	3	3	2	2
Sickness benefit <sup>4)</sup>	57	59	75	69	63
Maternity leave	50	50	51	47	46
Benefit for unemployed	15	16	18	18	18
Self-support, home-travelling and transitional benefits <sup>5)</sup>	17	13	12	12	10
<b>Total</b>	<b>627</b>	<b>621</b>	<b>673</b>	<b>663</b>	<b>666</b>
Student grant (SU)	328	322	318	317	317
<b>Total, incl. SU</b>	<b>954</b>	<b>943</b>	<b>991</b>	<b>980</b>	<b>983</b>
Pensioners	1,147	1,145	1,124	1,109	1,096
<b>Total, incl. SU and pensioners</b>	<b>2,102</b>	<b>2,088</b>	<b>2,115</b>	<b>2,089</b>	<b>2,079</b>
Subsidized employment <sup>6)</sup>	84	89	90	97	102
<b>Total, incl. SU, pensioners and subsidised employment</b>	<b>2,185</b>	<b>2,176</b>	<b>2,205</b>	<b>2,186</b>	<b>2,181</b>

Note: Recipients of education assistance benefit, the special education benefit and other temporary benefits (kontantydelse) are included as cash benefit recipients.

- 1) The data does not cover persons in subsidized employment and thereby differs from other register-based data and table B.4. Furthermore, both labour market ready and non-labour market ready cash benefit recipients are included in the group of recipients of unemployment benefits and cash benefits in activation schemes.
- 2) Disability and old age pension include pensioners living abroad as well as pensioners, who are employed.
- 3) Excl. persons on revalidation with wage support.
- 4) The number of sickness benefit recipients does not reflect the total absence due to illness. It includes the part of the sickness absence, which is not covered by the employer. Specifically, this covers sick-ness absences longer than 30 days as well as sickness among the unemployed.
- 5) The number of self-support and home-travelling as well as transitional benefits are calculated excl. recipients of wage subsidies.
- 6) Includes persons in employment with wage subsidies (including flexi-jobs and sheltered jobs).

Source: Statistics Denmark, DREAM and own calculations.

Annex tables

**Table B.7**  
**Gross investments**

	2020	2018	2019	2020	2021	2022
	DKK bn.	Real growth rate, per cent				
<b>Gross fixed capital formation</b>	521	4.2	0.1	5.1	5.4	3.2
<i>divided into group:</i>						
- Residential investments	129	4.8	4.7	10.1	13.2	1.5
- Public investments <sup>1)</sup>	83	2.3	-3.9	10.1	4.7	-2.0
- Total business investments	309	4.4	-0.6	2.0	2.4	5.3
- Construction investment	91	2.6	1.7	11.9	2.9	2.6
- Tangible and intangible investments	218	5.2	-1.3	-1.5	2.2	6.5

1) Public investments are incl. public acquisitions of buildings, which is why numbers differ from what is stated in Table B.1.

Source: Statistics Denmark and own calculations.

**Table B.8**  
**Balance of payments**

	2018	2019	2020	2021	2022
<b>DKK bn.</b>					
Goods exports	753	810	780	864	904
Goods imports	690	705	675	783	811
<b>Goods balance, total</b>	64	105	105	82	93
Service exports	521	558	498	546	603
Service imports	446	492	453	492	548
<b>Service balance, total</b>	74	66	45	54	55
Balance of goods and services	138	171	150	136	148
- Per cent of GDP	6.1	7.4	6.5	5.6	5.8
Investment income from abroad, net	71	75	90	75	73
Wage income from abroad, net	-13	-13	-12	-13	-13
EU payments, net	-14	-13	-16	-12	-12
Other current transfers from abroad, net	-19	-18	-19	-20	-21
Net transfers from abroad, total	26	32	42	30	27
Current account, total	164	203	192	165	175
- Per cent of GDP	7.3	8.8	8.2	6.8	6.9
Net assets against other countries	1,480	1,795	1,595	2,312	2,867
- Per cent of GDP	65.7	77.4	68.5	94.9	113.3

Source: Statistics Denmark and own calculations.

