

## Settlement change and political response

CHRISTIAN WICHMANN MATTHIESSEN

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*During the suburbanization process, urban policy consisted of zoning and land use planning. Around 1970, the additional process of desurbanization demanded a policy which could guide the structural development of a deconcentrated settlement system. The present article presents the various trends of settlement development after 1960 and discusses the political actions taken to control these trends.*

Christian Wichmann Matthiessen, Ph.D., Senior Lecturer. Geographical Institute of Copenhagen, Haraldsgade 68, DK-2100 Copenhagen Ø.

### INTRODUCTION

The process of urbanization has been going on since the industrial revolution at the end of last century. This process has led to a more and more concentrated population in bigger and bigger towns. The political responses to that process have been few and planning actions were only taken to restrain obviously irrational development.

After World War II the population and later the employment started to deconcentrate - primarily from the big towns. The process of deconcentration led to the stage of suburbanization. As a response to the subsequent land consumption, political actions were taken. First in the form of zoning laws, later by active physical planning where master plans and land use plans came to guide the development.

Led by a regional redistribution of growth of economic base and by the beginning process of desurbanization, much more active planning was introduced around 1970. This was one of guiding the whole settlement system by the use of comprehensive tools in the form of a new administrative and planning system. The objectives were to equalize standards of living on a geographical and social dimension.

The following paper has the objective to demonstrate the trends of urban development in Denmark after 1960 and to identify political responses and planning actions to that development.

First the demographic and socio-economic characteristics of the nation are discussed. The first-mentioned are rather stable whereas the latter have changed fundamentally during the last two decades.

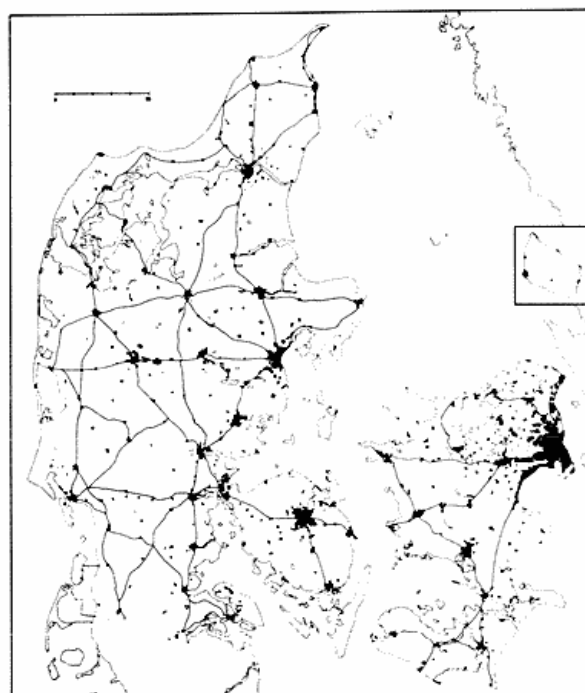


Fig. 1. Urban zones 1970. Major highways indicated. Source: Landsplansekretariatet (1974). *Arealplanlægning*, p. 66.

Fig. 1. Byzone 1970. Hovedveje angivet. Landsplansekretariatet (1974). *Arealplanlægning*, p. 66.

The urbanization process is described and the following processes of suburbanization and desurbanization are analysed in greater detail in a case study of the functional urban region of Odense. Regional development is described as this is looked upon as a dimension of change closely related to urban change.

Following this descriptive analysis of change, a discussion is presented of the political responses and the planning actions taken. The municipal reform in 1970 is looked upon as an implicit urban policy, because much of the urban development has been considerably affected by it. More explicit is the regional development policy which on the macro level is connected with urban policy. During the suburbanization process urban policy consisted of zoning and land-use planning. The process of desurbanization began around 1970 and

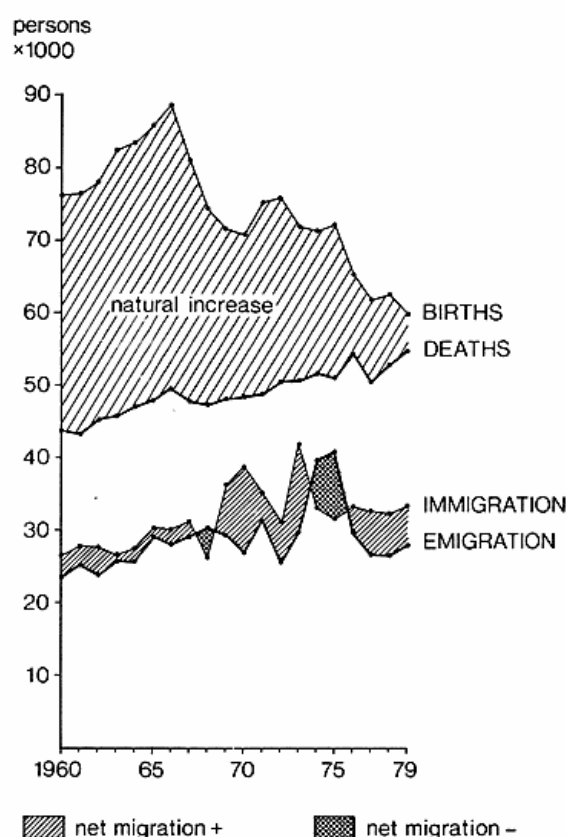


Fig. 2. Components of population change 1960-80, Denmark. Source: register.

Fig. 2. Ændringer i befolkningskomponenterne 1960-80, Danmark. Kilde: Danmarks Statistik: Statistiske Efterretninger.

the subsequent policy has been that of planning for the pattern of settlements. The next process of urban change might be that of reurbanization and the actions taken to guide this have to do with renewal.

## DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS

### Stable characteristics of the population

For some decades the population of Denmark has been slightly increasing. By 1960, the number was 4,565,455 against 5,065,313 in 1976. The sixties experienced a higher growth rate than the seventies, and by now the figure is presumably rather constant (1980: 5,111,534).

The number of immigrants was 26,655 (5.5 per 1000 inhab.) as the lowest, and 41,948 (8.4), as the highest annual figure (1960-76), whereas the corresponding number of emigrants was 23,647 (5.1), and 40,659 (8.0). The majority of in- and outmigrants were Danish citizens. The area of the nation has been constant since 1920, and no colonial experience has occurred in newer time. A restrictive policy on international flows of labour until joining the EEC in 1972

has also contributed to low international migration. The opening of the labour market within the EEC has had minor effect. Net migration has varied between -6,605 (-1.3) and 12,245 (2.4), the annual average was 2,459 (0.5) so, in relation to total population, migration was insignificant.

