

## The population of Denmark 1965–1970

### By Aage Aagesen

#### Abstract

*This paper follows up foregoing papers on the development of the population of Denmark. Five maps illustrate the net changes in the geographical distribution recorded for the five-year period 1965–70.*

During the five-year periods since 1955, the population of the Kingdom of Denmark has developed as follows:

	Denmark proper	Faroe Islands	Green- land	Total
Inhab. 1955	4.448.401	32.456	26.933	4.507.790
Inhab. 1960	4.585.256	34.596	33.140	4.652.992
Inhab. 1965	4.767.597	37.122 <sup>1)</sup>	39.613	4.844.332
Inhab. 1970	4.921.156	38.681	46.331 <sup>2)</sup>	5.006.168
Increase 1955–60	3.1 %	6.6 %	23.0 %	3.2 %
Increase 1960–65	4.0 %	7.3 % <sup>3)</sup>	19.5 %	4.1 %
Increase 1965–70	3.1 %	4.2 % <sup>5)</sup>	17.0 % <sup>4)</sup>	3.3 %

1) 1966    2) 1969    3) 1960–66    4) 1965–69    5) 1966–70

In 1970 the average density of population in Denmark proper was 114.1 inhabitants per sq.km (110.7 in 1965, 106.6 in 1960, and 103.3 in 1955), on the Faroe Islands 27.6 per sq.km (26.5 in 1966, 24.7 in 1960, and 22.7 in 1955), and in Greenland 0.02 per sq.km.

"Denmark proper" is by some authors called South-Denmark, the Faroes and Greenland then called North-Denmark.

In Jutland, including the neighboring islands (29.766 sq.km), the number of inhabitants 1970 was 2.178.979 or approximately 46 % of the population of Denmark proper (2.109.370 or 46 % in 1965, 44% in 1960), out of which 237.270 lived in North Slesvig. On the island of Zealand with neighboring small isles (7.434 sq.km), lived in 1970 2.129.846 persons (2.055.040 in 1965). 430.958 persons (425.128 in 1965) lived in Funen (3.486 sq.km). 125.677 (129.315 in 1965) lived in Lolland-Falster (1.795 sq.km), and 47.495 (48.744 in 1965) in the island of Bornholm in the Baltic Sea (588 sq.km).

The average yearly increase of the population in Denmark proper during the five year period 1965–70 was 6.4 o/oo, compared with 7.9 o/oo for 1960–65, 6.1 o/oo for 1955–60, and 7.8 o/oo for 1950–55. The increase had a culmination in 1965: 8,1 o/oo. The decrease in the following years may partly be caused by the prevention pills, etc. The number of live-born children, deaths, and marriages per. 1.000 inhabitants may be seen in the following table:

	Live-born children	o/oo of these deaths < 1 year	deaths	marriages
1955	17.3	25	8.7	7.9
1960	16.6	22	9.5	7.8
1965	18.0	19	10.1	8.8
1966	18.4	17	10.3	8.6
1967	16.8	16	9.9	8.5
1968	15.3	16	9.7	8.1
1969	14.6	15	9.8	8.0

The excess of the birthrate has decreased from 8.6 o/oo in 1955 to a minimum of 7.0 o/oo in 1962, has then later increased to 8.1 o/oo in 1966, but has in the following years decreased to a new minimum of 4.8 o/oo in 1969. But it seems as if the decrease is going to stop now. The number of divorces is about 15,6 % – 18,2 % of the marriages.

51.7% of the live-born children in 1969 were boys (51.4% in 1965, 52.5% in 1960). In 1969, 11.3% of the live-born children were illegitimates (9.5 % in 1965, 8.3 % in 1962). There is a very important and interesting difference in this problem between urban and rural districts. In Copenhagen not less than 16.9 % of the live-born children were illegitimates in 1969 (17.6 % in 1968, 16.5

% in 1965, 15.1 % in 1961), in the other urban zones of the country 13.2 % (10.5 % in 1965, 8.5 % in 1961), but in the rural districts only 9.0 % (7.1 % in 1965, 6.0 % in 1961).

In 1969 there were 1.017 women for every 1.000 men, exactly the same figure as in 1965. In 1960 the corresponding figure was 1.015, and in 1935 1.032. For more than a century the female surplus has been decreasing, but this movement seems to have increase in the following years it is now stationary.

The numbers of immigrants and emigrants changes rather much from year to year. In 1969, 36.257 persons immigrated into Denmark proper (26.655 in 1968), while 29.499 persons emigrated to other countries (30.067 in 1968). The immigration surplus in 1969 was 6.758 persons, 5.615 men and 1.143 women), but in 1968 there was an emigration surplus of 412 persons. A little look back shows for 1965 29.899 immigrants, 29.420 emigrants, and an immigration surplus of 479. The corresponding figures for 1964 were 27.414, 25.814, and 1.327.

Of the emigrants in 1968, 525 went to the Faroes (748 in 1965), and 3.723 to Greenland (3.515), 6,859 (7.808) emigrated to the other countries in Norden: Finland, Iceland, Norway and Sweden. Most important of these was Sweden with 3.143. To other European countries emigrated 9.251 (9.426): 2.456 (2.776) to U. K., 2.352 (2.719) to West Germany, 1.153 (1.166) to Switzerland. And 7.328 (6.542) went to other continents: 2.608 (2.536) to USA, 1.274 (1.056) to Canada, and 968 (378) to Australia. Of the immigrants 779 (847) came from the Faroes, and 3.107 (3.536) from Greenland, 6.260 (8.410) from other parts of Norden, and 9.716 (10.592) from other countries in Europe: 2.523 (2.911) from UK, 2.196 (3.118) from West Germany, and 1.000 (1.315) from Switzerland. 5.943 (6.296) immigrated from countries outside Europe: 2.250 (2.577) from USA, 696 (818) from Canada, and 277 (258) from Australia. It seems, as if about 2/3 of the emigrants from Denmark to oversea countries return after some years abroad. In 1969, 20.055 Danes emigrated, but in the same time 18.469 Danes reimmigrated to Denmark. The re-immigration is relatively most important from the neighboring countries and from Latin America, and less important from Australia and Canada.