**Table B.9**  
**Export and imports**

	2020	2018	2019	2020	2021	2022
	DKK bn.	Real growth rate, per cent				
<b>Exports</b>						
Goods, total	780	1.6	7.7	-2.2	8.1	3.3
- Agricultural goods etc.	125	-1.9	2.2	0.9	2.0	1.0
- Industrial goods (excl. ships etc.)	605	2.7	10.4	-1.9	9.8	4.4
- Other goods <sup>1)</sup>	50	-1.1	-3.7	-9.8	2.7	-5.2
Services, total	498	6.1	1.2	-14.0	5.6	9.9
- Sea transport	237	4.3	2.6	-6.5	5.5	2.0
- Other services	234	8.7	0.4	-11.8	2.7	13.9
<b>Total</b>	<b>1.278</b>	<b>3.4</b>	<b>5.0</b>	<b>-7.0</b>	<b>7.1</b>	<b>5.8</b>
<b>Imports</b>						
Goods, total	675	3.3	2.4	-1.5	10.7	2.1
- Agricultural goods etc.	85	3.4	3.5	-7.3	6.1	2.2
- Industrial goods (excl. ships etc.)	459	0.4	5.6	-0.1	11.7	2.5
- Other goods <sup>2)</sup>	130	11.7	-5.5	-2.2	10.4	1.0
Services, total	453	8.0	3.7	-7.8	4.3	10.2
<b>Total</b>	<b>1.128</b>	<b>5.1</b>	<b>3.0</b>	<b>-4.1</b>	<b>8.2</b>	<b>5.2</b>
<b>Memo</b>						
		Nominal growth rate, per cent				
Export of basic goods <sup>3)</sup>	758	2.0	8.9	-1.5	10.4	4.9
<b>Export prices</b>						
		Change, per cent				
Goods, total		1.1	-0.2	-1.5	2.5	1.3
Services, total		3.5	5.8	3.9	3.8	0.5
<b>Total</b>		<b>2.1</b>	<b>2.2</b>	<b>0.5</b>	<b>3.0</b>	<b>1.0</b>
<b>Import prices</b>						
Goods, total		2.5	-0.3	-2.8	4.7	1.5
Services, total		3.5	6.1	0.0	4.1	1.0
<b>Total</b>		<b>2.9</b>	<b>2.3</b>	<b>-1.7</b>	<b>4.5</b>	<b>1.3</b>

**Table B.10**  
**Private consumption**

	2020	2018	2019	2020	2021	2022
	DKK bn.		Real growth rate, per cent			
<b>Total consumption</b>	<b>1,071</b>	<b>3.5</b>	<b>1.2</b>	<b>-1.3</b>	<b>3.2</b>	<b>4.1</b>
Retail trade goods	372	3.7	1.5	6.1	4.8	-1.9
- Food, drinks and tobacco	166	1.9	0.8	4.0	1.7	-0.5
- Other goods	205	5.2	2.0	7.9	7.4	-2.9
Purchase of vehicles	46	13.4	4.2	0.8	-2.9	8.3
Electricity, fuels and gas	45	2.7	-3.9	-7.4	10.5	-9.5
Gasoline and similar	21	0.8	-0.8	-11.8	3.3	-0.4
Housing	247	2.5	1.4	1.2	2.1	2.1
Other services	344	3.1	1.4	-11.4	1.6	15.0
Tourist expenditures	24	1.6	-0.4	-45.8	40.0	30.0

Source: Statistics Denmark and own calculations.

**Table B.11**  
**Net lending by sectors**

	2018	2019	2020	2021	2022
<b>DKK bn.</b>					
Private sector, total	147	110	205	212	165
- Households	37	1	26	36	29
- Corporations	110	108	179	175	136
- Non-financial corporations	75	61	125	146	127
- Financial corporations	34	47	54	29	8
General government	17	94	-14	-47	10
<b>Total</b>	<b>164</b>	<b>204</b>	<b>191</b>	<b>165</b>	<b>174</b>

Note: Net lending of general government corresponds to the general government budget balance. The total (except for typically small net capital transfers from abroad) corresponds to the current account balance, cf. table B.8.

Source: Statistics Denmark and own calculations.

