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### Resumé

I artiklen beskrives og diskuteres den danske geografiske befolknings- og erhvervsfordeling under den økonomiske krise i 1980-83. Der anvendes 3 dimensioner, nemlig regioner, bystørrelser og – inden for byområderne – central/omegnskommuner.

1970'ernes decentralisering af befolkningen ophørte omkring 1980. Tidligere årtiers koncentration genopstod imidlertid ikke, folketallet blev næsten konstant i alle dele af landet. En væsentlig årsag hertil synes nedgangen i boligbyggeriet at være – folk har måttet forblive i den eksisterende boligmasse.

Også decentraliseringen af arbejdspladserne svækkedes i 1980. Afgørende var det, at krisen især ramte de primære og sekundære erhverv, som er overrepræsenteret i udkantregioner og i mindre byer og landdistrikter. Derimod øgedes beskæftigelsen fortsat i den tertiære sektor, som er overrepræsenteret i de største byer.

I 1983 synes der at ske det modsatte. Arbejdsløshedens udvikling tyder på beskæftigelsesvækst vest for Storebælt og stagnation i Hovedstadsregionen, som præges af en stor offentlig sektor.

Beskæftigelsesfordelingen skyldes dog ikke alene forskelle i erhvervsstruktur. Inden for de enkelte erhverv sker der også lokaliseringsforskydninger. En række årsager hertil diskuteres, bl.a. betydningen af »sociale kvalifikationer« og iværksætter-holdinger uden for storbyerne. Stort set synes de faktorer, der gjorde sig gældende i 1970'erne, fortsat at være de vigtigste.

Decentraliseringens ophør under krisen kan hovedsageligt tilskrives for det første på befolkningssiden boligbyggeriets nedgang, for det andet strukturudviklingen på erhvervsiden og for det tredje vekselvirkningen mellem befolknings- og erhvervsfordelingen.

## Unemployment and economic activities in the EC

Bue Nielsen

Nielsen, Bue: Employment and economic activities in the EC. Geografisk Tidsskrift 84: 62-69. Copenhagen January 1984.

*Regional disparities in unemployment and economic activities in the EC in the late 1970's. Various concepts of unemployment are discussed. The performance of regions and countries using different concepts are illustrated.*

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Keywords: *Economic geography, European communities, regional development, unemployment.*

International comparisons of the level of unemployment are difficult. Unemployment statistics in different countries, as they are plotted by the labour exchanges, generally give a picture of unemployment more in alignment with the unemployment policy of the country than a true measure of need for and real lack of employment. This is true also for the harmonized statistics on registered unemployed used in the EC.

### LABOUR FORCE SURVEYS

EUROSTAT's distributions of population by categories of activity, published in the so-called Labour Force Surveys, give, however, a uniform material for a more detailed description of unemployment (EUROSTAT, 1977, 1981). Some results from an investigation based on these data will be presented in the following.

The publications from the Labour Force Surveys distribute the population into different groups with varying contacts to the labour market: persons with a main occupation, unemployed (in the strict sense), persons with occasional employment, seeking employment, housewives, children under 14 years of age, pupils, pensioners and other non-active persons. In this paper the total population, children and pensioners excluded, is called working population, and the paper studies the division of the working population in occupied and non-occupied.

The reasons for including pupils and housewives in the working population might be discussed. The housewives are, however, well-known as a labour reserve. A change in their number is an important indicator of the state of the

	1975	1979	Growth 1975-79	%
Population in the survey	250 756	253 829	3 073	1.2
of which: Children age 0-13	53 278	48 241	-5 037	-9.5
Pensioners	33 011	34 163	1 152	3.5
Working population	164 467	171 425	6 958	4.2
of which: occupied	98 608	101 067	2 459	2.5
men	64 612	64 918	306	0.5
women	33 996	36 149	2 153	6.3
non-occupied	65 859	70 358	4 499	6.8
men	14 321	17 414	3 093	21.6
women	51 538	52 944	1 406	2.7

Table 1. Development in the main groups of population in the EC 1975-1979. Figures in 1000.  
Tabel 1. Udviklingen i befolkningshovedgrupperne i EF 1975-1979.

labour market, even if this does not apply to their absolute numbers. The latest years' development in Denmark, where prolonged school attendance has substituted non-existing jobs on the labour market – and therefore is not a sign of growing need for education – justifies the inclusion of this group in the working population, even if demographic factors also are at play here.