In Denmark proper the average expected life-time, based on registrations of the years 1961-65, was 70.3 years for men, and 74.5 years for women. In the period 1956-60 it was 70.4 for men, and 73.8 for women, while in 1946-50 it was 67.8 for men, and 70.1 for women.

On the Faroe Islands the number of live-born children was 845 in

1969 (889 in 1965, 764 in 1960), whereof 406 boys (464 in 1965, 410 in 1960). The number of deaths in 1969 was 269 (261 in 1965, 274 in 1960), hereof 14 less than 1 year old. These is a significant and increasing surplus of men of the islands: in 1966 there were only 911 women for every 1.000 men, and 926 in 1960.

In Greenland the number of live-born children was 1.576 in 1968 (1.795 in 1964, 1.586 in 1960), whereof 805 boys (921 in 1964, 843 in 1960). The number of deaths was 333 in 1968. But of the live-born children in 1968 not less than 568, or 36.0 %, were illegitimates (1964: 627, or 34,9 %, 1960: 509, or 32.1 %). For every 1.000 inhabitants the number of live-born children was 35.2 in 1968 (47.4 in 1964), and of deaths 7.4 (8.8 in 1964). The excess of the birthrate is thus not less than 26.8 o/oo in 1968, but was 38.6 o/oo in 1964, one of the largest in the whole world, although it is now decreasing. Nevertheless this problem has to be considered as a very important and serious one, because Greenland has only very limited possibilities for maintaining human life. The average life-time in Greenland for the period 1960–65 was 57.0 years for men, and 64.2 years for women, while the corresponding figures for 1952–59 were 51.4 and 53.6, and for 1946–51 they were 32.2 and 37.5 years.

The most part of the inhabitants in Denmark proper live in towns or other urban agglomerations. The urban population is still increasing and was in 1965 77.0 % (70.4 % in 1960, and 69.0 % in 1955).

The number of persons per household was in 1965 2.8 as an average for Denmark proper, but only 2.5 in the Copenhagen district, 2.7 in the other towns, and 3.2 in the rural communes.

A problem in Denmark proper, as well as for the most industrialized countries, is the residing aliens, and especially the aliens with labour permits, whereof a greater part are the so-called guest workers. The numbers are shown in the following table:

	aliens with labour per- mit.	total aliens		aliens with labour per- mit.	total aliens
1962	8.497	14.199	1967	12.970	20.885
1963	9.268	15.131	1968	14.245	22.659
1964	9.364	15.758	1969	14.604	23.336
1965	10.703	17.572	1970	17.893	27.252
1966	11.703	18.994	1971	24.852	34.484

Citizens from the other countries in Norden (Finland, Iceland, Norway, and Sweden) are not regarded as aliens and are not included in the figures above.

The number of residing aliens increased by 142.9 % in the period 1962-71, especially in the latest years, and the number of aliens with labour permits not less than 192.3 %. Of the total number of aliens in 1971, 9,028 were from Western Germany (7,801 in 1966), 6,073 from Turkey (only 156 in 1966), 4,591 from Yugoslavia (261 in 1966), 4,524 from U.K. (3,192 in 1966), and 3,685 from USA (2,702 in 1966). Other important native countries (with more than 1,000 residing aliens in 1971) are Benelux, Italy, Poland, and Switzerland. Of the residing aliens from Turkey, 97 % had a labour permit, i.e. were guest workers, and of the aliens from Yugoslavia 87 %, while the corresponding figures for USA and Western Germany were only 39 % and 60 %. Since 1970 the immigration of quest-workers is stopped by the Danish government, but family members of the guest-workers, who already live in Denmark, are still permitted to immigrate. Nevertheless, since 1970 about 3,500 guest workers have left the country, and still more seem to go home to their own country.

The biggest and most important concentration of population in Denmark is the Copenhagen district. In statistics and literature we speak about the "capital" (comprising the communes of Copenhagen, Frederiksberg, and Gentofte), the suburban communes (19 communes around the "capital", until 1965 divided in 9 "suburban", and 10 "surrounding" communes), and the total Metropolitan region in a new definition, comprising the communes of Copenhagen and Frederiksberg, and the "amtskommuner" (counties) of Copenhagen, Roskilde, and Frederiksborg. Since 1950, the population of these regions has developed as shown in the following table:

	in 1.000 persons					
	1950	1955	1960	1965	1970	1971
Copenhagen "capital"	975	960	924	874	810	798
suburban communes	242	327	424	504	573	579
Copenhagen with suburbs	1.217	1.287	1.348	1.378	1.383	1.377
Commune of Copenhagen	768	754	721	678	635	621
Commune of Frederiksberg	119	118	114	111	103	100
County of Copenhagen	314	398	486	558	611	618
County of Roskilde	77	82	90	119	150	157
County of Frederiksborg	148	163	182	211	255	265
New Metropolitan Region	1.426	1.515	1.593	1.677	1.754	1.761

In the central parts of the Copenhagen region the population has decreased since 1950. An analogous development is seen in the most bigger cities all over the world. But also the growth of Copenhagen including the suburban region, which still is the most ordinary used definition of a Greater Copenhagen, shows a declining rate of increase: 70.000 persons 1950–55, 61.000 1955–60, 30.000 1960–65, but only 5.000 1965–70, and in the one year from 1970 to 1971 it has had a decrease of 6.000 persons. Out of the 22 communes in the region "Copenhagen with suburbs", 7 had a decreasing population 1965–70, and not less than 11 in the one year 1970–71. But as it may be seen on the map fig. 3, this does not mean a stagnation of the growth of Greater Copenhagen, but – as I expressed already in "The population of Denmark 1960–65" – it means that a revision of the borders of the region now has been necessary.

The new Metropolitan region, which now has been established, and is going to be used by the statistical Service of Copenhagen from 1970, is composed of the central communes of Copenhagen, and the 3 "amtsrådkredse" (approximately analogous to "counties") of Copenhagen, Roskilde, and Frederiksborg (see map fig. 3).

This new border may of course be discussed, especially because this region comprises some towns, which only partly may be considered as dormitory towns or satellite towns to the capital, and further several rural districts. But, in consequence to the planning and the trend of the urban development until to day we may expect, that the most part of the region shall be more or less urbanized within this century.