Annex tables

**Table 12**  
**Gross value added (GVA)**

	2020	2018	2019	2020	2021	2022
	Share, per cent	Real growth rate, per cent				
Total GVA	100	1.7	2.2	-2.4	3.6	3.1
Public sector	21	-0.6	2.2	-4.5	2.4	0.3
Private sector	79	2.4	2.2	-1.8	3.9	3.8
Private sector excl. mining and quarrying	79	2.6	2.6	-1.6	3.9	3.9
Non-farm private sector <sup>1)</sup>	68	2.6	1.9	-1.9	4.3	3.8

1) Non-farm private sector consists of manufacturing, construction and private services excl. shipping.  
Source: Statistics Denmark and own calculations.

**Table B.13**  
**Hourly productivity in selected industries**

	Gns. 1995-2020	2018	2019	2020	2021	2022
<b>Real growth rate, per cent</b>						
Total	1.2	2.0	1.5	0.5	1.8	1.0
Public sector	0.6	-0.9	1.8	-2.6	-0.4	-0.5
Private sector	1.3	2.7	1.4	1.3	2.5	1.2
Private sector excl. mining and quarrying	1.5	3.0	1.8	1.6	2.5	1.2
Non-farm private sector <sup>1)</sup>	1.3	2.7	1.0	1.5	2.7	1.1

Note: Hourly productivity is defined as gross value added in constant prices relative to the total number of hours.  
1) Non-farm private sector consists of manufacturing, construction and private services excl. shipping.  
Source: Statistics Denmark and own calculations.

**Table B.14**  
**Contributions to growth in households' real disposable income<sup>1)</sup>**

	2018	2019	2020	2021	2022
<b>Real growth rate, per cent</b>					
Disposable income <sup>2)</sup>	2.4	2.7	0.1	2.0	2.2
<b>Contribution, percentage points</b>					
Compensation of employees <sup>3)</sup>	2.7	2.8	1.3	2.5	1.4
Social benefits	0.1	0.6	1.6	-0.2	-0.3
Income taxes	-1.1	-1.4	-2.1	0.1	0.2
Net interest income	0.1	0.3	0.2	0.0	0.0
Dividend etc. <sup>4)</sup>	0.3	0.3	-0.8	0.1	0.5
Pension contribution	0.3	-1.4	-0.4	-0.4	-0.1
Payment from pension schemes <sup>5)</sup>	0.2	0.3	0.1	-0.1	0.3
Others <sup>6)</sup>	-0.1	1.3	0.2	0.1	0.2

1) The households in the Economic Survey include the NPISH-sector.

2) Disposable income is calculated incl. taxation on payments of frozen holiday funds.

3) Covering only employees residing in Denmark.

4) Incl. dividends from investment funds.

5) Occupational pensions etc. (but not individual pension schemes in banks, etc.)

6) Including self-employed.

Source: Statistics Denmark and own calculations.

**Table B.15**  
**Households' net lending<sup>1)</sup>**

	2018	2019	2020	2021	2022
<b>DKK bn.</b>					
Disposable gross income <sup>2)</sup>	1,100	1,138	1,144	1,183	1,227
Private consumption	1,059	1,080	1,071	1,119	1,183
Gross investment <sup>3)</sup>	106	113	122	137	143
Net capital transfers <sup>4)</sup>	10	-1	4	6	12
<b>Direct net lending</b>	<b>-55</b>	<b>-57</b>	<b>-44</b>	<b>-67</b>	<b>-87</b>
Adjustment for the change in pension entitlements <sup>5)</sup>	92	58	70	104	116
<b>Net lending<sup>6)</sup></b>	<b>37</b>	<b>1</b>	<b>26</b>	<b>36</b>	<b>29</b>
<b>Per cent of disposable gross income</b>					
Direct net lending	-5.0	-5.0	-3.9	-5.7	-7.1
Net lending	3.4	0.1	2.3	3.1	2.4

1) The households in the Economic Survey include the NPISH-sector.

2) Disposable income is calculated incl. taxation on payments of frozen holiday funds.

3) Households' gross investments include investments in owner-occupied housing and investments in buildings and materials by sole proprietors.