The number of liveborn has shown a slightly increasing trend until 1966 when birth control methods became more effective. This meant a drop in the number of births to a lower and still declining level. The highest and lowest values were the following: 88,332 (19.5) and 70,802 (14.6). The number of deaths has been slightly increasing, but are almost constant. The figures were; 43,310 (1.4) and 51,637 (10.3). For each year, a surplus of births has been registered. This was on the increase until 1966, then declined. Per 1000 inhab. the surplus of births has varied between 3.9 and 8.2.

The population's distribution by sex has been constant and almost equal, whereas the age structure has changed somewhat with a steadily increasing proportion of elderly people. Apart from the baby-boom during World War II, the Danish population's age structure shows a very stable trend.

Thus, the population of Denmark is biologically homogeneous and constant and influenced only to a small extent by international migrations.

### Changing characteristics of the population

During the sixties and seventies there has been a fundamental change in the characteristics of the Danish population with regard to social structure and employment as well due to economic development.

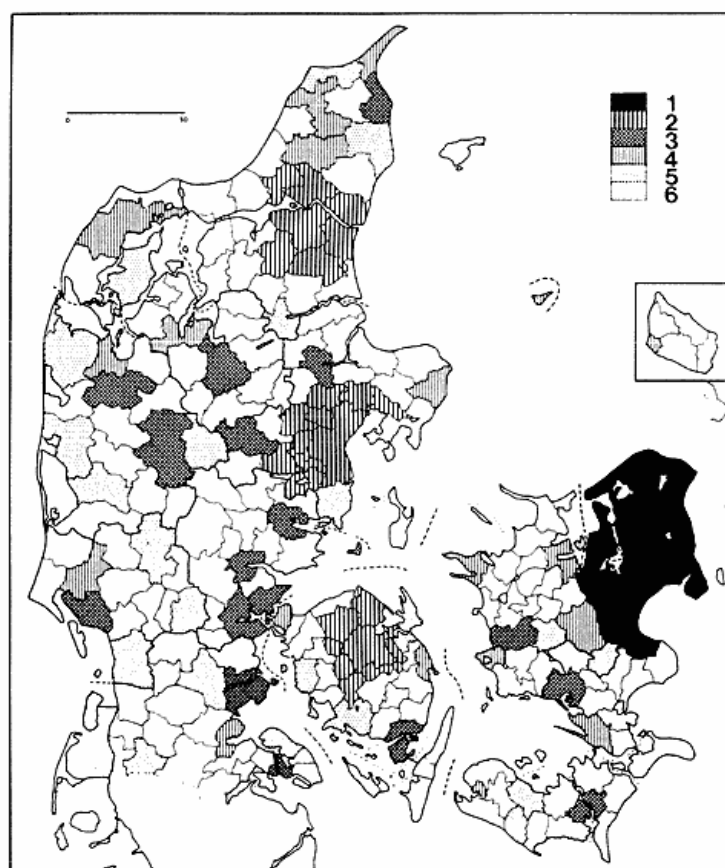
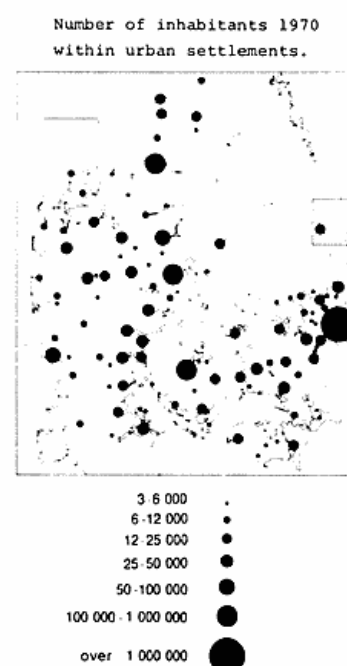
By 1960, the labour force was 1,902,492 persons (42.8% of the population); by 1975, it had grown to 2,485,627 (49.2%). This growth was steady throughout the time period and meant a halving in the number of home-makers, from 874,247 in 1960 (19% of the total population) to only 494,960 in 1975 (9.8%). The number of children, students, and pensioners has been rather constant, so the increase in labour force is strongly connected with female participation in the labour market. During the sixties and beginning of the seventies, unemployment was low, about 30,000 (1.5%), but increased to 124,000 (5%) in 1975; the 1980-figure is 150,000 (6%).

The social composition changed considerably during the sixties and seventies, as demonstrated in table 1.

Table 1

	1960	1965	1970	1975	1978
Self-employed	20.9 %	18.6 %	15.7 %	13.6 %	12.5 %
Salary earners	27.5	32.2	39.4	44.3	47.4
Workers	51.5	49.2	45.0	42.1	40.1

	Population 1970 (in thousands)	Changes (%)		
		1965-70	1970-76	1976-80
<b>Metropolitan region:</b>				
Core	740	-8.1	-11.8	-8.9
Rest	1,003	13.4	10.8	2.8
<b>Municipalities outside the metropolitan region with major town:</b>				
>100,000 (including sub-urban municipalities)	721	6.7	5.0	1.6
20,000-100,000 (no sub-urban municipalities)	732	5.9	3.0	1.3
10,000 - 20,000 (do)	338	3.5	4.3	21.7
<b>Settlements:</b>				
Copenhagen	1,382	-0.1	-6.3	
Other >100,000	460	3.4	-3.4	
20,000-100,000	722	7.5	1.2	
10,000 - 20,000	278	9.1	7.4	
5,000 - 10,000	188	10.6	12.6	
1,000 - 5,000	497	21.6	31.6	
200 - 1,000	409	14.0	24.5	
<b>Rural districts</b>	<b>1,001</b>	<b>-6.9</b>	<b>-17.0</b>	
<b>Denmark</b>	<b>4,938</b>	<b>3.6</b>	<b>2.7</b>	<b>1.0</b>



1. Metropolitan region
2. Municipalities with towns 100.000 inhab. and surrounding suburban munic.
- Municipalities with towns:
3. 20-100,000 inhab.
4. 10- 20,000 "
5. 5- 10,000 "
6. Other municipalities.

Fig. 3. Population change in different settlement types. Source 1965-76: census; 1980: register. The maps are from Planstyrelsen (1979): Rapport om det fremtidige bymønster, p. 10, and from: Landsplansekretariatet (1974): Arealplanlægning, p. 38.

Fig. 3. Forskellige bytypers befolkningsændringer. Kilde 1965-76: Folketællinger; 1980: Danmarks Statistik: Statistiske Efterretninger. Kortene er fra: Planstyrelsen (1979): Rapport om det fremtidige bymønster, p. 10, og fra: Landsplansekretariatet (1974): Arealplanlægning, p. 38.