On the maps fig. 1–2 the increase and decrease of the population 1965–70 are shown for every commune in Denmark proper. The maps fig. 3–5 show the same thing for some regions, the Mid-Jutland region, and North Slesvig. The method, which I also used in "The Population of Denmark 1955–1960", prepared for the International Geographical Congress in London 1964, and again in "The Population of Denmark 1960–65", written to the congress in New Delhi 1968, is not a traditional one and should give an exact picture of the development, because it shows the increase or decrease in the absolute number of persons.

Since 1965 some of the smaller communes, and communes with a small number of inhabitants, in certain parts of the country, have been united into bigger communes. The most important part of the country, where the old, smaller communes still exist, is the Copenhagen region. In the most of the new bigger communes you find as well a rural as an urban population, but still now, in 1972,

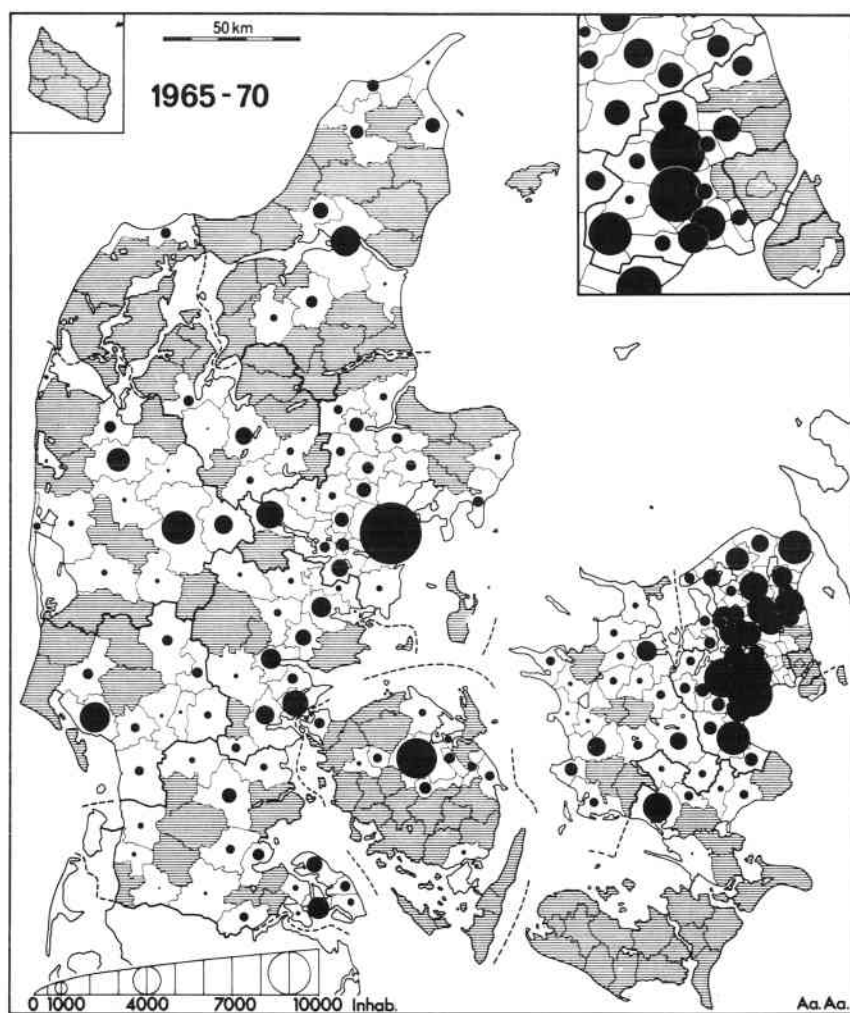


Fig. 1. The net increase of population in Denmark 1965–70. Communes with a net increase are shown in white with a black circle indicating the size of the increase. Communes with a net decrease are hatched and those with unchanged population white.

*Fig. 1. Cirklerne angiver befolkningens nettotilvækst i danske kommuner 1965–70. Kommuner med aftagende befolkning skraverede.*



the division of the population in these groups has not been finished. In the most cases, the new communes consist of 2–8 old communes, but a few of them in the most urbanized regions, of up to 22 old communes or parts of old communes.

On the map fig. 1 every commune, where the population in 1970 shows a net increase compared with the population in 1965, is shown with a black circle on a white background. The size of the circle shows the growth of the population in these 5 years according to the scale on the map. Communes, having a decreasing population during these 5 years, are hatched. A commune, where the number of inhabitants in 1970 was exactly the same as in 1965, is shown in white without a circle.

The converted picture is given on the map fig. 2: The communes having a net decrease of the population during the period 1965–70, are here shown in white with black circles, the size of these circles shows the decrease in the absolute number of persons. And, opposite to fig. 1, the communes having an increasing population 1965–1970, are shown by a hatching. On both maps are inserted large-scale maps for the Copenhagen region.

On the map fig. 1 is shown an extraordinary rapid growth of the population in a region around Copenhagen. Compared with the corresponding maps for 1955–60 (*Aa. Agesen* 1964) and for 1960–65 (*Aa. Agesen* 1968) it is remarkable that the communes having the most important increase 1965–70 may be found in a larger distance from the city. In 1955–60 the zone with the most rapid growth was placed 20–40 km from the capital. In 1960–65 it was found in a distance of 35–60 km, but in 1965–70 up to 90 km from the old city of Copenhagen. While in the periods 1955–60, and 1960–65 (*Aa. Agesen* 1964 and 1968) the communes around the "capital" all had an increasing number of inhabitants, have some of them a decrease for the period 1965–70 (Dragør, Tårnby, Rødovre, and Lyngby-Tårnbæk), and for the other the increase was less remarkable than before 1965. The reasons for this difference is partly due to the fact 1) that the communes in the suburban circle around the "capital" are now more or less built-up, and although trends of urbanization still is going on, their populations grow slower than 5–10 years ago, and some of them have already topped – and partly 2) that the modern means of transportation, used for daily communication (pendling) between home and employmentplace, make it possible for the people to choose their residence at a larger distance from their employment than ever before. Especially esthetic reasons, such as a hilly landscape, a wide view, the proximity of lakes, forests, or sea-shores, have had a certain importance for the evolution of the urbanizations around



Copenhagen. But also 3) the organized planning of new centres of urbanization, near suburban railway-stations and motor-roads, plays a still more important role for the increase of population into a further distance from the "capital".