The Labour Force Survey is based on a sample of the population. This requires the use of rather large regions to avoid too great unreliability in the compared data. In this paper the 105 regions in the EC used by EUROSTAT are therefore aggregated to 50, centered around 5 millions inhabitants. Calculations of reliability are presented in Nielsen (1982).

#### Unemployment

The development in the main groups of population from 1975 to 1979 for the total of EC is shown in the tables 1 and 2.

Year	Men	Women	Total
1975	18.14	60.25	40.04
1979	21.15	59.43	41.04

Table 2. Non-occupied persons in % of working population.  
Tabel 2. De ikke-beskæftigedes andel af arbejdsbefolkningen.

The data in these tables show that the number of occupied persons in the EC increased during the years 1975-79. This growth did not keep pace with the growth in the working population, however. Thus the number of non-occupied persons increased in both absolute and relative numbers. The two sexes indicate rather different performances, as the number of occupied men only shows a very modest development, whereas the employment of women increased relatively and absolutely.

The regional distribution of the non-occupied population is mapped as figure 1. National levels of non-occupation vary enormously. There are low rates of activity in the Netherlands and in southern Italy. Also northern Italy, Mediterranean France, Ireland, Belgium, northernmost France and the western part of Central Germany give values below the average for the EC.

This distribution of the regions does not indicate the distribution of total unemployment, however. The social factors behind the equally low rates of activity in the Netherlands and in southern Italy are very different, the composition of the non-occupied population differs and the social problems are thus very different in nature and depth.

The lower rate of activity in the western part of Germany and northernmost France compared to that of the neighbouring areas in the same countries results from the well-known structural problems for coal mining etc., from which the population of those areas suffers.

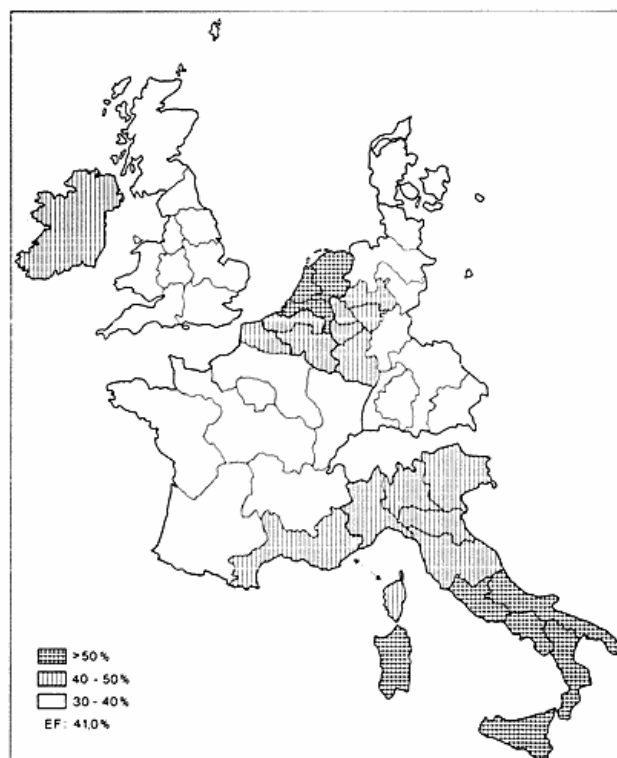


Fig. 1. Non-occupied persons in % of working population 1979.  
Fig. 1. De ikke-beskæftigedes andel af arbejdsbefolkningen 1979.

	1975	1979	Growth 1975-79	%
Unemployed . . . . .	3 753	4 445	692	18.4
With occasional occupation . . . . .	2 352	3 250	898	38.1
Seeking employment . . . . .	1 533	1 944	411	26.8
Pupils . . . . .	19 079	21 949	2 870	15.0
Housewives . . . . .	38 347	36 862	-1 485	-3.9
Other non-occupied . . . . .	795	1 908	1 113	140.0

Table 3. Development of the groups of non-occupied 1975-1979. Figures in 1000.  
Tabel 3. Udviklingen i grupperne af ikke-beskæftigede 1975-1979.

The non-occupied groups of the working population 1975 and 1979 are shown in table 3. The number of unemployed categorized as such grew 700.000 during these 4 years. But the number of all non-occupied rose with not less than 4½ million in the same period. This growth occurred in all groups, the housewives excluded. The difficult situation on the labour market clearly results in many different reactions from those without jobs. The strict concept of unemployment used by the EC, and in the national registrations as well, is completely insufficient to grasp this social reality.

large countries alone, we observe a definite fall in the United Kingdom (with Ireland) and a marked rise in France and Italy. In terms of total non-occupied however, United Kingdom has performed badly, whereas France is best placed among the countries in the EC. The picture is reversed! It is necessary to evaluate all groups of non-occupied if one is to form a realistic opinion of the character and dimension of unemployment.