Table 2

	1960	1965	1970	1975	1978
Agriculture, fishing, etc.	17.8 %	13.4 %	11.2 %	9.3 %	8.3 %
Manufacturing, construction, etc.	38.4	39.3	37.3	33.6	32.2
Wholesale and retail trade	14.3	15.1	16.0	15.4	15.0
Transport	7.3	6.9	6.6	6.5	6.6
Public administration	3.4	3.8	4.5	5.4	5.4
Education, etc.	3.4	4.3	5.6	7.3	7.9
Health and social services	5.1	6.2	8.4	12.2	13.8
Other professional occupations	1.6	2.0	2.6	2.9	3.1
Other services	5.5	5.9	6.5	5.6	5.4
Not stated	3.2	3.1	1.3	1.8	2.1
Total	100	100	100	100	100
Jobs, total	1,962,492	2,118,260	2,380,200	2,485,627	2,625,223
GNP per inhabitant (D.kr. in 1955 prices)	8,552	10,516	12,545	13,458	14,414

There was a decline in the share of self-employed and workers, and a corresponding increase in salary earners. This should reflect a social adjustment towards improvement and equalization.

In response to the economic trends within the society, the occupational distribution of the population also changed during the same decades (table 2).

The number of persons employed in agriculture has almost halved, manufacturing shows a slightly decreasing share, whereas wholesale and retail trade, transport, and services of various kind are constant. Public activities show a significant increase, especially for health- and social services. The main increase in employment has been in the public sector. This change has to be related to increasing income and social changes and has little to do with the changing export or with international capital movements.

#### GENERAL TRENDS OF URBANIZATION

During this century there has been a general trend towards a highly urbanized population. 1960, 74% of the population lived in urbanized areas of more than 200 inhabitants against 83% in 1976. The remaining population lives dispersed, or in small settlements in the rural areas. The trend is a consequence of the changes in the employment structure. If grouped according to size and kind, a more illustrative picture emerges (table 3).

Table 3

	1960	1965	1970	1976
Metropolitan area	29.4 %	28.9 %	27.9 %	25.5 %
Other settlements with				
10,000 - inhab.	26.6	28.1	29.5	30.1
2,000 - 9,999 "	8.3	7.8	9.4	12.6
200 - 1,999 "	9.7	12.4	13.1	14.5
Rural districts	25.9	22.8	20.1	17.4
Total	100	100	100	100

The metropolitan area has a weakly declining share, whereas the larger towns are slightly increasing their population. The minor towns showed a weakly declining share until 1965 when they started to rise considerably. The share of the smallest towns rose heavily during the whole period, whereas the rural districts had an evenly declining trend. Thus the urban pattern cannot be considered stable as an increasing share of the urban settlement population is found in small towns. The changes of population within each size group of settlements further underline the changing trends. The big towns are decreasing like the rural districts, and the medium-size towns are increasing slowly. Only the small-size towns show considerable growth and their growth even seems to accelerate.

#### Suburbanization and desurbanization, the Odense case

The Functional Urban Region (FUR) of Odense has been chosen as an example of how population location are changing the urban pattern.

This FUR consists of 9 municipalities with a total population of 218,885 in 1970. The core municipality represents Denmark's third largest town: Odense (137,276 inhab. 1970). The 8 ring municipalities are all part of the FUR's labour market area with a definition of the ring as the area with more than 15% commuters to the core. The economic structure of the FUR is close to the national average, and the evolution and history can be considered typical for the nation. Population change of the FUR is described by the diagram below.

Class No. 1 covers the old core which contains the historic city including the nearest surroundings. The old core was heavily urbanized before the study period and reached a maximum in 1960. Since then its population has declined at an accelerating rate. In spite of this, it is by far the most urbanized area within the FUR. Class No. 2 covers the old suburbs, i.e. the area which was rather urbanized at the start of the time period, containing urbanized

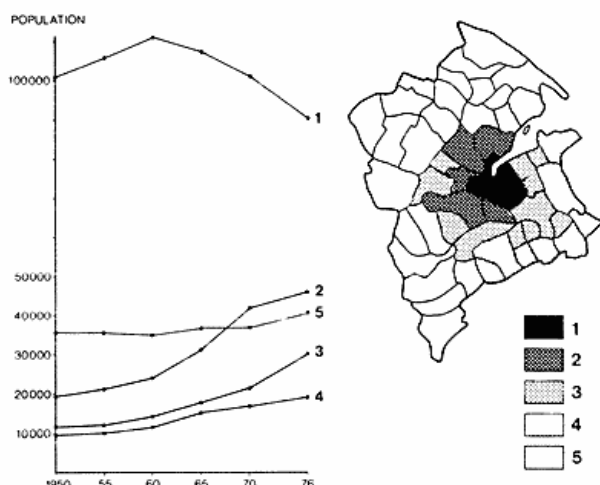


Fig. 4. Population change in the functional region of Odense 1950-76. Source: census.

Fig. 4. Folketallet 1950-76 i den funktionelle byregion Odense. Kilde: Danmarks Statistik: Folketællinger.

areas from before World War II. The old suburbs faced heavy growth from the end of the fifties into the seventies at the beginning of which the growth rate started to fall.

Class No 3 covers the new suburbs. They started to grow around 1960 and had a rather slow growth rate during the sixties, followed by a faster increase during the seventies.

Class No. 4, the inner ring, is no ring but an area lying east of the core where growth took place at a modest and uniform rate from the end of the fifties until now.

Class 5, or the outer ring, comprises areas where agriculture is the most important occupation with a stagnating population until the beginning of the seventies when a weak increase started.

The change in population figures based on enumeration units exhibits a much more dramatic shift in population, namely the changing structure of the settlement system. This process is demonstrated by 3 maps which show the settlements within the FUR. In 1960, only one urban area stands out: the old core which at that time reached its maximum population. In the rural districts there are a few small settlements, all at some distance from the old core. Most of them are market towns, a few of them have small-scale industries because they lie near railway facilities. The 1960 map shows the stage of urbanization.

From 1960 to 1970 the picture shifts. The number of towns in the ring is fairly stable, but there has been a growth in size. The central city has started to diminish, and suburbs are mushrooming up at the fringe of the core. The 1970 situation is one of rapid suburbanization.

The map from 1976 shows continued suburbanization and beginning desurbanization; it seems as if a whole system of smaller towns has evolved in a ring at a distance of roughly 15 km from the city centre of the core. From 1970 to 1976 there has been little growth in the settlements which were suburbs in 1970. As the core has continued to shrink, this map demonstrated how the process of desurbanization has reached the FUR.

The development of the new urban pattern within the labour market area is closely connected with the access to transport facilities. In the small settlements, lots and houses are for sale at low prices, and private cars have made the longer distances acceptable. Close distance between job and home, or daily commuting from suburb to town centre by collective traffic means or bicycle, is replaced by daily commuting by car over longer distances in all directions.