In the period 1965-70 3<sup>rd</sup> suburban communes in a distance of 20-30 km from the old city of Copenhagen have increased more than 100 %: Vallensbæk from 3,110 to 7,558 (8,303 in 1971), Herstederne from 7,350 to 22.030 (25.243) and Ølstykke from 2.403 to 6.720 (7.568). In the central part of the Copenhagen region the number of inhabitants is decreasing, in the communes of Copenhagen (from 678.072 to 630.000), Frederiksberg (from 110.841 to 101.957), Gentofte (from 85.498 to 77.970), Lyngby-Tårnbæk, Rødovre, Tårnby, and Dragør. Between this decrease in the center and the very fast increase in a distance from the center, we find an increase of variable importance. In Gladsaxe there has been observed an increase from 40.303 in 1950 to 64.693 in 1960, 71.302 in 1965, and 74.447 in 1970, in Brøndbyerne from 5.061 to 20.256, 27.503, and 33.081, in Ballerup-Måløv from 6.877 to 19.582, 35.665, and 50.335, and slower in Birkerød from 9.021 in 1950 to 14.846 in 1960, 18.884 in 1965, and 20.880 in 1970. But the newest information shows a decrease 1970-71 for some of these communes in the zone between the decreasing center and the maximum increasing zone (Gladsaxe, Glostrup, Herlev, Hvidovre).

It is interesting, that several mediaval towns and older settlements, originally independent of the capital in the Copenhagen region, now form parts of the region with increasing population around the capital. The most important of these are the old episcopal residence Roskilde, 32 km west of Copenhagen (42.259 inhab. in 1965, 49.545 in 1970, 50.873 in 1971), the ports of Helsingør (Elsinore) 47 km north of the capital (46.509, 51.948, 50.873), and Køge, 38 km southwest of the capital (24.947, 30.298, 31.509), and the old castle-town of Hillerød, 35 km northwest of Copenhagen (25.724, 29.684, 30.018). These, and many other towns (Frederiksværk, Frederikssund, Fredensborg, etc.), are gradually becoming residential towns for a population working in the capital, and satellitetowns with industries and other activities. The capital is their principal sales-market, although they at the same time very often conserve their original function as market-places and local centers for their surrounding rural districts.

But not only the urbanized zone itself, including the surrounding residential towns and satellite towns, shows an increase of population. Also towns situated at a longer distance co-operate with the capital, although they must be considered as rather independent market towns. So the commune of Næstved, in the southern part of

the island of Zealand, has increased from 37.208 inhab. in 1965 to 41.075 in 1970, and 42.439 in 1971. Korsør on the western coast of the island, increased from 19.181 to 19.905 and 20.130, Ringsted in the centre of the island, from 23.982 to 25.342 and 25.841, Slagelse from 30.074 to 31.818 and 32.676, and Holbæk from 23.802 to 25.889 and 26.091. On Zealand outside the capital, only some communes in a long distance from Copenhagen and far away from the main transportation lines, have had a decreasing population.

As a matter of fact, people from all parts of Zealand go daily to work or education in Copenhagen. So, from Roskilde, not less than 4.300 persons go daily by train, and a larger number go by car. From Hillerød, 1.800 persons, and from Helsingør 1.250 persons go daily by rail to the capital, and even from Næstved 600 persons. The not exactly known number of car-drivers, who go to and from their work in Copenhagen, is most important in the shorter distances, until about 30 km.

From a geographical point of view the Copenhagen region may be considered as part of the urbanized Ørestad region around the waterstrait of Øresund, connecting the Baltic Sea with Kattegat and the Northsea. The eastern part of this region is situated in the southernmost part of Sweden. Here the towns of Malmö (266.695 inhab. in 1971), Helsingborg (100.493 inhab.), Lund (56.164 inhab.) and Landskrona (34.639 inhab.), and their suburbs form a broken zone of urbanization, which stretches along the Øresund for a length of some 60 km, and a width of 5–18 km. The Ørestad region has a population of about 1.75 million in Denmark 0.55 million in Sweden. A co-operation is going on or planned between the Danish and the Swedish administration concerning recreative areas, water supply, cultural institutions, a central air-port, and bridges over the Øresund. The central airport is planned to be placed on the Danish island of Saltholm, between Copenhagen and Malmö, consisting of a plain of Chalk-rocks only 1–2 m above sea-level. In connection with this plan a bridge complex from Copenhagen and Malmö has been planned. In 1971 more than 25 millions passengers were transported over Øresund by the ferries.

In the prognoses for the decade 1970–80 is expected that about 60% of the population growth of Denmark may be placed in the Copenhagen region.

On the big islands south of Zealand (Lolland, Falster and Møn) the population is decreasing in all communes, although these islands have good bridge-connections to Zealand. The distance to the capital is too long for daily pendling.