4) Net capital transfers in 2020 and 2021 include refunded property taxes to owner-occupied property owners.

5) Net payment to and return (excl. tax on pension yield) of household capital in life insurance companies and pension funds.

6) Household acquisition (net) of financial assets (incl. shares) in other sectors.

Source: Statistics Denmark and own calculations.



**Table B.16**  
**Real estate market and construction**

	2018	2019	2020	2021	2022
<b>Per cent</b>					
Increase in the price of traded single-family houses <sup>1)</sup>	3.8	3.0	4.5	13.1	3.8
Housing gross investment (real growth)	4.8	4.7	10.1	13.2	1.5

1) The increase is adjusted for developments in the volume of housing sales.  
Source: Statistics Denmark and own calculations.

**Table B.17**  
**Labour wage ratio, wage increases and computational preconditions**

	2018	2019	2020	2021	2022
<b>Labour wage ratio, per cent</b>					
Private sector	57.1	57.2	57.8	57.1	56.2
The entire economy	63.0	63.0	63.8	63.2	62.3
<b>Wage increase, per cent</b>					
Private sector					
- Hourly earnings (excl. nuisance bonus)	2.3	2.5	1.9	2.6	2.8
Public sector					
- Hourly earnings (excl. nuisance bonus) <sup>1)</sup>	1.9	2.2	2.5	-	-
- Budgetary impact	1.6	1.8	2.5	1.3	1.9
Wage adjustment rate, per cent <sup>2)</sup>	2.0	2.0	2.0	2.0	1.2

Note: The labour income ratio is calculated as aggregated labour income relative to the GVA (gross value added) and adjusted for the number of self-employed. The hourly wage increases in the private sector in 2018-2020 are published by The Confederation of Danish Employers. The hourly wage increases in the public sector are a weighted average of wage indices for the state, the municipalities and the counties, all reported by Statistics Denmark. No estimates are made on the development in public sector hourly earnings. The budgetary impact is based on the contractually agreed wage increases including contributions from the adjustment scheme (reguleringsordningen) but excluding any residual increases. The hourly wage increases for the private and public sectors are not comparable.

- 1) The estimated rate of increase in hourly earnings in the public sector in 2018 is affected by a technically relatively low wage increase in Q2 2018 compared to the agreed wage increases. This is because the wage increase agreed by April 1 2018 has been implemented retroactively in the wages for June 2018, while Statistics Denmark calculates Q2 wages on the basis of information about May.
- 2) The wage adjustment rate stated for 2018-2021 is the announced wage adjustment rate, while 2022 is an estimate.

Source: The Confederation of Danish Employers, Statistics Denmark, and own calculations.

**Table B.18**  
**Price developments and explanatory factors**

	2018	2019	2020	2021	2022
<b>Change, per cent</b>					
Net price index	0.9	0.9	0.4	1.6	1.6
Tariffs and housing benefits, contribution	-0.1	-0.1	0.0	-0.3	-0.1
Consumer price index	0.8	0.8	0.4	1.3	1.5
HICP	0.7	0.7	0.3	1.3	1.5

Note.: The contribution from tariffs and housing benefits is computed as the difference between the consumer price inflation and the net price inflation. Changes in the prices of taxed goods such as energy can therefore influence the contribution from taxes, even though the tax level remains unchanged.

Source: Statistics Denmark and own calculations.