The regional distribution of the changes in the proportion of non-occupied persons is mapped in figure 2. Data for the countries are given in table 6. Denmark, France

	D	F	I	UK/ IRL	B/L	NL	DK	EC
Unemployed	-119	511	420	-275	150	12	-7	692
With occ. occupation	-43	-72	641	406	-20	-2	-13	898
Seeking employment	29	-78	63	314	4	78	0	411
Pupils	867	318	664	554	79	241	148	2 870
Housewives	-686	-412	-611	470	-108	-88	-50	-1 485
Other non-occupied	1 028	-33	-254	298	75	6	-7	1 112
Total	1 076	234	923	1 767	180	247	71	4 498

Table 4. Growth of non-occupied 1975-1979. Countries. Figures in 1000.  
Tabel 4. Vækst i ikke-beskæftigede 1975-1979, fordelt på lande.

This fact is underlined by the geographical distribution of the unemployed and the other non-occupied groups. Changes in the different groups of non-occupied persons in the countries of the EC in the years 1975-79 are shown in table 4. If we look at registered unemployment in the

and the Netherlands have performed better than the average of the EC, and the proportion of occupied has increased. In the other end, especially the United Kingdom lost jobs.

The regional performance is complex, particularly in

Economic activity	NACE code
1. Agriculture, forestry, fishing, hunting . . . . .	0
2. Energy and water . . . . .	1
3. Extraction and processing of non-energy-producing minerals and derived products; chemical industry . . . . .	2
4. Metal manufacture; mechanical, electrical, and instrument engineering . . . . .	3
5. Other manufacturing industries . . . . .	4
6. Construction and civil engineering . . . . .	5
7. Distributive trades, hotels, catering, repairs . . . . .	6
8. Transport and communication . . . . .	7
9. Banking and finance, insurance, business services, renting . . . . .	8
10. Public administration, national defence, and compulsory social security . . . . .	91
11. Other services . . . . . (91 excluded)	9

Table 6. General classification of economic activities (NACE). Tabel 6. EUROSTAT's erhvervsklassifikation (NACE).

Germany. But it can be observed, that the new areas of industrialization in western France and central Italy figure among those few regions with a growing share of occupied persons, whereas most regions in United Kingdom, Ireland and southern Italy have witnessed a clear deterioration. The same has happened in traditional problem-areas such as Wallonia and the Ruhr, but also in Lower Saxony and southern Germany.

Further hints about the changes in the structure of employment can be obtained by dividing the population into men and women. The regional distribution of the proportion of the female working population which is occupied is mapped in figure 3. The areas with total employment expansion are all characterized by a rapidly growing proportion of women in work.

This occurrence is in most of these regions rather precarious, however. All regions with a large growth in the employment of women (western and south-western France, central Italy and the southern part of the Netherlands) are characterized by industries demanding cheap, stable and unskilled labour. The clothing and shoe industries dominate, together with modern component production in electronics and other metal manufacture, cf. Li-pietz (1977), Arcangeli et al. (1980) and L pple & van

	1975	1979	Change 1975-79
BRD	37.05	38.29	1.24
France	37.76	37.55	-0.21
Italy	49.98	50.35	0.37
United Kingdom /Ireland	32.19	34.83	2.64
Belgium /Luxembourg	43.94	45.40	1.46
Netherlands	52.72	52.63	-0.09
Denmark	34.66	33.84	-0.82
EC	40.04	41.04	1.00

Table 5. Non-occupied persons in % of working population. Countries.

Tabel 5. De ikke-besk ftigedes andel af arbejdsbefolkningen, fordelt p  lande.

Hoogstraten (1977). A great deal of the employment is occasional, or outside the regular labour market and thus with long working-days, dangerous environment in the factories and lack of social security.