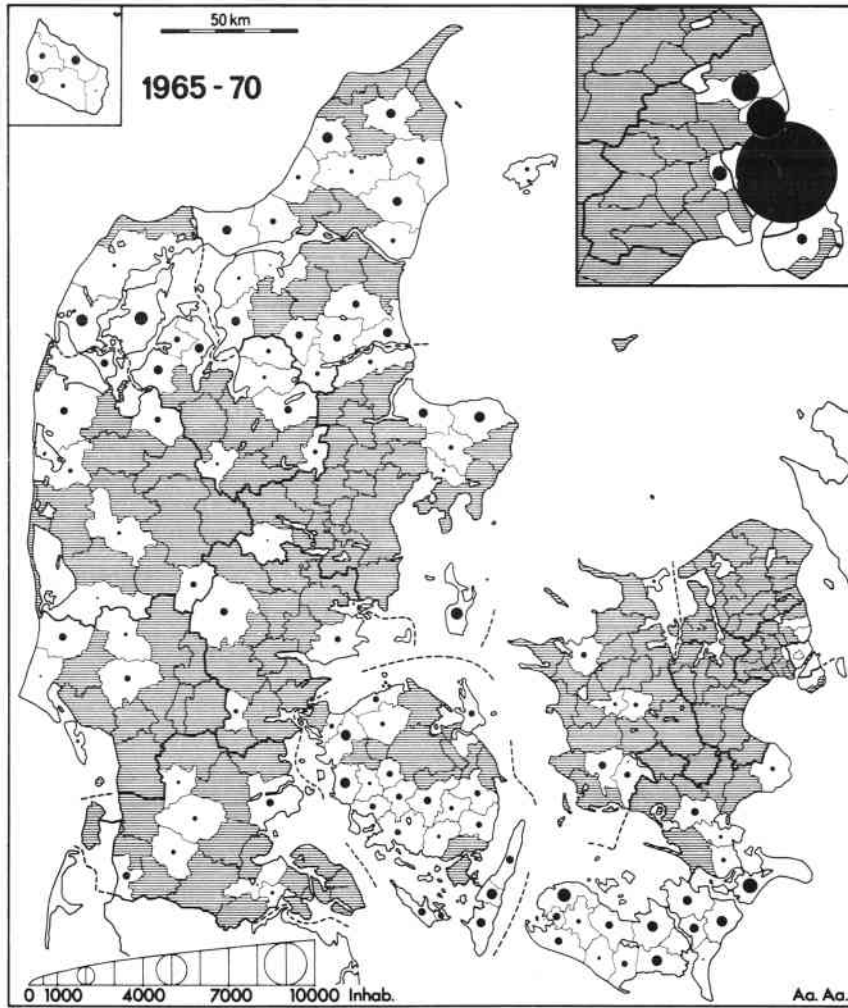


Fig. 2. The net decrease of the population in Denmark 1965–70. Communes with a net decrease are shown in white with a black circle indicating the size of the decrease. Net increase is shown by hatching.

Fig. 2. Cirklerne angiver nettofald i befolkningstallet i danske kommuner 1965–70. Kommuner med nettotilvækst er skraverede.

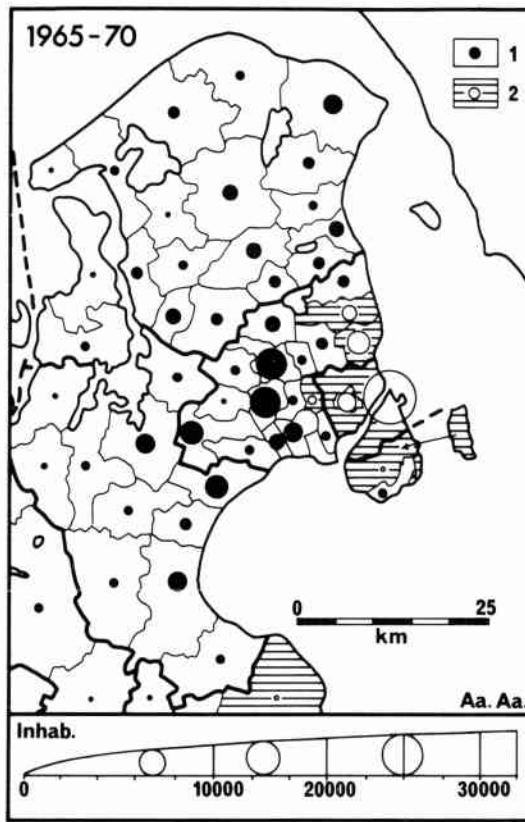


Fig. 3. The net changes in the size of the population of the Greater Copenhagen region 1965–70. Communes with a net increase are shown in white with a black circle indicating the size of the increase. Communes with a net decrease are hatched and with circles indicating the size of the decrease.

*Fig. 3. Nettoændringer i befolkningstallet i det storkøbenhavnske område angivet ved cirkler. Arealet i kommuner med nettotilvækst er hvidt, med nettofald skraveret.*

Around the biggest and most important provincial towns the map fig. 1 shows regions with an increasing population. The new commune-units used to-day may not directly be compared with older units. Such, the new commune of Århus, the second town in Denmark, consists of the old commune of Århus, 18 surrounding communes, and part of 3 other communes in the old, administrative system. This new Århus had in 1965 215.395 inhabitants, in 1970 233.162, and in 1971 238.449. But the region with an increasing population stretches farther out from the town, especially along the coast-line northeast of Århus, and in the valleys and the lake district west, southwest, and northwest of the town, i. e. into zones of an

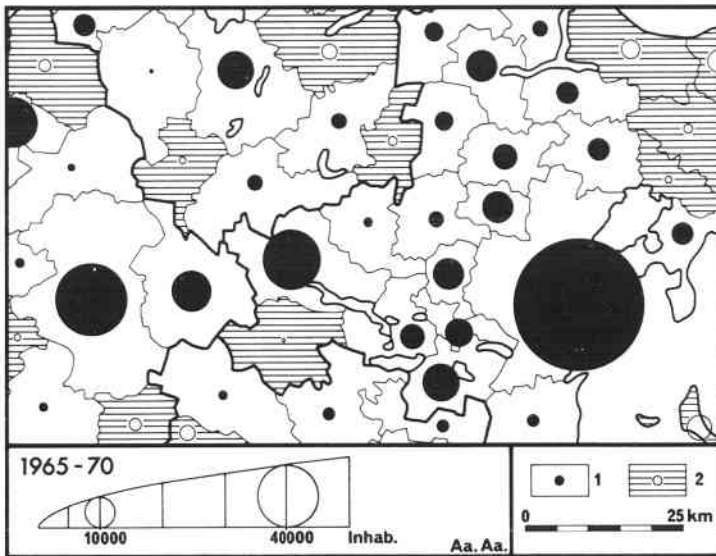


Fig. 4. The net changes in the size of the population in the region between Århus and Herning in Middle-Jutland. Communes with a net increase are shown in white with a black circle indicating the size of the increase. Communes with a net decrease are hatched and white circles show the size of the decrease.