Parallel explanatory factors can be used on the spread of

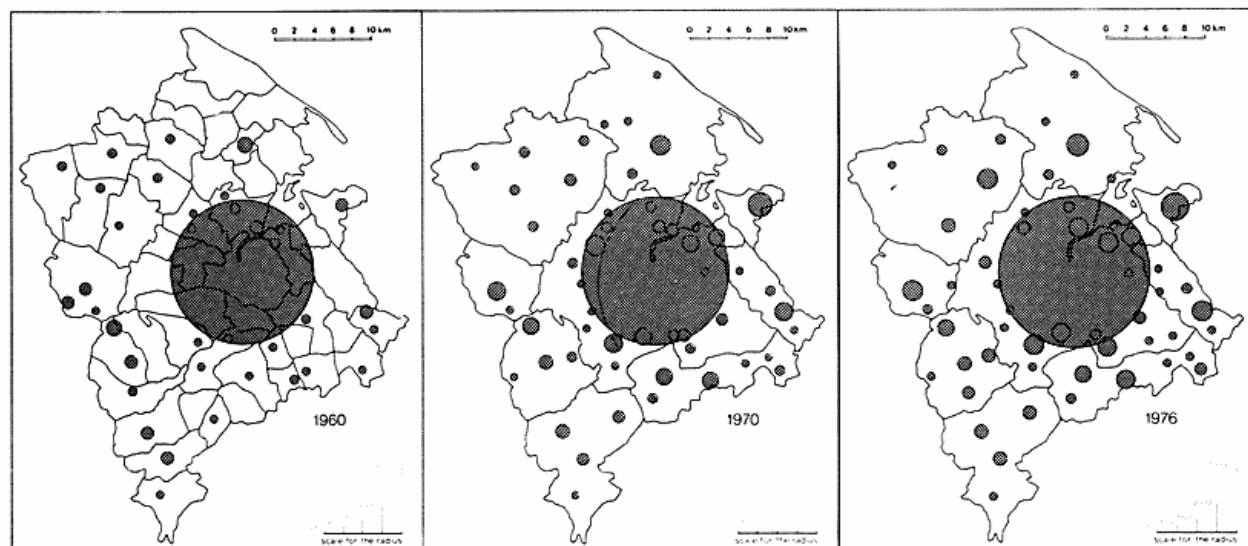
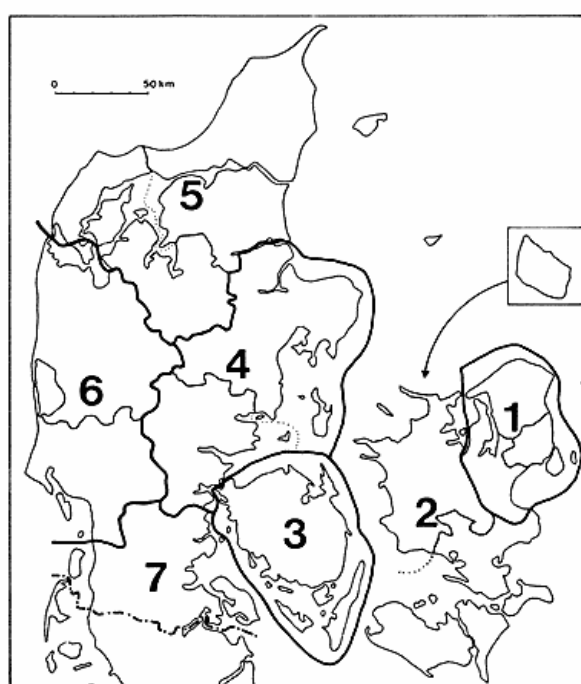


Fig. 5. Population in settlements with more than 250 inhab. in the functional region of Odense 1960-76. Source: census.

Fig. 5. Folketallet 1960-76 i bymæssige bebyggelser med mere end 250 indbyggere i den funktionelle byregion Odense. Kilde: Danmarks Statistik: Folketællinger.

manufacturing which has occurred during the late sixties and in the seventies. Here access to the labour market and heavy transport is facilitated by the use of lorries.

The changes in the urban system are also explained by the increased responsibilities of the local government. Especially the former rural districts have observed a dramatic growth in the number of civil servants. This growth has been locally concentrated due to active planning, which shall be dealt with later.



	Population 1970 (in thousands)	Changes (%)			
		1960-65	1965-70	1970-75	1975-80
1	1,743	4.4	4.3	1.4	-1.3
2	555	1.5	1.3	2.5	2.9
3	431	2.6	1.6	3.1	1.8
4	828	4.6	5.6	5.6	2.6
5	675	2.5	0.7	2.7	2.7
6	437	5.3	4.3	4.4	3.8
7	237	3.9	3.4	2.9	2.4
Dk	4,906	3.7	3.4	2.9	1.3

Fig. 6. Regional change of population: 1960-80. Source: register.  
Fig. 6. Folketallets ændring i forskellige regioner 1960-80. Kilde:  
Danmarks Statistik: Statistiske Efterretninger.

## REGIONAL DEVELOPMENT

Urbanization and the growth of suburbs and small settlements have created a new urban pattern within the single functional urban regions. Outside the labour markets of the larger towns new settlements have also emerged which must be explained by other factors. Moreover, there has been a different development within the different regions of the nation.

The basic occupations in Denmark are agriculture, tourism, and manufacturing; the expansion of the latter can especially explain differences in regional development.

Until the end of the 1950s the classical localization factors were of major importance for Danish manufacturing. It was concentrated to the metropolitan area and the larger provincial towns which experienced high growth rates. In 1958-61 the so-called second industrial revolution took place, a period of extraordinary expansion due to favourable international conditions; manufacturing increased everywhere, and until the mid-sixties, the problem of labour shortage was moderate because of high natural increase and migration from the rural districts. This boom started a process that was sustained for a long period and was followed by stagnation in number of jobs. Simultaneously with this stagnation in manufacturing employment (in spite of increasing productivity) a steady redistribution of employment has taken place from the larger towns to the minor ones. In the metropolitan region, employment has decreased considerably since 1960, and since 1970 only the group of towns with less than 5,000 inhab. has experienced an increasing employment rate. The changes in spatial distribution are mainly the consequence of the establishment of new firms in lagging regions, whereas firms in more densely populated areas were closed down, or laid off staff. Only a minor part of the displacements between regions can be described as migrations of industries. Thus, a displacement of Danish manufacturing has taken place from larger towns to development regions and to smaller towns. Illeris (1979, cited below) has given some explanations of the trends:

»First of all, it may be a consequence of government intervention (regional policies). However, the decentralization of manufacturing has also taken place in countries with little or no government policies, so the latter cannot be more than partial explanations. In this connection, also increased local efforts to attract firms should be mentioned.