Comparisons of respective development in men's and women's employment is shown in figure 4. Many regions with growing proportions of female employment simultaneously witnessed a decrease in male employment. The

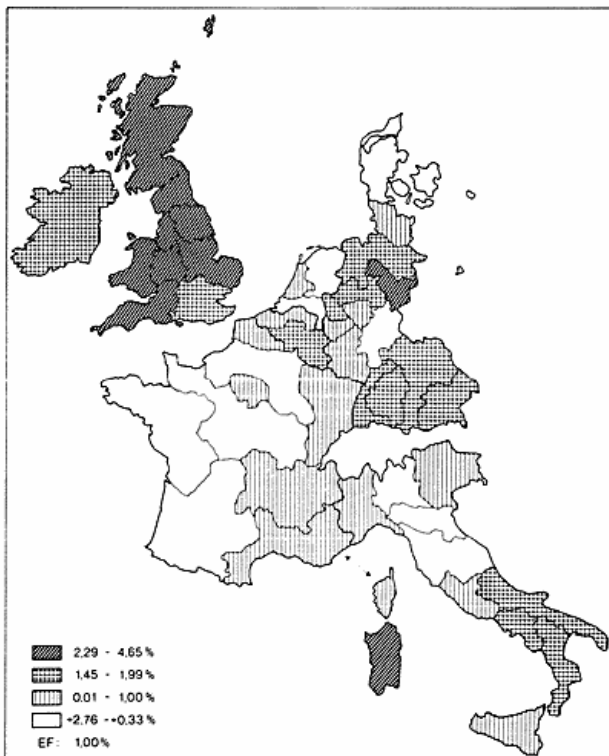


Fig. 2. Change in non-occupied persons' percentage of working population 1975-1979.

Fig. 2.  ndring af de ikke-besk ftigedes andel af arbejdsbefolkningen 1975-1979.

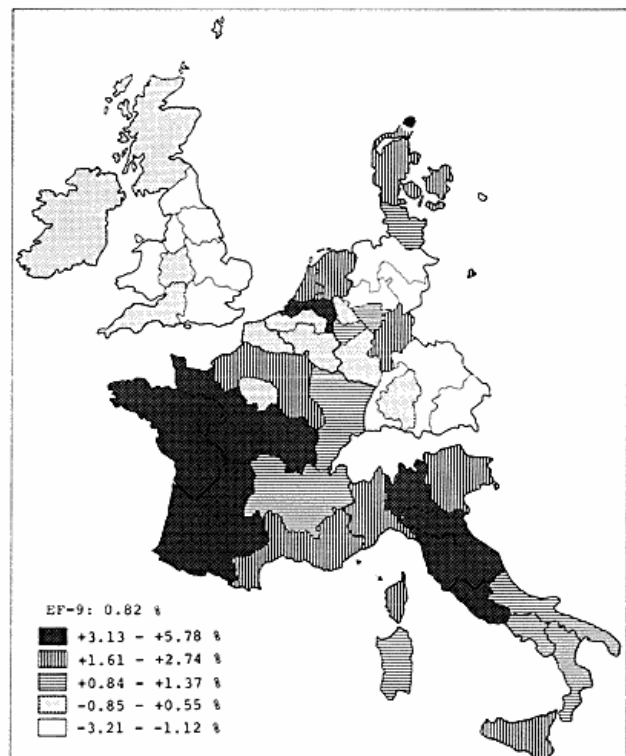


Fig. 3. Change in occupied persons' percentage of working population 1975-1979. Women.

Fig. 3.  ndring af de besk ftigedes andel af arbejdsbefolkningen 1975-1979. Kvinder.

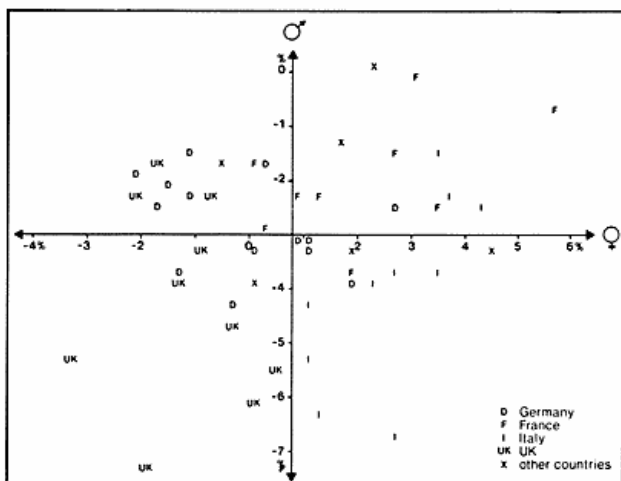


Fig. 4. Change in occupied persons' percentage of working population 1975-1979. Men and women.

Fig. 4. Ændring af de beskæftigedes andel af arbejdsbefolkningen 1975-1979. Mænd og kvinder.

new possibilities for employment in the decentralised manufacturing and office functions have not benefited the men, that are rendered superfluous. Instead the demand has sought other groups on the labour market, often housewives from rural communities.