*Fig. 4. Nettoændringer i befolkningstallet i området mellem Århus og Herning angivet ved cirkler. Arealet i kommuner med nettotilvækst hvidt, med nettofald skraveret.*

attractive nature (see map 4). This development is similar to that of the Copenhagen region: People can now choose their dwelling-place within a large radius from their daily working-place. By car they can reach the centre or Århus from the coast or the lake-district in half an hour or less. And the old castle-town of Skanderborg, 24 km southwest of Århus (13.781 inhab. 1965, 15.145 in 1970) is becoming a suburban satellite-town in the same way as the old towns around Copenhagen. Also towns, created by the railway-stations, such as Hørning, Hinnerup, Hadsten and others, may now more or less be considered as dormitory towns or satellite towns for Århus.

Around *Odense*, on the island of Funen, an analogous development takes place. The town is placed near the centre of the island, but a canal to the sea gives it a good harbour. The new commune of Odense comprised the old commune of Odense, 11 surrounding communes and a part of 1 more. In 1965, the new communes had 156.453 inhab., in 1970 164.166, and in 1971 166.141. It is more than one third of the population of the island. But also here a commune outside Odense is of special interest: The

commune of Munkebo, 10 km northeast of Odense, where a great shipyard (Lindøværftet) has been erected on the coast of Odense Fjord. Munkebo has therefore increased from 1.230 inhab. in 1955 to 2.031 in 1960, 4.593 in 1965, and 5.051 in 1971, although a greater part of the workers live in Odense.

In and around *Ålborg* in Northern Jutland, on both shores of the narrow water-strait of Limfjorden, another similar development is found. The new commune of Ålborg consist of 2 old market-town communes: Ålborg and Nørresundby, 11 surrounding communes, and a part of 1 more. The old town of Ålborg, situated south of Limfjorden, and Nørresundby, north of the same, are connected by 2 bridges and a tunnel. The new Ålborg had in 1965 149.608 inhab., in 1970 153.862, and in 1971 155.445. The greatest part of the suburbs, dormitory suburbs, and satellite towns around Ålborg is now incorporated in the new commune, but still Støvring and other settlements outside the commune may be considered as dependent satellite towns or suppliers to the urban population.

Around other greater towns analoqueous zones of population increase may be seen on the maps. Very often the town itself increases rather little or even decreases, while the suburbs increase much more. The new communes, comprising both the old town and its modern suburbs, are sometimes too big to show us this differentiation. In the new commune of *Esbjerg*, an important port in southwestern Jutland, the growth is not only concentrated in the commune of Esbjerg (71.486 inhab. in 1965, 76.056 in 1970, 76.657 in 1971), but also in the neighbouring communes of Bramming (9.976, 10.319, 10.363), Ribe (16.853, 17.201, 17.276), and Varde (16.155, 16.693, 16.848). Ribe and Varde are old market-towns with their own hinterland, but from today an economic region together with the much younger port of Esbjerg. Around several towns on the eastern coast of Jutland a similar growth of the population in the urban, suburban and surrounding areas may be observed, so at *Randers* (62.749 inhab. in 1965, 63.832 in 1970, 64.359 in 1971), at *Vejle* (47.802, 49.818, 49.853), at *Kolding* (50.423, 52.160, 52.895), at *Fredericia* (40.270, 43.513, 44.128), and at *Horsens* (49.957, 51.988, 52.453). The towns of Vejle, Fredericia, and Kolding have planned together to create a common zone of untraditional urbanization and economic development, where Fredericia has a good and deep harbour, one of the best in Denmark, while Vejle and Kolding are industrial and commercial centres.

The change from small to big commune units makes it in many cases impossible to compare the population-development in the different parts of a new commune. In the few cases, where it may



be possible, we can state a population decrease in the central part of the biggest towns, analogous to the situation in Copenhagen. So in the town of Ålborg, according to the limitation used 1965, the population topped in 1965 (111.725 inhab. 1955, 119.063 in 1960, 123.334 in 1965, but only 119.497 in 1970). It means a decrease 1965-70 of 3.837 persons, while the new Ålborg commune in the same period had an increase of 4.254 persons. The growth has thus taken place outside the town itself and its suburbs in the traditional means of the word, and new dormitory and satellite settlements as well as scattered houses for people working in the town have grown up in the surrounding rural districts.

In the central part of Jutland vast regions have had an increasing population. It concerns the plains, consisting of meltwater-sand from the latest glacial period, and parts of the sandy moraines from the Riss-glaciation. As a whole, these soils are the most barren ones in Denmark. Since about 1860 a reclamation of these former heath-areas has taken place. Although this cultivation now has stopped, the increase of population still goes on, because the development of urban centres has been retarded compared with the rural development. The industrialization has here caused a growth of some centres, where the population has increased and still is increasing rather much. It concerns especially the textile industry, and particularly the hosiery, which had been the main reason for the growth of new towns such as *Herning* (22.014 inhab. in 1955, 24.790 in 1960, 29.902 in 1965, 32.512 in 1970 in the old commune, 47.023 in 1965, 52.342 in 1970, and 53.230 in 1971 in the new, bigger commune), and *Ikast* (4.760 inhab. in 1955, 7.559 in 1965). South of these towns, *Grindsted* is another industrial and commercial centre in the reclaimed areas (4.423 inhab. in 1955, 6.600 in 1965). All these new towns are less than 100 years old.

In North-Slesvig the population development may be seen on the map fig. 5. The most important population increase is found on the island of Als, partly concentrated in *Sønderborg* (18.682 inhab. in 1955, 23.111 in 1965 in the old commune with its suburbs, and 27.140 in 1965, 29.387 in 1970, 29.517 in 1971 in the new commune), in *Nordborg* (1.797 inhab. in 1955, 4.013 in 1965), and in the surrounding communes. This very interesting increase has as its main reason the amazing growth of a factory for measuring instruments, thermostats, etc., situated in Havnbjerg near Nordborg. The factory started about 1950, but employs to day more than 6000 workers etc. Although a part of these people live in newly urbanized districts near the factory, others prefer to live elsewhere in the island of Als or in the neighbouring part of the continent, especially the peninsula of Sundeved. From all over this region they



can reach their working-place within half an hour by car or special buslines. The island of Als has had an population development like this: 35.478 inhab. in 1950, 37.910 in 1955, 43.755 in 1960, 48.676 in 1965, and 54.197 in 1970. It is remarkable, that the increase still goes on with the same intensity, although the explosive growth of the factory has now stopped. But it must be mentioned, that the region as a whole has recieved a general economic development, and that especially the town of Sønderborg has other expanding industries, which have contributed to the growth of the population of Als.