**Table B.19**  
**Public finances**

	2018	2019	2020	2021	2022
<b>DKK bn.</b>					
Public consumption	547.0	557.7	574.5	607.0	602.5
Income transfers <sup>1)</sup>	356.2	365.2	386.1	388.3	390.1
Investments	75.6	75.0	83.0	87.6	87.0
Interest expenditures	18.0	17.0	12.7	18.0	13.0
Subsidies	38.1	38.0	68.0	72.2	41.8
Other expenditures <sup>2)</sup>	80.8	71.8	102.9	98.5	87.4
<b>Total expenditure<sup>3)</sup></b>	<b>1,115.7</b>	<b>1,124.5</b>	<b>1,227.2</b>	<b>1,271.6</b>	<b>1,221.8</b>
Personal income taxes, etc. <sup>4)</sup>	465.5	487.4	507.3	509.0	513.2
Labour market contributions	98.3	100.8	105.5	108.7	109.5
Pension yield taxation	13.3	63.4	48.0	29.8	24.8
Corporate taxes	62.1	72.7	61.1	62.8	65.4
VAT	217.6	222.7	230.5	240.5	246.1
Other duties	147.0	145.0	144.6	148.2	151.2
Other taxes <sup>5)</sup>	5.6	4.5	4.0	2.2	1.0
Interest revenues	26.3	24.1	20.7	26.7	22.5
Other revenues <sup>6)</sup>	100.4	101.1	94.5	100.6	101.0
Tariffs etc. to the EU	-3.2	-3.1	-3.1	-3.4	-3.5
<b>Total revenue<sup>7)</sup></b>	<b>1,132.8</b>	<b>1,218.7</b>	<b>1,213.2</b>	<b>1,225.0</b>	<b>1,231.3</b>
<b>General government budget balance</b>	<b>17.1</b>	<b>94.2</b>	<b>-14.0</b>	<b>-46.6</b>	<b>9.5</b>
Net interest expenditure	-8.3	-7.1	-8.0	-8.7	-9.5
General government primary balance <sup>8)</sup>	8.9	87.1	-22.0	-55.3	0.0

## Annex tables

- 1) Income transfers exclude other regular transfers to households such as mileage allowance and index supplement.
- 2) Other expenditures include capital transfers, transfers to the Faroe Islands and Greenland and the Danish EU-contributions.
- 3) Total expenditure differs from Statistics Denmark's equivalent. Total expenditure is calculated from a definition of the total expenditure, where all sub-elements of public consumption – e.g. imputed expenditure from depreciation and revenue from sales of goods and services – are defined as expenditures.
- 4) Personal income taxes include withholding taxes, tax on imputed income from owner-occupied dwellings, specific taxes from households, tax on estates of deceased persons and other personal taxes.
- 5) Other taxes include media license and mandatory pension payments for civil servants.
- 6) Other revenues include profits from public enterprises, current and capital transfers from other domestic sectors and the EU, and imputed (calculated) revenues such as contributions to civil servants' earned pension. Moreover, revenues from oil and gas explorations in the North Sea, duty on pipelines, and the hydrocarbon tax are included in other revenues..
- 7) Total revenue differs from Statistics Denmark's equivalent, where the sales of public goods and services are counted as revenue and not – like here – counted as a part of the total expenditures. Furthermore, total revenue here includes a revenue-counterpart to the imputed depreciation expenditures included in public consumption
- 8) The general government primary balance states the balance of the general government finances before net interest expenditures..

Note: Statistics Denmark and own calculations.