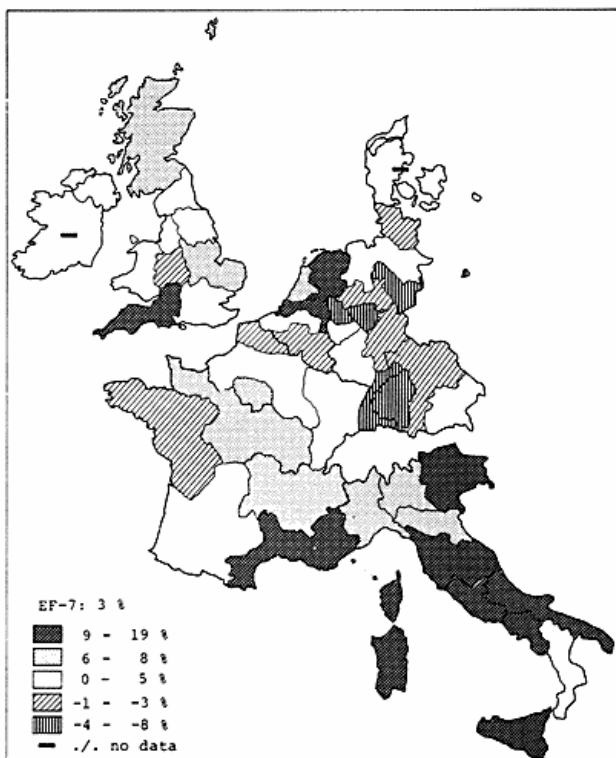


Fig. 5. Employment change 1973-1979.  
Fig. 5. Vækst i beskæftigelsen 1973-1979.

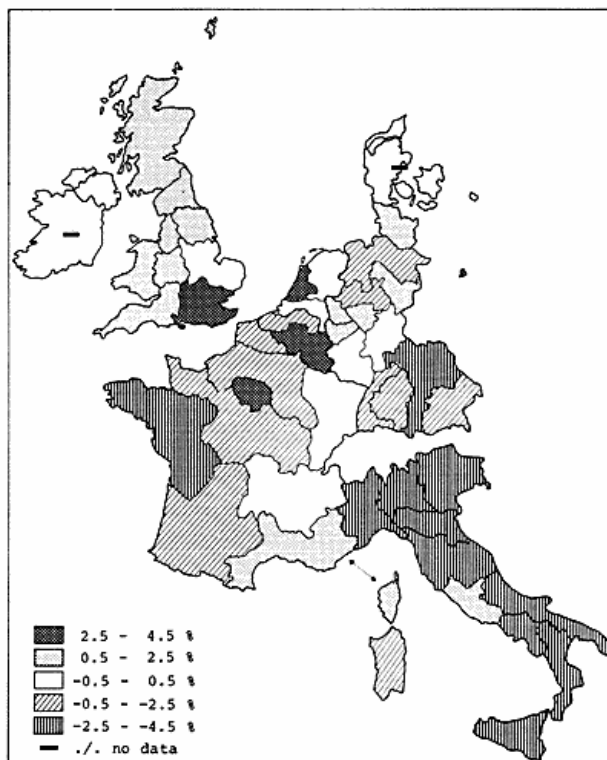


Fig. 6. Structural growth 1973-1979.  
Fig. 6. Strukturel vækst 1973-1979.

#### Occupation

The material in the Labour Force Surveys will be used to dig a bit further into the regional changes in the distribution of economic activities. The years 1973 and 1979 will be compared in order to get the full impact of the economic crisis in the data (EUROSTAT 1975, 1981).

The Labour Force Surveys give figures for persons with a main occupation, falling in 11 activity groups. The classification of activity groups is shown in table 5. We use the aggregated regions mentioned above in order to reduce the unreliability of the samples. The 1973 Labour Force Survey did not include Denmark and the Republic of Ireland. These countries are therefore omitted from the analysis. The data from 1973 used here has been corrected in several ways by taking the following points into consideration: There have been some changes in the delimitation of regions between 1973 and 1979, especially in the northern part of England, and in Lower Saxony. For some regions, mainly in France, new estimates of the total population in 1973 have been published. Finally the sum of the employment in the 11 activities in each region has been »grossed-up« to comply with the figures for total employment; this concerned especially the United Kingdom and the Netherlands. In total, these correction procedures only involved small modifications.



Fig. 7. Specific redistribution of employment 1973-79. All activities.

Fig. 7. Specifik omfordeling af beskæftigelsen 1973-79. Alle erhverv.

