OECD REGIONS AND CITIES AT A GLANCE - COUNTRY NOTE

DENMARK

A. Resilient regional societies

B. Regional economic disparities and trends in productivity

C. Well-being in regions

D. Industrial transition in regions

E. Transitioning to clean energy in regions

F. Metropolitan trends in growth and sustainability

The data in this note reflect different subnational geographic levels in OECD countries:

- **Regions** are classified on two territorial levels reflecting the administrative organisation of countries: large regions (TL2) and small regions (TL3). Small regions are classified according to their access to metropolitan areas (see https://doi.org/10.1787/b902cc00-en).

- **Functional urban areas** consists of cities – defined as densely populated local units with at least 50,000 inhabitants – and adjacent local units connected to the city (commuting zones) in terms of commuting flows (see https://doi.org/10.1787/d58cb34d-en). Metropolitan areas refer to functional urban areas above 250,000 inhabitants.

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Copenhagen has the highest potential for remote working

A1. Share of jobs amenable to remote working, 2018
Large regions (TL2, map)

The share of jobs amenable to remote working across Danish regions ranges from 47% in the capital region to 35% in Northern Jutland and Southern Denmark (Figure A1). Such differences depend on the task content of the occupations in the regions, which can be amenable to remote working to different extents. As for all other OECD countries, occupations available in cities tend to be more amenable to remote working than in other less densely populated areas.

In addition to the type of occupation, fast and efficient digital infrastructure is crucial to seize the opportunities offered by digitalisation. With less than 55% of the buildings covered by optic fiber in 2018, Zealand was the only region with comparatively low fiber optic availability in Denmark (Figure A2).

Figure [A1]: The lower percentage range (<25%) depicts the bottom quintile among 370 OECD and EU regions, the following ranges are based on increment of 5 percentage points. Further reading: OECD (2020), Capacity to remote working can affect lockdown costs differently across places, http://www.oecd.org/coronavirus/policy-responses/capacity-for-remote-working-can-affect-lockdown-costs-differently-across-places-0e85740e/
Ageing challenges regions far from metropolitan areas more strongly

The elderly dependency rate, defined as the ratio between the elderly population (65 years and over) and the working age (15-64 years) population, has increased in all types of regions in Denmark since 2010. Regions far from metropolitan areas show the highest elderly dependency rate (50%) among the three types of regions (Figures A3 and A4).

Danish regions have fewer hospital beds per capita than OECD average

All regions in Denmark have significantly less hospital beds per capita than the OECD average (Figure A5). Regional disparities in hospital beds are small in comparative terms, with Southern Denmark, the region with the lowest number of hospital beds per capita in 2018, having 1 bed per 1000 inhabitants more than the region of Copenhagen.

Figure notes. [A3]: OECD (2019), Classification of small (TL3) regions based on metropolitan population, low density and remoteness. [A4]: Small (TL3) regions contained in large regions. TL3 regions in Denmark are composed by 11 Landskier.
Regional gaps in GDP per capita have increased since 2000, with the region of Copenhagen experiencing the strongest economic growth

Regional disparities in GDP per capita have increased by 10% in Denmark over the last eighteen years. Behind such a trend is the economic growth of the Copenhagen region, whose GDP per capita growth by more than 20% between 2000 and 2018 was twice as high as in Zealand, the region with the lowest level of GDP per capita in the country. Denmark remains a country with regional disparities below the OECD median (Figure B1).

With a productivity growth of 0.9% per year over the period 2000-18, Southern Denmark has kept pace with Copenhagen, whereas Zealand, the Danish region with the lowest productivity, widened its gap with the capital region (Figure B2).

Overall, regions with access to a metropolitan area of at least 250 000 inhabitants have narrowed their productivity gap with metropolitan regions over the period 2000-18 (Figure B3).

Note: A ratio higher than two means that 20% of the national population living in the richest regions have more than the double of GDP per capita than the 20% population living in the poorest regions.
The largest differences in well-being across Danish regions concern safety and education

While most Danish regions rank in the middle 60% of OECD regions in 9 out of 11 well-being dimensions – including jobs, environment and housing – they all perform among the top 20% of OECD regions in life satisfaction. In contrast, outcomes across regions are very unequal in the dimensions of safety and education. While Zealand is in the top 20% of OECD regions in terms of safety, Northern Jutland is in the middle 60% of OECD regions (Figure C1).

The top performing Danish regions rank above the average of the top OECD regions in 5 out of 13 well-being indicators, particularly in terms of life satisfaction and social support network (Figure C2).