**Table B.20**  
**Taxes and tax burden**

DKK bn.	2018	2019	2020	2021	2022
<b>Indirect taxes</b>	<b>361.4</b>	<b>364.6</b>	<b>372.0</b>	<b>385.3</b>	<b>393.8</b>
- VAT	217.6	222.7	230.5	240.5	246.1
- Registration tax	20.6	20.3	18.7	18.5	18.9
- Excise duties	72.2	69.0	68.8	70.0	68.3
- Energy (incl. PSO)	42.6	38.3	37.3	36.6	36.3
- Environmental	3.6	3.3	3.5	3.7	3.7
- Tobacco and spirits etc.	11.0	11.6	12.6	12.9	11.0
- Others	15.1	15.9	15.4	16.8	17.3
- Property taxes	29.6	30.6	31.6	32.6	33.3
- Motor vehicle tax paid by businesses	3.8	3.8	3.8	3.9	3.9
- Other indirect taxes	17.6	18.2	18.7	19.9	23.3
<b>Direct taxes</b>	<b>638.9</b>	<b>719.3</b>	<b>718.0</b>	<b>706.1</b>	<b>707.6</b>
- Withholding taxes <sup>1)</sup>	444.9	463.2	485.1	488.0	492.4
- State tax	156.6	163.3	173.0	175.8	176.6
- Bottom-bracket tax	126.9	143.4	151.5	154.2	155.7
- Top-bracket tax	17.5	17.6	19.0	19.3	18.4
- Health contributions	9.7	0.0	0.0	0.0	0.0
- Limited tax liability	2.4	2.3	2.5	2.4	2.5
- Total municipal tax	239.3	247.6	261.9	266.0	267.5
- Property value tax	14.5	14.6	15.0	13.3	14.0
- Other withholding taxes <sup>2)</sup>	34.6	37.7	35.2	32.9	34.3
- Pension yield tax	13.3	63.4	48.0	29.8	24.8
- Corporate tax	62.1	72.7	61.1	62.8	65.4
- Other personal taxes	8.2	8.2	8.3	8.2	8.0
- Media license	4.5	3.5	2.7	1.2	0.0
- Motor vehicle tax paid by households	7.5	7.4	7.3	7.5	7.5
- Labour market contributions	98.3	100.8	105.5	108.7	109.5
Social security contributions <sup>3)</sup>	1.1	1.0	1.4	1.0	1.0
Capital taxes	4.8	8.6	6.7	5.3	5.4
Customs and import duties (collected by the EU)	3.2	3.1	3.1	3.4	3.5
<b>Total taxes</b>	<b>1,009.4</b>	<b>1,096.6</b>	<b>1,101.1</b>	<b>1,101.1</b>	<b>1,111.3</b>
GDP	2,253.3	2,318.0	2,329.6	2,435.9	2,530.4
<b>Total taxes, share of GDP</b>	<b>44.8</b>	<b>47.3</b>	<b>47.3</b>	<b>45.2</b>	<b>43.9</b>

## Annex tables

- 1) For 2018-2020, the distribution of withholding taxes to the state and municipalities is from Statistics Denmark. For 2021-2022, an estimate is used based on the Ministry of Finance's tax base forecast.
  - 2) Includes equity income tax, tax on estates of deceased persons and revenue from the Danish business scheme etc.
  - 3) Includes mandatory pension payments for civil servants in public enterprise etc.
- Source: Statistics Denmark and own calculations.

**Table B.21**  
Development in the tax base for municipalities

	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
	DKK bn.					Per cent				
May 2017	988.0	-	-	-	-	3.5	-	-	-	-
August 2017	982.8	-	-	-	-	2.9	-	-	-	-
December 2017	990.9	1010.5	-	-	-	3.1	2.0	-	-	-
May 2018	981.2	1005.3	-	-	-	2.7	2.5	-	-	-
August 2018	979.9	1008.0	-	-	-	2.2	2.9	-	-	-
December 2018	979.2	1013.2	1045.9	-	-	1.9	3.5	3.2	-	-
August 2019	966.7	1005.7	1033.8	-	-	0.6	4.0	2.8	-	-
December 2019	966.1	1006.3	1035.9	1073.4	-	0.6	4.2	2.9	3.6	-
May 2020	965.7	1008.8	997.6	1042.7	-	0.5	4.5	-1.1	4.5	-
August 2020	965.7	1010.7	1054.6	1044.9	-	0.5	4.7	4.3	-0.9	-
December 2020	965.7	1007.3	1063.6	1070.7	1087.2	0.5	4.3	5.6	0.7	1.5
May 2021	965.7	1006.8	1060.5	1070.3	1085.6	0.5	4.3	5.3	0.9	1.4
August 2021	965.7	1006.8	1058.3	1075.5	1081.7	0.5	4.3	5.1	1.6	0.6

Note.: Rows show the time of the budgeting of the municipal tax base. The columns show the tax base in the year concerned.

Source: Statistics Denmark and own calculations.