### Shift-share analysis

The data from the Labour Force Surveys 1973 and 1979 distributed over 11 activities and 49 regions are used in a shift-share analysis. Keeble et al. (1981) made an analogue analysis on the basis of similar material on an aggregated regional level. Their conclusions do not need to be repeated. In order to reach more detailed results we will analyse some of the activity groups in the much finer regional division of the EC used here.

The type of shift-share analysis used is more thoroughly described in Nielsen & Sørensen (1984). We shall only give the mathematical equations.

The change in the employment in each of the 11 activity groups in each of the 49 regions is divided into 3 components, called general, structural and specific:

$$g_{ij} = (T_2/T_1 - 1) \times t_{ij}$$

$$st_{ij} = (T_{i2}/T_{i1} - T_2/T_1) \times t_{ij}$$

$$sp_{ij} = t_{ij2} - (T_{i2}/T_{i1}) \times t_{ij1}, \text{ where}$$

$g_{ij}$ ,  $st_{ij}$  and  $sp_{ij}$  are general, structural and specific growth in activity  $i$  in region  $j$  1973-79 respectively,

$t_{ij1}$  and  $t_{ij2}$  are employment in activity  $i$  in region  $j$  in 1973 and 1979 respectively,

$T_{i1}$  and  $T_{i2}$  are employment in activity  $i$  in the EC in 1973 and 1979 respectively,

$T_1$  and  $T_2$  are the total employment in the EC in 1973 and 1979 respectively.

The development of the total employment from 1973 to 1979 is mapped in figure 5. The growth has been above the average in Italy, France and the Netherlands. Generally the growth rates are high in regions adjoining the traditional centres, as in southwestern UK, central France, the peripheral Netherlands and North East Italy, but the growth rates are high in the most of southern Italy as well. On the other hand employment has declined in Germany, where the traditional manufacturing areas in west and south are hard hit. The same applies to other regions with traditional industries, such as Wallonia and Nord-Pas de Calais.

The structural strength of the regions in 1973 is measured by relating the structural component in the shift-share analysis to the total 1973 employment. The regional distribution of this measure is shown in figure 6. Regions with a favourable industry-mix – using this classification of activities – generally were Great Britain, Wallonia, partly Germany and the capitals of the EC. Activities with low general rates of growth dominated Italy, France and southern Germany.

The industry-mix in the regions 1973 show only very modest signs of connection with the actual development of their employment the following years. 13 of the 19 structurally strong regions mapped in figure 6 had growth

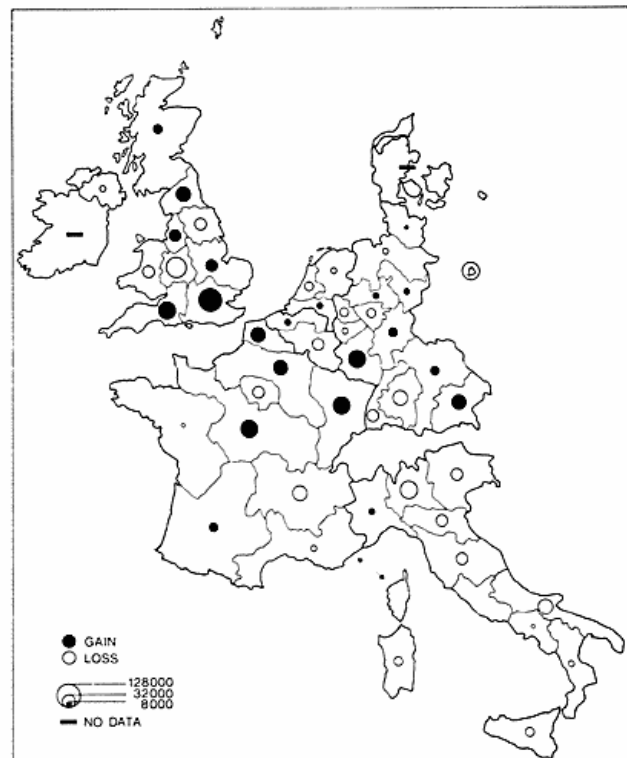


Fig. 8. Specific redistribution of employment 1973-1979. Metal manufacturing (NACE 3).

Fig. 8. Specifik omfordeling af beskæftigelsen 1973-1979. Metalforarbejdende industri (NACE 3).