Near the frontier to Germany, the commune of Bov, the southernmost in Jutland, shows an interesting development. Here we find the most used frontier-passages by road (Kruså) and by railway (Padborg). Before 1920, when the frontier was established, the only settlement-agglomeration was the village of Bov. Since then, an untraditional urban agglomeration has grown up around the frontier railway station, and the main roads between Kruså, Bov, and Padborg-Frøslev. This urbanization had 2.879 inhab. in 1950, but 4.921 in 1965. (The total for the new commune of Bov was 9.146 inhab. in 1965, 9.498 in 1970). Its population works partly in the frontier service and trade, but it is evident that in a certain way this Danish settlement may be considered as part of the influence zone of the German town Flensburg (100.000 inhab.) a few km south of the frontier.

In the northernmost part of Jutland, north of Ålborg, a remarkable increase of population may be seen by Frederikshavn (31.870 inhab. 1965, 32.826 in 1970, 33.288 in 1971) an important industrial and fishing harbour. Also the fishing ports of Hirtshals, Skagen (The Skaw), and Hanstholm have had a certain population growth. Hirtshals has doubled up its population from 1950 to 1967 and has to day more than 5.000 inhab. in the urbanization itself.

The decrease of population 1965–70 may be seen on the map fig. 2. The decrease in the central part of the Copenhagen region has already been discussed. A similar decrease takes place in the most important provincial centres such as Århus, Odense, and Ålborg since 1960, but cannot be seen on the map. Another remarkable region with decrease is the islands south of Zealand, where all rural districts decreases, while the urban population is stagnating or slight decreasing. Only the little town of Rødby, where a new ferryconnection to Western Germany has been established, shows an increase (3.551 inhab. in 1960, 4.751 in 1970 in the market town).

Also in the northern and northwestern part of Jutland the



Fig. 5. The net changes in the size of the population of North Slesvig 1965–70. Communes with a net increase are shown in white with a black circle indicating the size of the increase. Communes with a net decrease are hatched and, correspondingly, circles show the size of the decrease. Communes with unchanged population figure are white without circles.

Fig. 5. Nettoændringer i befolkningstallet i Nord Slesvig 1965–70 angivet ved cirkler. Areal i kommuner med nettotilvækst hvidt, med nettofald skraveret.

decrease of population is rather remarkable. Even smaller market towns decrease because of the concurrence with the bigger and greater centres, well placed in the traffic system. And many local centres decrease, because the population in their hinterland decreases. Examples of such centres are Lohals on the island of Langeland, Hvidbjerg and Hurup in western Jutland, and Tranbjerg on the island of Samsø.

Most of the smaller islands and many peninsulas have a rather big decrease of population. Also some larger islands show the same trend, such as Lolland, Falster, and Møn, south of Zealand, and Bornholm. The island of Mors in the Limfjord (26.766 inhab. 1960, 25.739 in 1965, 24.973 in 1970), Læsø in Kattegat (3.120, 2.851, 2.736), Samsø (6.429, 5.852, 5.217), Ærø south of Funen (10.109, 9.656, 9.310), and Langeland southeast of Funen (18.692, 17.745, 17.077) show a slow, but still continued decrease. The population on the smaller islands live in a certain isolation, which to some degree often prevents them from taking part in the modern economic, cultural and technical development. Many of the small islands are in most years isolated by ice in the wintertime for 1–3 months. Especially the need for a good education of children and young people may force the families to leave the isolated islands.

Even a bridge or a dam connection to a bigger island or to the continent has until to day not had much influence on the decreasing number of people on the small islands. Also many peninsulas have a problem of isolation. Where an increase is ascertained on smaller islands, the reason may be that suburbs or residential towns are growing up (Tåsinge: 4.866 inhab. in 1960, 4.956 in 1965, 5.100 in 1970, and Thurø: 1.607, 1.923, and 2.197, both with suburbs to the town of Svendborg, or Fanø: 2.675, 2.750, and 2.760 near the town of Esbjerg), or that a new economic development takes place (Rømø, with its new fishing harbour: 651, 812, 817). On the smallest islands the decrease is very severe: Anholt in Kattegat has decreased from 237 inhab. in 1965 to 196 in 1970, and Mandø in the Wadden-Sea from 151 to 131. It is expected that the future of many of these small islands may be recreative or holiday places.

During the last decades the economic structure of Denmark has changed. The exportation from Denmark, which traditionally has been dominated by agricultural products such as butter, bacon, and eggs, consists to day mainly of industrial marchandises. And the number of persons occupied in agriculture is decreasing. About 1850 agriculture occupied about 50% of the working population in Denmark proper, (58% in 1834), in 1930 30%, and in 1940 25%. In the period 1935–1950 the secondary occupations were dominating. The development since 1950 of the occupation of the working population has been as follows:

The decrease of the agricultural population still goes on, but not as fast as in the period before 1960. In the villages and on the farms you may find a certain number of young people, who work in factories or in service trades, but still live on the farms, while the older generation work the farms. Other people give up the farms and go to the cities. A number of modern industries, which are more or less independent of a traditional placing near harbours, in great cities, near certain raw-materials, etc. will be scattered over all parts of the country, often using this non-agricultural workers in the rural districts. Thanks to the modern means of transportation the workers can live within a radius of 60–100 km from the place, where they are employed.

On the *Faroe Islands* the growth of the population 1966–70 is more slowly (4.2 %) than in 1960–66 (7,3 %). In the capital of the islands, Thorshavn, the population is increasing: 5.607 inhab. (17.4 % of the total number of persons on the islands) in 1950, 7.447 (21.5 %) in 1960, 9.738 (26.2 %) in 1966, and 10.683 (27.7 %) in 1970. In 1966–70 the total increase of the population of the islands was 1559 persons, whereof Thorshavn had a growth of 945.