**C2. How do the top and bottom regions fare on the well-being indicators?**

<table>
<thead>
<tr>
<th>Country Average OECD Top 20% regions Danish regions</th>
<th>Top 20%</th>
<th>Bottom 20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety: Homicide Rate (per 100 000 people), 2016-18</td>
<td>0.9</td>
<td>0.7</td>
</tr>
<tr>
<td>Education: Population with at least upper secondary education, 25-64 year-olds (%), 2019</td>
<td>81.5</td>
<td>90.3</td>
</tr>
<tr>
<td>Community: Perceived social network support (%), 2014-18</td>
<td>95.3</td>
<td>94.1</td>
</tr>
<tr>
<td>Jobs: Employment rate 15 to 64 years old (%), 2019</td>
<td>75.0</td>
<td>76.0</td>
</tr>
<tr>
<td>Health: Life Expectancy at birth (years), 2018</td>
<td>81.1</td>
<td>82.6</td>
</tr>
<tr>
<td>Income: Disposable income per capita (in USD PPP), 2018</td>
<td>8.1</td>
<td>6.6</td>
</tr>
<tr>
<td>Environment: Level of air pollution in PM2.5 (µg/m³), 2019</td>
<td>9.6</td>
<td>7.0</td>
</tr>
<tr>
<td>Life Satisfaction: Life satisfaction (scale from 0 to 10), 2014-18</td>
<td>7.6</td>
<td>7.3</td>
</tr>
<tr>
<td>Access to services: Households with broadband access (%), 2019</td>
<td>91.7</td>
<td>91.3</td>
</tr>
<tr>
<td>Housing: Rooms per person, 2018</td>
<td>1.9</td>
<td>2.3</td>
</tr>
<tr>
<td>Civic engagement: Voters in last national election (%), 2019 or latest year</td>
<td>83.7</td>
<td>84.2</td>
</tr>
</tbody>
</table>
D. Industrial transition in regions

Manufacturing employment has declined in all Danish regions since 2000 although manufacturing gross value added has increased in Copenhagen and Zealand.

Between 2000 and 2018, all large regions in Denmark experienced a decline in the share of manufacturing employment. The share of manufacturing employment declined at the fastest pace in Central Jutland, with almost 7 percentage point reduction (Figure D1).

The decline in manufacturing employment coincided with a reduction in manufacturing gross value-added in the Danish regions, except in Copenhagen region and Zealand. (Figure D2).

D2. Manufacturing trends, 2000-18

Figure [D.2]: Regions are ordered by regional employment as a share of national employment. Colour of the bubbles represents the evolution of the share over the period 2000-18 in percentage points: red: below -2 pp; orange: between -2 pp and -1 pp; yellow: between -1 pp and 0; light blue: between 0 and +1 pp; medium blue: between +1 pp and +2 pp; dark blue: above +2 pp over the period.
Central Jutland which accounted for 40% of Danish electricity in 2017, produced most electricity through renewable sources and with limited use of coal

In 2017, Central Jutland – which contributes to almost 40% of the country’s electricity – is making progress towards the transition to clean electricity production. While stopping the use of coal remained an important challenge in the region, Central Jutland generated 91% of its electricity using renewable sources in 2017 (Figure E1).

E1. Transition to renewable energy, 2017

<table>
<thead>
<tr>
<th></th>
<th>Total electricity generation (in GWh per year)</th>
<th>Regional share of renewables in electricity generation (%)</th>
<th>Regional share of coal in electricity generation (%)</th>
<th>Greenhouse gas emissions from electricity generated (in Ktons of CO₂ eq.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Jutland</td>
<td>11 174</td>
<td>91%</td>
<td>9%</td>
<td>2 073</td>
</tr>
<tr>
<td>Southern Denmark</td>
<td>7 330</td>
<td>58%</td>
<td>23%</td>
<td>2 122</td>
</tr>
<tr>
<td>Zealand</td>
<td>6 434</td>
<td>80%</td>
<td>20%</td>
<td>1 133</td>
</tr>
<tr>
<td>Copenhagen Region</td>
<td>2 635</td>
<td>12%</td>
<td>53%</td>
<td>1 642</td>
</tr>
<tr>
<td>Northern Jutland</td>
<td>1 844</td>
<td>53%</td>
<td>47%</td>
<td>727</td>
</tr>
</tbody>
</table>

Carbon efficiency in the production of electricity is very unequal across Danish regions. While Copenhagen Region emitted 620 tons of CO₂ per gigawatt hour of electricity produced in 2017, Central Jutland releases only 185 tons of CO₂ per gigawatt hour. Relative to total national levels, Central Jutland produced 38% of electricity in the country, but it emitted 27% of total CO₂ emissions related to electricity generation (E2).

E2. Contribution to total CO₂ emissions from electricity production, 2017

Note: These estimates refer to electricity production from the power plants connected to the national power grid, as registered in the Power Plants Database. As a result, small electricity generation facilities disconnected from the national power grid might not be captured. Only 95% of the total country’s electricity production is covered. Electricity production from Hydro, Waste power plants is missing. See here for more details.
**F. Metropolitan trends in growth and sustainability**

**Compared to the OECD average, a higher share of population in Denmark lives outside cities and their commuting areas**

In Denmark, 54% of the population lives in cities of more than 50,000 inhabitants and their respective commuting areas (functional urban areas, FUAs), 21 percentage points below the OECD average. The share of population in metropolitan areas over half a million inhabitants is 42% in Denmark, much below the OECD average of 60% (Figure F1).

**Built-up area per capita decreased slightly in Copenhagen metropolitan area since 2000**

Built-up area per capita in Danish metropolitan areas ranges between 340 and 250 square metres per inhabitant, respectively higher and lower than OECD average of about 300 square metres per inhabitant. In the metropolitan area of Copenhagen, population has grown at highest pace than built-up area since 2000 (Figure F2).

Source: OECD Metropolitan Database. Number of metropolitan areas with a population of over 500,000: two in Denmark compared to 349 in the OECD.
Copenhagen metropolitan area ranks among the top 20% of OECD metropolitan areas in terms of GDP per capita

In terms of GDP per capita, Copenhagen metropolitan area is among the top 20% of OECD metropolitan areas – with more than 500 000 people, and ranks between Helsinki and Oslo (Figure F3).

F3. Trends in GDP per capita in metropolitan areas
Functional urban areas above 500 000 people