Next, changes in the internal economies or diseconomies of scale have been suggested - connected with the fact that big plants are over-represented in big settlements and small plants in small settlements. In many countries it has been observed that small physical units recently have performed better than big ones (irrespective of the organizational mergers that take place). The reasons are not clear, but it has been suggested that small units might be more flexible in critical periods, and that modern organizational structures (»profit centres») favour physical decentralization.

Third, the importance of externalities may have changed. The declining importance of the transport of goods in the total cost structure has already been observed some time ago. In contrast, the need of advanced firms for frequent face-to-face contacts with business partners, research, government authorities, and other organizations has been stressed much - perhaps even exaggerated. At any rate, the consequences of improved means of transport (increase of aviation) and telecommunication (data-transmission) probably are that restrictions on the choice of location are reduced, and that advantages of agglomeration decrease. It has even been suggested that the nearness to qualified and specialized organizations in metropolitan areas now may be outweighed by the better personal understanding of problems and the less bureaucratic attitudes of public authorities and business connections in small settlements.

Finally, the availability of different kinds of labour - i.e. the location of households - plays a role. In the 60's, when the supply of unskilled labour was insufficient in metropolitan areas, workers leaving agriculture undoubtedly contributed to the decentralization of low-wage branches. Even under the present conditions, where the demand for labour tends to be smaller than the supply, a similar mechanism may operate - and contribute to the reduction of wage differences and reduction of unemployment differences which have been observed. Today, however, the advantage of small settlements may consist of a labour-force with more cooperative attitudes, less absenteeism, and smaller labour turn-over. Furthermore, qualified staff-members may be more easily available in small settlements than earlier.

#### URBAN POLICY

The trends of development within the nation cannot be separated from the political responses and from actions taken to guide the development. The Municipal Reform in 1970 might be looked upon as an implicit urban policy, because much of the urban development around and after this year has been considerably affected by it. More explicit is the regional development policy which is also connected with urban policy, especially on the macro level.

During the suburbanization process, explicit urban policy consisted of zoning and land use planning. For example, recreational and agricultural land was threatened by urban growth, and restrictions had to be imposed on its use. The suburbs of the big cities were often planned as large units with master plans.

Around 1970 a new policy was introduced namely that of planning for the pattern of settlements as a whole and for the structure of the settlement system. The policy has been closely connected with the beginning process of desurbanization.

When discussing the various types of policy, it is not the objective here to give a comprehensive review. Thus, urban renewal will not be dealt with, although this might be looked upon as the response to a new development trend, that of reurbanization.

#### ORGANIZATIONAL CHANGE - IMPLICIT URBAN POLICY

Until 1970, the administrative system in Denmark was rather complicated and working according to tradition in a

three-level system topped by the central government. The second level was represented by 3 types of authority. The capital: Copenhagen, had a special status with a high degree of self-governance. The boroughs (89), defined as the historic towns, often clearly underbanded, had a special status with a traditionally determined, rather high degree of self-governance. The rest of the country was organized in counties (25) with a combined state-appointed and regional-elected authority and consequently a weaker degree of self-governance.

The third level, municipalities, was as far as capital and boroughs are concerned identical with the second level, but the counties were subdivided into urban or rural municipalities (ca. 1300) with a high degree of self-governance, although on restricted matters only.

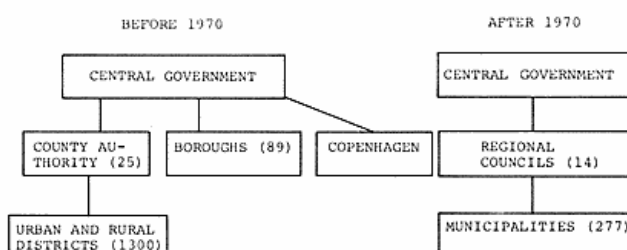


Fig. 7. The administrative system before and after the reform 1970. *Fig. 7. Det administrative system for og efter kommunalreformen 1970.*

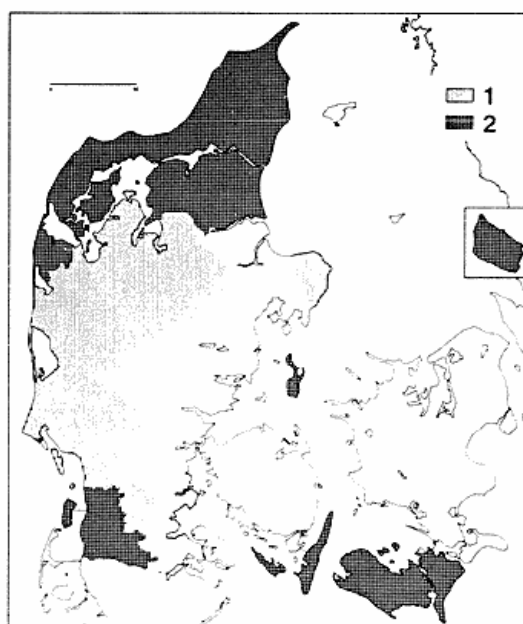


Fig. 8. Lagging regions 1970. 1. Areas with general subsidies. 2. Areas with specific subsidies. Source: Landsplansekretariatet (1974): Arealplanlægning, p. 47.

Fig. 8. Egnsudviklingsstøtte 1970. 1. Områder med almindelig støtte. 2. Områder med særlig støtte. Landsplansekretariatet (1974): Arealplanlægning, p. 47.



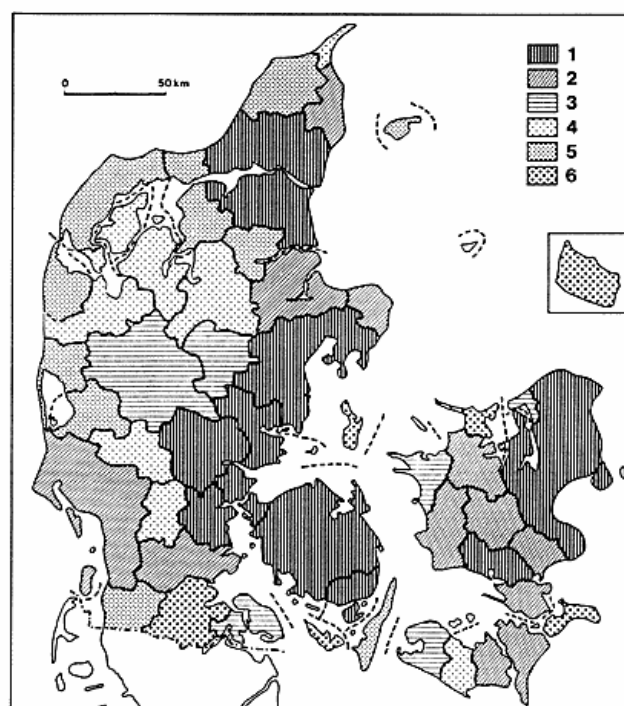


Fig. 9. Trends in manufacturing development within labour market areas 1965-76.