Primary occupations	1950		1960		1965	
		1.000 %		1.000 %		1.000 %
Agriculture	379	20.9	297	15.1	286	13.4
Fishing	15	0.8	14	0.7	14	0.7
Forestry, gardening	35	2.1	34	1.8	27	1.3
Mining	4	0.2	4	0.2	3	0.1
	433	24.0	349	17.8	330	15.5

### Secondary occupations

Manufacturing	525	29.0	591	30.1	645	30.2
Construction, etc.	132	7.2	149	7.6	184	8.6
Public utilities, etc.	12	0.7	13	0.6	14	0.7
	669	36.9	753	38.3	843	39.5

### Tertiary occupations

Commerce	262	14.4	301	15.3	337	15.7
Transport	138	7.6	150	7.7	149	7.0
Administrations, etc.	190	10.5	266	13.5	348	16.3
Other service	97	5.4	108	5.5	127	6.0
	687	37.9	825	42.0	961	45.0

In 1960-66 Thorshavn increased with 2291 persons out of a total of 2526 for the islands. The town of Klaksvik has also an increasing population: 3.079 in 1950, 3.894 in 1960, 4.257 in 1966, and 4.427 in 1970. But most of the other settlements on the islands have a stationary or a slowly decreasing population. In some settlements with less than 200 inhabitants was 9.5 % of the population of the islands, in 1960 7.5 %, and in 1970 5.7 %. The corresponding figures for the settlements with less than 500 inhab. were respectively 19.6 %, 16.4 %, and 13.3 %. The population-decrease is most significant on the islands of Vagur (Vågø), Sandøy (Sandø) and Sudurøy (Suderø). The number of persons per household on the islands has decreased from 4.4 in 1950 to 4.1 in 1960, and 3.8 in 1966.

In *Greenland* not less than 46.2 % of the population in 1965 was less than 15 years old. The corresponding figure for 1960 was 44.3

% For Denmark proper, 23.8 % was less than 15 years old in 1965 (25.1 % in 1960, but only 23.3 % in 1970), and for the Faroes 31.7 % in 1966 (32.8% in 1960). The administration centre of the island, Godthåb (greenl: Nuk) has grown up very fast: here lived in 1957 2.746 inhab., in 1961 3.322, in 1964 4.721, and in 1969 7.166. Of the other towns in Western Greenland, Holsteinsborg has increased from 1.493 inhab. in 1957 to 2.402 in 1964, and 3.232 in 1969. Egedesminde has grown from 1.639 inhab. in 1957 to 2.393 in 1964, and 3.215 in 1969, Julianehåb 1617 in 1957, 2.064 in 1964, and 2.703 in 1969. The greatest increase of population is seen in the centres of administration and economic activity (fishing). At the same time a very remarkable decrease of population in the small and isolated settlements goes on. The town population in Greenland has increased from 20.513 inhab. in 1961 to 25.464 in 1964, and to 33.640 in 1969. The population in the smaller settlements on the coasts of the island, has decreased from 13.799 inhab. in 1961 to 12.904 in 1964, and to 11.617 in 1969. Many of the smallest and most isolated settlements have been given up. The largest settlement in East-Greenland, Angmagssalik, has increased from 498 inhab. in 1957 to 774 in 1964, and 885 in 1969, while the northernmost "town" of Greenland, Thule, increased from 219 inhab. in 1962 to 288 in 1969.

The population living in towns of more than 1.000 inhab. was in 1969 30.091 or 65% of the total population in Greenland. The corresponding figures for 1961 were 15.525 and 45.3 %, and for 1964 21.503 and 55.4 %.

An immigration, especially from Denmark proper, goes on in Greenland. In 1969, 16.0 % of the population was born outside the island (in 1961: 8.7 %, and in 1964: 11.3 %). The immigrants, which mainly are serving in commerce and administration, go to the most important towns. Most immigrants are found in the town of Godthåb, where in 1969 32.9 % of the inhabitants were born outside Greenland (25.5 % in 1964.)

Of the working population in Greenland 1965 (13.232 persons), 27,6 % were occupied in fishing, catching, sheep breeding, etc., 2,4 % in mining, 10,1 % in manufacturing, 11,7 % in building and construction, 11,7 % in commerce, 10,0 % in transport, and 25,5 % in administrations, etc. The fishing (cod, shrimps, salmon, etc.) is the most important occupation along the west-coast, hunting in the eastern and northwestern districts. Sheeps breeding is mainly found in the southernmost part of West-Greenland and goes as far to the north as to Godthåb, where also reindeers are hold.

## Literature

Danmarks Statistiske Årbog. (Statistical Yearbook), several editions. Copenhagen yearly.

Danmarks Folkemængde 1955. Copenhagen 1957.

Danmarks Statistik: Statistiske Efterretninger nr. 45, 1966. Copenhagen 1966.

Danmarks Statistik, unpublished material.

*Hansen, V.*: Some Characteristics of a Growing Suburban Region. *Geografisk Tidsskrift* 1960. *Kampp, Aa.H.* (1950): Færøerne. Folk og erhverv. Copenhagen.

*Kampp, Aa. H. and Agesen Aa.* (1965): Det danske kulturlandskab. Copenhagen.

*Leth Nielsen, L.*: Analyse af de indre vandringer i Danmark. *Geografisk Tidsskrift* 1967.

*Rasmussen, St.E.* (1952): Greater Copenhagen Planning. Copenhagen

*Trap, J.P.*: Danmark (Denmark. A topographical handbook). 5th edition. Copenhagen.

*Aagesen, Aa.* (1949): Geographical Studies on the Railways of Denmark. Copenhagen.

*Aagesen, Aa.*: Atlas of Denmark. Tome 2. The Population. Editor: The Royal Danish Geographical Society. Copenhagen 1960.

*Aagesen, Aa.*: The Copenhagen District and its population. *Geografisk Tidsskrift* 1960.

*Aagesen, Aa.*: The population of Denmark. *Geografisk Tidsskrift* 1960.

*Aagesen, Aa.*: The population of Denmark 1955–1960. *Geografisk Tidsskrift* 1964.

*Aagesen, Aa.*: The population of Denmark 1960–65. *Geografisk Tidsskrift* 1968.