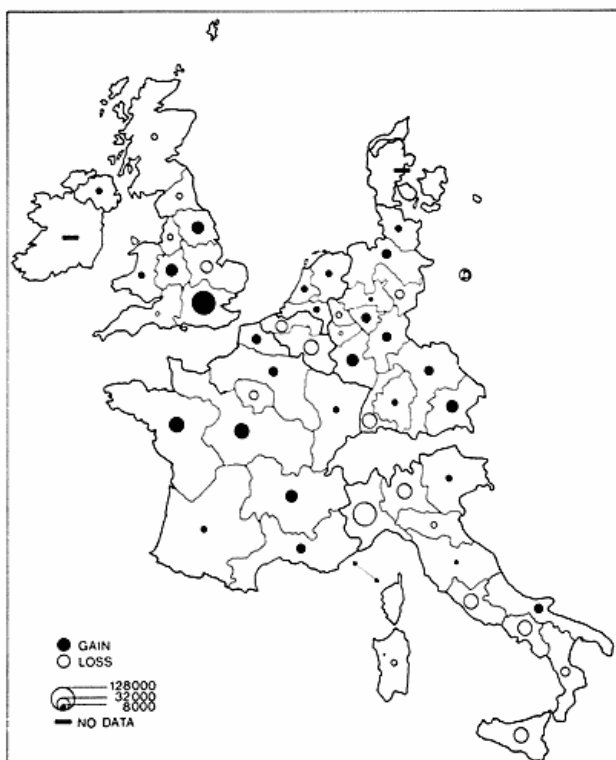


Fig. 9. Specific redistribution of employment 1973-1979. Other manufacturing (NACE 4).

Fig. 9. Specifik omfordeling af beskæftigelsen 1973-1979. Anden industri (NACE 4).

rates well below the average of the EC. The favourable structure of activities was more than offset by a negative specific change in the employment in the regions. On the other hand, 14 of the 22 structural weak regions experienced growth rates above average, caused by great specific gains. These regions include the whole of Italy, except Lazio.

The regional distribution of the specific component for all activities is mapped in figure 7. The specific gains show a regional pattern much in accordance with total growth. Of the areas with a growth clear above the average only Ile de France and western Netherlands have negative specific components. The growth can thus be related to the structure of activities only in these two regions.

The specific gains in employment which Italy and other peripheral regions in the EC witnessed in the years 1973-79 are very unequally distributed among the activities, however. The manufacturing activities show this very clearly. The specific redistribution in metal manufacture (NACE 3) and other manufacturing industries (NACE 4) are mapped in figure 8 and 9 respectively. These activities should be seen as the most important productive ones in a long-sighted development context. The regional pattern for the manufacturing activities is very much different from the pattern for all activities taken together. The Ital-

ian regions all lose, just like the traditional crisis-area of Wallonia. The large specific redistribution of employment to Italy, and particular southern Italy, seems to be either markedly unproductive as consumer service and administration, or associated with an old-fashioned agriculture and speculative building activities, none of which guarantee future growth.

The regional distribution of specific gains in manufacturing is somewhat complex, but seems to favour the southern parts of UK, parts of central Germany and a good section of France. The dispersion of manufacturing employment from the old centres does not reach the more peripheral parts of the EC in the years of crisis.

### CONCLUDING REMARKS

In the institutions of the EC much is said about the necessity of regional equalization in the EC as a precondition for further integration. The materials presented in this paper concerning the patterns of unemployment and the most important productive activities do not show tendencies to such an equalization. They rather corroborate that the development leads to bigger disparities as stated by so many observers during the latest years.

### Resumé

I artiklen benyttes data fra EUROSTAT's stikprøveundersøgelser af arbejdsstyrken til at belyse arbejdsløsheden og erhvervsændringerne i EF i slutningen af 1970'erne.

EUROSTAT opdeler befolkningen i en række kategorier, afhængigt af arbejdssituationen: Beskæftigede, arbejdsløse, med tilfældigt arbejde, arbejdssøgende, husmødre m/k, børn under 14 år, elever, pensionister samt andre ikke-beskæftigede. Befolkningen, fraregnet børn og pensionister, kaldes i denne artikel arbejdsbefolkning. Artiklen undersøger ændringerne i arbejdsbefolkningens fordeling på beskæftigede og ikke-beskæftigede.

Tabel 1-3 viser udviklingen for EF som helhed. Kvindernes aktivitetsrate steg, mens mændenes faldt kraftigt. Mens antallet af arbejdsløse, der er registreret som sådan, voksede med 700.000 i årene 1975-79, steg det samlede antal ikke-beskæftigede 4½ million. Det snævre arbejdsløshedsbegreb, som almindeligvis bruges, er helt utilstrækkeligt til at indfange denne sociale realitet. Dette understreges af tabel 4, der viser, at indtrykket af arbejdsmarkedet i f.eks. Storbritannien og Frankrig er helt afhængigt af det benyttede arbejdsløshedsbegreb.