1. Employment in manufacturing 1970:  
11.5 - 16.0% of all employment.  
Change 1965-76: -3.0 to -7.0 of the percentage share.
2. Manufacturing:  
10.0 - 14.0%.  
Change: -1.0 to -3.0
3. Manufacturing:  
14.0 - 19.0%.  
Change: 0.0 to -3.0
4. Manufacturing:  
10.0 - 13.0%.  
Change: 3.0 to -1.0
5. Manufacturing:  
5.0 - 10.0%.  
Change: 2.0 to -1.0
6. Manufacturing:  
6.5 - 10.0%.  
Change: -1.0 to -3.0

1. High industrial share of all employment. Heavy decline. The members of the class are the old industrialized regions. Most of the larger towns are within these areas.
2. Medium industrial share of all employment. Medium decline. Many medium-sized towns lie within the areas. The members of the class are the regions which lie in connection with the old industrialized areas. They were early influenced by industry, but less than the members of class 1.
3. High industrial share of all employment. Small or medium decline of share. The members of the class are characterized by having had recent industrial development. The towns are medium-sized.
4. Medium industrial share of employment. Stagnation or growth.

The members of the class are peripheral regions with small or medium-sized towns. Industry is a recent innovation.

5. Low industrial share of employment. Stagnation or growth. Peripheral regions with small or medium-sized towns. Industry is a recent innovation.

6. Small industrial share of all employment. Medium decline. The members of the class are mostly islands and peripheral regions. Only small towns lie within the areas.

Source: census.

Fig. 9. Industriens udvikling i arbejdskraftoplande 1965-76:

1. Industribeskæftigelse 1970: 11,5 - 16,0%  
Vækst i andelen 1965-76: -3,0 til -7,0.
2. Industribeskæftigelse: 10,0 - 14,0%  
Vækst: -1,0 til -3,0.
3. Industribeskæftigelse: 14,0 - 19,0%  
Vækst: 0,0 til -3,0.
4. Industribeskæftigelse: 10,0 - 13,0%  
Vækst: 3,0 til -1,0.
5. Industribeskæftigelse: 5,0 - 10,0%  
Vækst: 2,0 til -1,0.
6. Industribeskæftigelse: 6,5 - 10,0%  
Vækst: -1,0 til -3,0.

Gruppe 1 har høj industribeskæftigelse med kraftig tilbagegang. Det er de gamle industrialiserede regioner, hvor de fleste store byer findes.

Gruppe 2 har middel industribeskæftigelse og middel tilbagegang. I området findes mange halvstore byer. Områderne ligger i kontakt med de gamle industrialiserede regioner og blev temmelig tidligt industrialiserede.

Gruppe 3 har høj industribeskæftigelse med lille til middel tilbagegang. Byerne er middelstore, og områderne er karakteriseret ved nylig industriel udvikling.

Gruppe 4. Middel industribeskæftigelse og stagnation heri. Udkantsområder med små eller middelstore byer. Industri er en nylig innovation.

Gruppe 5. Lav industribeskæftigelse med stagnation eller vækst. Udkantsområder med små eller middelstore byer. Industri er en nylig innovation.

Gruppe 6. Lav industribeskæftigelse med middel tilbagegang. Områderne indeholder kun småbyer og består mest af øer og udkantsområder.

Kilde: Danmarks Statistik: Folketællinger.

In 1970, a drastic administrative reform was carried out. The objectives of the revision were many: The new system was meant to be homogeneous, functional, and democratic at all levels.

The first level was the central government; the second, the counties (12). They were defined as regions with a major city as a node and with geographically and economically determined boundaries (labour market, traffic system, hinterlands of higher education, hospitals and cultural services). The third level was the municipality level (277), the units of which were defined as a city and its hinterland. This last definition was in many cases impossible to fulfill for reasons of tradition, policy, lack of cities at a proper distance and so



forth. In the metropolitan region the system deviates somewhat from the above described, but in this context, this is of minor importance. The whole administrative reform was negotiated within the former system, and most of it was the result of compromises.

The pre-1970 system laid a rather high degree of responsibility on the central government less on the second level, and a low degree on the third one. Government interference in local policy was generally insignificant, and the way the system operated could not assure homogeneity in development. The degree of local decision-making on the quality of public services was high. The description of this system may seem self-contradictory; but the central government did not interfere much in the operation of the local governments. These, on the other hand, had only a limited sphere of operation. The system was financed by taxes on all levels and by proportional and automatic expenditure sharing by central and lower levels of government.

After 1970 a decentralization of tasks and of control was introduced. As a rule, all that could be operated by local or regional authority was placed there. Control of the system was also decentralized. This was counteracted by changing the financial system whereby fixed proportional payments were replaced by block subsidies using objective norms, and by a more centralized system of formulating these norms.

Besides the many systematic reforms, the sixties and seventies have experienced a substantial extension of public involvement in many matters. The level of public services is high and increasing, and the number of civil servants has grown considerably as illustrated by table 2.

Although there is no general agreement about the consequences of the reforms and changes around 1970, it is clear that a higher degree of geographical equality has been obtained, and this has contributed to changes in the settlement system. All municipalities have to fulfill homogeneous tasks outlined by law, which has created a rapid urban growth within former rural districts.

Another clear consequence is that of concentration outside the capital, both on the local and the regional level. Within the new administrative units there has been a tendency to make the biggest settlement the growth pole. This has especially been the case in regions without real big cities and in municipalities without existing settlements above a certain size. The consequence has been an accelerated process of desurbanization.

#### REGIONAL DEVELOPMENT POLICY

Urban policy and regional policy are interconnected features. Regional development policy started in 1958 and has since been active in establishing basic industries in the relatively underdeveloped parts of the country, especially in Jutland. Moreover, border location benefits after Denmark's joining the European Economic Community has especially favoured South Jutland with an increase in job opportunities as the consequence.

The metropolitan region and the three regions with cities of between 100,000 and 200,00 inhab. ceased to grow in the mid-seventies and are by now stagnating. Since 1974 the metropolitan region has even declined. These trends were actually formulated as targets in the national plan, although little action has been taken to fulfill it. The fact that 35% of the Danish population is living in the metropolitan region of Copenhagen makes this city a huge one on a national scale, which contributes to the formulation of an urban policy in favour of smaller settlements.

The objective of these combined policies is to create an equal development for the whole nation in an attempt to level out some of the differences between the large towns and the rest of the country. The political targets are, however, only to a small extent followed up by action. Only a few national governmental units have migrated to peripheral regions, and financial support to establish new firms, or relocate existing ones has been modest.