**Table B.22**  
**Income transfers**

	2018	2019	2020	2021	2022
<b>DKK bn.</b>					
Unemployment benefits (excl. activation)	14.0	14.5	21.2	17.6	16.3
Cash benefits <sup>1)</sup> (excl. activation)	24.0	24.4	26.3	26.3	28.8
Vacation allowance	0.8	0.7	0.7	0.2	0.3
Anticipatory pensions <sup>2)</sup>	40.2	41.9	44.8	48.2	50.4
Resource rehabilitation allowance	6.5	6.7	6.3	6.0	6.4
Early retirement benefit	9.0	8.2	8.5	8.9	5.8
Rehabilitation benefit	0.9	0.8	0.6	0.5	0.4
Sickness benefit	11.4	11.9	14.1	13.9	12.4
Maternity pay	10.9	11.1	12.0	11.5	11.4
Rent benefit	14.8	15.1	15.4	15.7	15.8
Child and youth benefit	14.6	14.7	14.8	14.8	14.9
Other transfers <sup>3)</sup>	22.3	21.7	24.6	25.2	28.2
Student grants (SU)	20.7	20.7	20.9	21.7	21.2
Public pension scheme <sup>4)</sup>	136.6	142.5	144.9	146.5	146.4
Other pension schemes <sup>5)</sup>	29.6	30.2	30.8	31.4	31.5
<b>Total<sup>6)</sup></b>	<b>356.2</b>	<b>365.2</b>	<b>386.1</b>	<b>388.3</b>	<b>390.1</b>
<b>Total, excl. public and other pensions</b>	<b>190.0</b>	<b>192.5</b>	<b>210.4</b>	<b>210.4</b>	<b>212.2</b>
<b>Total, excl. education grants, public pensions and other pensions</b>	<b>169.3</b>	<b>171.8</b>	<b>189.5</b>	<b>188.7</b>	<b>191.1</b>

1) Taxable and non-taxable benefits incl. the integration benefit.

2) Incl. early retirement benefits to retired citizens in foreign countries.

3) Activation benefits, dependent child allowance, subsidy for childcare, unemployment benefits, special education benefit, green check and pay scheme for holders of flexi-jobs etc.

4) Incl. differentiated allowances and heating allowance for pensioners. Incl. pension schemes for citizens in foreign countries.

5) Civil servants in public enterprises and part-time early retirement scheme etc.

6) Income transfers exclude other regular transfers to households such as mileage allowance and index supplement.

Note: The expenditures to income transfers is not directly equivalent to the number of benefits recipients in table B.6.

Source: Statistics Denmark, DREAM and own calculations.

**Table B.23**  
Key figures estimated at different times

	Dec. 2019	May 2020	Aug. 2020	Dec. 2020	May 2021	Aug. 2021
<b>2019</b>						
GDP (real growth rate, per cent)	2.0	2.4	2.3	2.8	2.8	2.1
Gross unemployment (1.000 persons)	104	104	104	104	104	104
Consumer prices (change, per cent)	0.8	0.8	0.8	0.8	0.8	0.7
Balance of payments (DKK bn.) <sup>1)</sup>	178	183	181	207	207	203
Actual budget balance (DKK bn.)	59	85	88	88	88	94
<b>2020</b>						
GDP (real growth rate, per cent)	1.5	-5.3	-4.5	-3.8	-2.7	-2.1
Gross unemployment (1.000 persons)	105	146	147	133	133	133
Consumer prices (change, per cent)	1.2	0.2	0.3	0.5	0.4	0.4
Balance of payments (DKK bn.) <sup>1)</sup>	171	130	125	162	181	192
Actual budget balance (DKK bn.)	-6	-160	-88	-81	-27	-14
<b>2021</b>						
GDP (real growth rate, per cent)	1.4	4.0	4.2	2.8	2.4	3.8
Gross unemployment (1.000 persons)	108	138	138	126	122	114
Consumer prices (change, per cent)	1.6	1.2	1.2	1.2	1.1	1.3
Balance of payments (DKK bn.) <sup>1)</sup>	168	162	133	160	160	165
Actual budget balance (DKK bn.)	-5	-43	-56	-31	-74	-47
<b>2022</b>						
GDP (real growth rate, per cent)	-	-	-	3.1	3.6	2.8
Gross unemployment (1.000 persons)	-	-	-	119	115	104
Consumer prices (change, per cent)	-	-	-	1.6	1.5	1.5
Balance of payments (DKK bn.) <sup>1)</sup>	-	-	-	187	182	175
Actual budget balance (DKK bn.)	-	-	-	-39	-16	10

1) The current account balance.

Source: Statistics Denmark and own calculations.



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