Områder med vækst i beskæftigelsen (se figur 2 og 3) er præget af vækst i kvindebeskæftigelsen i erhverv med billig, stabil og ufaglært arbejdskraft som f.eks. fremstilling af beklædning, fodtøj og elektroniske komponenter. Disse regioner har et kønsopdelt arbejdsmarked; de fyrede mænd går arbejdsløse, mens nye lag af kvinder indrulleres i proletariatet.

Beskæftigelsesudviklingen i årene 1973-79 undersøges ved hjælp af en regional omfordelingsanalyse med 11 erhverv fordelt på 49 regioner. Der mangler data for Danmark og Irland. For erhvervene taget under ét er der en specifik omfordeling navnlig til Italien (se figur 7), men denne omfordeling skete ikke i industrierhvervene (figur 8 og 9). Den specifikke omfordeling til Italien har navnlig fundet sted i de uproduktive erhverv. Sprednin-



gen af industribeskæftigelsen fra de gamle centre er under krisen ikke nået ud til de perifere dele af EF.

Der tales i EF's organer meget om, at en formindskelse af de regionale uligheder er en nødvendig betingelse for fortsat integration. Resultaterne i denne artikel viser imidlertid, at der foregår en regional udvikling, der leder til stadig større forskelle i EF.

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## Changes in regional employment in Denmark in the seventies

Bue Nielsen and Peder Michael Sørensen

Nielsen, Bue and Sørensen, Peder Michael: Changes in regional employment in Denmark in the seventies. Geografisk Tidsskrift 84, 69-73. Copenhagen, January 1984.

*The paper deals with regional development in employment in Denmark in the 1970's. It uses shift-share analysis to isolate elements and activities responsible for the regional dispersion experienced. In that context the paper discusses the interrelationship between manufacturing industries and public services.*

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Keywords: *Regional development, occupations, manufacturing, public services.*

During the 1970's Denmark witnessed a reversal of the trend towards a centralization of population and employment which had characterized previous decades. The purpose of the paper is to deliver a short description of the changes in occupational structure involved in this decentralization.

### DATA

In this analysis we use data from the Employment Surveys for the years 1972 and 1978.<sup>1</sup> Changes in the methods of registration<sup>2</sup> and in the classification of occupations<sup>3</sup> in the surveys since then prevent any meaningful investigation into the changes of employment in later years.

The Employment Surveys are based on samples of people aged 15-74 and record the development of the labour force. An assessment of the development of the employment based on these data might thus be disturbed by differing developments in the regional distribution of unemployment. It can be shown, however, that for the period studied this is not the case. The development described in this paper concerning the labour force can without further qualifications be regarded as valid for the development of the employment as well.

The classification of activities used here is more detailed than that published by Danmarks Statistik. This might, dependent on the size of the sample, influence the results for minor industries in small regions (e.g. Bornholm) for which some reservation thus should be taken.



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## Changes in regional employment in Denmark in the seventies

Bue Nielsen and Peder Michael Sørensen

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*The paper deals with regional development in employment in Denmark in the 1970's. It uses shift-share analysis to isolate elements and activities responsible for the regional dispersion experienced. In that context the paper discusses the interrelationship between manufacturing industries and public services.*

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Keywords: *Regional development, occupations, manufacturing, public services.*

During the 1970's Denmark witnessed a reversal of the trend towards a centralization of population and employment which had characterized previous decades. The purpose of the paper is to deliver a short description of the changes in occupational structure involved in this decentralization.

### DATA

In this analysis we use data from the Employment Surveys for the years 1972 and 1978.<sup>1</sup> Changes in the methods of registration<sup>2</sup> and in the classification of occupations<sup>3</sup> in the surveys since then prevent any meaningful investigation into the changes of employment in later years.

The Employment Surveys are based on samples of people aged 15-74 and record the development of the labour force. An assessment of the development of the employment based on these data might thus be disturbed by differing developments in the regional distribution of unemployment. It can be shown, however, that for the period studied this is not the case. The development described in this paper concerning the labour force can without further qualifications be regarded as valid for the development of the employment as well.

The classification of activities used here is more detailed than that published by Danmarks Statistik. This might, dependent on the size of the sample, influence the results for minor industries in small regions (e.g. Bornholm) for which some reservation thus should be taken.