#### LAND-USE PLANNING - SUBURBANIZATION

After World War II urban growth accelerated. This growth took place in the form of suburbanization around the capital and the larger cities. The fifties and sixties were decades of progressive land consumption in the outskirts of the existing towns. From the outset, suburbanization was solely a residential feature, which was first followed by industrial suburbanization and later by services and offices. During the process this created high demands in the large agglomerations on technical infrastructure, and on this and social infrastructure when the suburbs were there. The investments in infrastructure were, as a general rule, lagging behind the residential development, as they were financed by taxation. The rapid process thus created structural problems on which the organizational system and the planning officers offered only partial solutions.

Until the end of the seventies, physical planning was guided by planning laws which demanded that towns with more than 1000 inhab. should work out master plans for the not urbanized urban zone, elaborated according to instructions and control from the central government. In practice local governments could plan as they liked because the planning laws were inadequate in demands. The quality of the master plans varied and was often low; generally, they were land use plans for the whole urban development or for a limited area. Plans for a future structure of a whole urban agglomeration were rarely encountered.

Counteracting the process of rapid urban growth and land consumption were the interests of agriculture and recreation. These interests had been formulated as the policy of preventing uncontrolled urban sprawl. It was more or less a general agreement in the fifties and sixties that the urban development should be coherent and take place in connection with existing settlements. To fulfill these objectives a very efficient tool was established in 1949 when zoning laws were passed and put into force. These laws made it possible to

divide the whole country into urban, rural, and recreational zones and thereby control urban growth. Unfortunately, administration of the laws were partly laid in the hands of local and regional administrative units which did not always interpret the laws according to their original intention. In general, however, zoning laws have contributed to create a rather sharp distinction between urbanized and open land.

During the suburbanizing period land consumption was extremely high, and the urban zone (used and planned) was growing rapidly (table 4).

Table 4

	Urban Land		Urban Zone	
	km <sup>2</sup>	%	km <sup>2</sup>	%
1951	657	1.5		
1967	930	2.2		
1970	1060	2.5	1700	3.9
1974	1200	2.8	1750	4.1
1978	1400	3.3	1890	4.4

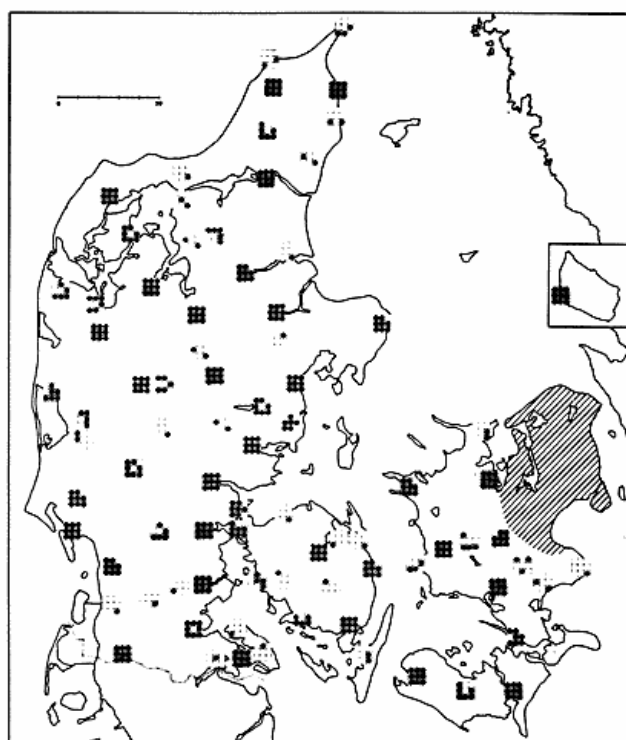
In combination with the rapid growth of the urbanized land the planning of new urban land was even more optimistic and in 1970 the gap between the consumed land and the whole urban zone was wide. Since then, it has narrowed simultaneously with a decrease in land consumption from 40 sq.km per year around 1970 to 30 sq.km in the mid-seventies. The slowing down of suburbanization has thus led to a fall in planning actions, and the political interest has shifted from growth to structure.

During the seventies a planning reform was carried out. The laws outlined detailed demands to planning, and a more efficient system was introduced, which will be described later. This system was the consequence of the many mistakes and failures of the former system, so now - when the rapid urban change seems to be finished - a system to manage it is in operation.

#### SETTLEMENT SYSTEM POLICY - DESURBANIZATION

The start of an efficient planning system can be placed at the beginning of the 1970s following the administrative reform of 1970. It was set up as a hierarchy with national, regional, and municipal economic, structural and land use plans. The national plans have the form of directives, proposal on different matters, sector plans, land reservations and control operations. The regional plans deal with the urban system and control the municipal space of operation on a variety of issues. The municipality plans are master plans for the local urban system, and structure plans for the function of this system.

To set up this planning system a flow of directions and persuasive guidelines came from the Ministry of Environment, first to the newly established municipalities, later also to the regional authorities. In all these more or less official



Metropolitan region of Copenhagen

1	2	3
4	5	6
7	8	9

Fig. 10. District center functions in the seventies outside the metropolitan region of Copenhagen. Source: Planstyrelsen (1979): Rapport om det fremtidige bymønster, p. 18.

Fig. 10. Egnscenterfunktioner i 70'erne uden for Hovedstadsregionen. 1. Gymnasium 1976. 2. Handelsskole 1976. 3. Teknisk skole 1976. 4. Delt sygehus 1976. 5. Hovedpolitistation 1976. 6. Udvalgs-varehandel svarende til 10.000 personers forbrug 1968. 7. 4.000 arbejdspladser i byerhverv 1970. 8. 75 firmaer i byerhverv, hver med mere end 10 arbejdspladser 1970. 9. 6 eller flere rutebillinier 1973-74. Kilde: Planstyrelsen (1979): Rapport om det fremtidige bymønster, p. 18.

ways each municipality was persuaded to point at one settlement as a growth pole for services and manufacturing. This was of course a most vital topic and greatly discussed in the many municipalities without a dominant settlement. The concept has later been even more underlined in national plans and is foreseen to be important in the regional plans which are being formulated, see fig. 11. This »growth-pole of small poles«-policy has been combined with an even more obvious policy: that of establishing a settlement hierarchy.

In a variety of reports it has been emphasized that the concept of the Danish urban pattern was dominated by the thoughts of Christaller and Lösch. The structure of service centres in Denmark have been analysed and discussed by

many scholars. Some of them have also been active in formulating the urban policy. By using indicators as a measure of centrality, and dividing the settlements into different types by means of scalogram-techniques, Illeris (1966, 1967, 1980) has identified three levels of services centres. Empirical analyses of interaction identify functional regions on three corresponding levels.

The use of the service centre theory as a basis for identifying functional regions with settlements of different levels as nodes, have been criticized, latest by Pedersen (1980) and by Allpass and Agergaard (1979). The criticism is based on the following argument:

First, the method of analysis leads to self-fulfilling results. The method selects indicators based on frequency of service which in itself leads to identification of levels of service. Second, the data base is inconsistent, as the definition of units is based on juridical constraints so that function, size, sale, and range do not influence the definition. Third, the conclusion is that a hierarchy exists which is in conflict with many other conclusions stating that the settlement system is one of continuum.

Besides this scientific criticism, it can be stated that the central-place theory is a static one, and the use of it can only be a restrictive policy which establishes threshold populations for a given level of services within functional regions, and thus orients the settlement system towards a hierarchy.

Nevertheless, the theory seems to have played a major role in formulation of the basis for planning settlement systems. Two reports from the Ministry of Environment (1978, 1979) discuss the present and future settlement pattern. The main conclusions are that a hierarchy of settlements is to be established:

- Copenhagen, the capital with 1.3 mio in the agglomeration, 1.75 mio in the whole metropolitan region.
- Regional centres; namely the four largest cities outside Copenhagen with between 100,000 and 200,000 inhab. in the nodal settlement.
- District centres with between 20,000 and 100,000 inhab. in the nodal settlement.
- Sub-district centres with at least 5,000 inhab. in the nodal settlement and 20,000 inhab. in the region.
- Municipal centres with at least 1,000 inhab. in the nodal settlement and 3,000 inhab. in the region.
- Local centres with at least 1,200 inhab. in the region.

The two upper levels in the hierarchy are identical with the existing settlement system. The thresholds for planning urban growth have in a later report (1979) been increased to a minimum region of 5,000 inhab.; thus the lower levels of the future settlement system have been omitted.

To demonstrate the hierarchical thinking a map is shown from the reports to show the third level of the hierarchy. From the 1978-report, it can also be cited that it is important to fill up holes in the settlement system as well as in the single settlements of a certain level.

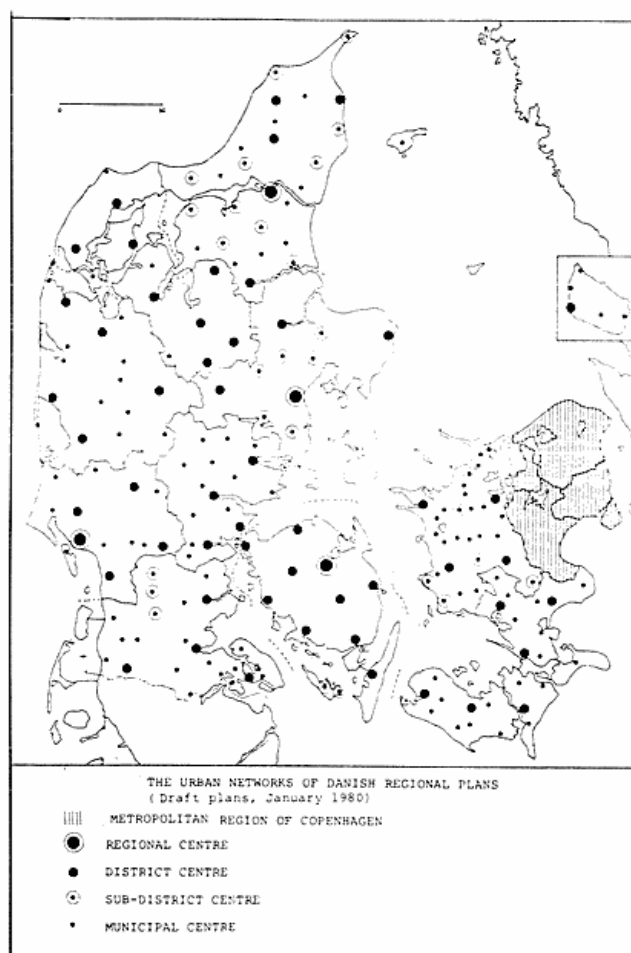


Fig. 11. The proposed urban system of regional plans in 1980. Source: Illeris, S. (1980): Research on changes in the structure of the urban network, p. 35.

Fig. 11. Regionplanernes fremtidige bymønster 1980. Kilde: Illeris, S. (1980): Research on changes in the structure of the urban network, p. 35.

Thus it has been demonstrated that the main planning efforts for the next decade will be devoted to planning for a future, and rather desurbanized settlement system. Countering this is a tendency of population growth in the inner cities, a reurbanization, which is partly guided by an increasing activity in renewal of the older parts of the building stock.

#### RESUMÉ

Siden den industrielle revolution i slutningen af det 19. århundrede er der foregået en urbaniseringsproces i Danmark. Denne proces har ført til en mere og mere koncentreret befolkning i større og større byer. Den planmæssige reaktion har været lille og har især bestræbt sig på at undgå en irrationel udvikling.

Efter Anden Verdenskrig begyndte befolkningen og senere arbejdspladserne at søge ud mod byernes forstæder. Den politiske reaktion på det store jordforbrug og den ukontrollerede suburbani-sering manifesterede sig i zonelovgivning. Senere styredes byudvik-

lingen desuden ved hjælp af dispositions- og arealbenyttelsesplaner.

Omkring 1970 introduceredes en langt mere aktiv fysisk planlægning. En redistribution af vækst i basisindustrierne og en begyndende byspredning nødvendiggjorde stærke styringsmidler, således at hele bysystemets udvikling kunne tilrettelægges hensigtsmæssigt. Bl.a. derfor gennemførtes en administrations- og planlovsreform, som tillod en stærk styring. Formålet hermed var at skabe ensartede levevilkår såvel socialt som geografisk.

Denne artikel har til formål at beskrive byudviklingstendenserne i Danmark efter 1960 og identificere de politiske reaktioner.

Først beskrives den rolige demografiske udvikling og den stærkt foranderlige socio-økonomiske udvikling. Dernæst beskrives urbaniseringsprocessen. Suburbaniserings- og desurbaniseringsprocesserne analyseres nærmere i et case study over Odense. Regional udvikling inddrages i den descriptive analyse, idet denne anses for at være tæt forbundet med byernes forandring.

Herefter præsenteres og diskuteres politiske og planlægningsmæssige reaktioner. Kommunalreformen fra 1970 anses for et led heri, idet den har haft betydelig effekt på byudviklingen. Det samme gælder for regionaludviklingspolitikken. Mere eksplicit fysisk planlægning udgøres af zonelovgivning og arealbenyttelsesplaner i forbindelse med suburbaniseringen samt af bysystemplanlægningen i forbindelse med desurbaniseringsprocessen. Endelig er byfornyelsespolitikken nødvendig, såfremt tendensen til reurbanisering skal forstærkes.

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