

## Changes in the Geographical Distribution of Danish Industry

By Ruth Helkiær Jensen.

### Abstract

*Based on the size and composition of labour force the growth and dispersion of the industrial trades in Denmark is outlined. Increasing industries concentrate in the traditional centers while the declining ones locate in peripheral regions.*

The decade 1960–70 was characterized by a great evolution in possibilities of communication. In spite of that, the census in 1965 and Danmarks Statistik's investigation of employment 1969 showed that regional diversities still exist in the total occupational distribution as well as in industry alone.

The diagram fig. 1 describes the occupational composition in Danish counties 1969, i.e. before the county-revision 1st. Apr. 1970. The figures refer to total employment, in contrast to The Industrial Statistics operating with establishments employing at least 6 workers. All counties have more than 25% employed in industry, in all parts of Jutland except the eastern part more than 20% still work in agriculture, and in the counties near Copenhagen, the Århus county and the Åbenrå county half of the total amount of labour work in service-occupations.

An investigation of the growth and dispersion of Danish industry 1961–64 (*R.H. Jensen 1967*) showed that the amount of labour was increasing without changing the general distributional pattern, while a selective spread of industry had taken place.

Establishments with low wage level and low percentage of salaried employees increased in the less industrialised parts of the country and the more advanced industrial groups showed decreasing importance in these regions and growth in the traditional industrial districts.

ARBEJDSSTYRKEN FORDELT PÅ DE TRE STORE ERHVERVSGRUPPER I DE ENKELTE AMTER 1969.

(Stat. efterretn. 16/1970)

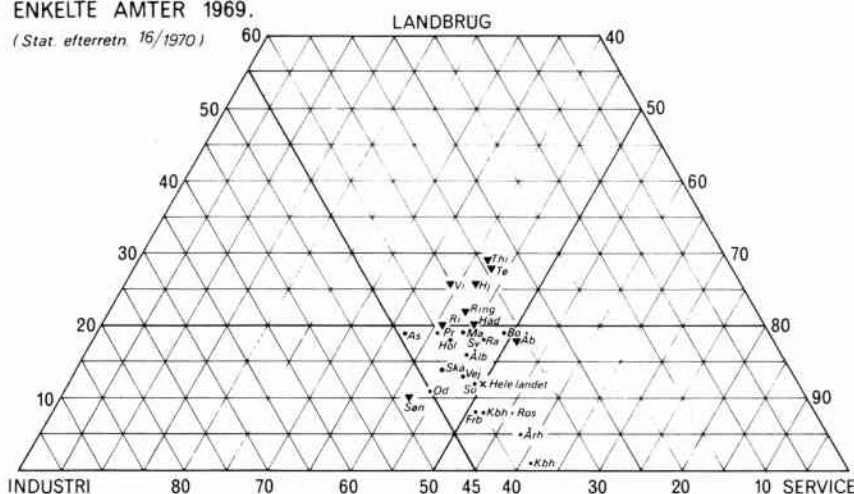


Fig. 1. A triangular diagram showing the occupational composition in Danish counties 1969.

Fig. 1. Trekantdiagrammet viser den erhvervmæssige sammensætning i danske amter 1969.

The purpose of the present paper is to extend this study to the 1968 census of manufactures (Statistiske Efterretninger 1971 nr. 17), to reexamine earlier findings in the light of the newer data and also to scrutinise the aspect of industrialization of rural districts.

Since 1965, the grouping of manufacturing industries has been changed in accordance with ISIC which results in minor differences between the figures from the two periods.

In comparison with fig. 2, the columns in fig. 3 show that the increasing number of employee 1961-64 has given way to a stagnation with small fluctuations due to changing conjunctures. Copenhagen proper continues going down, consequently the rest of the country increases relatively. The general distributional pattern is unchanged, the Capital has the leading position and the relative strength of the other parts of the country is the same in 1968 as in 1965 and 1961.

The figures represent the net-increase only, they do'nt tell anything about number of factories, composition of industrial trades or quantity of production. Decreasing employment can correspond with increasing rational production.

Danish industrial statistics operate with 10 main groups varying not only in production but also in technical details, organization and composition of manpower. The statistics give information

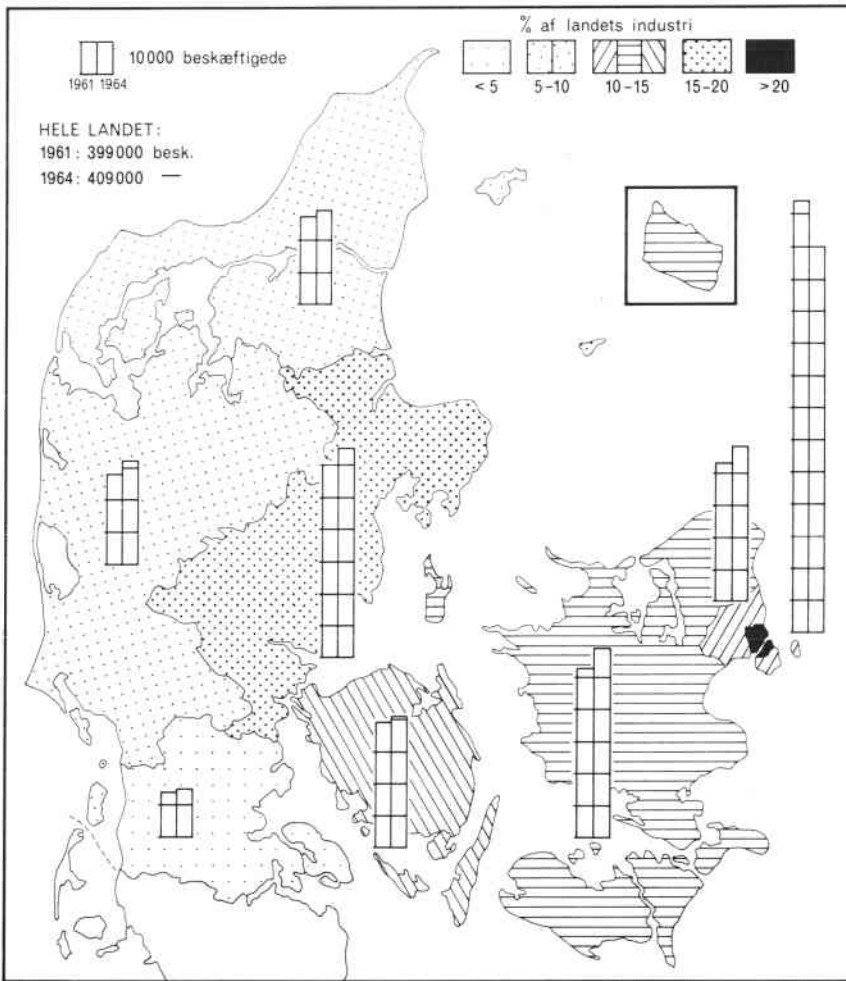


Fig. 2. The geographical distribution of industry based on the total number of employed in 1961 and 1964.

Fig. 2. Industriens geografiske fordeling på basis af det samlede personel i 1961 og 1964.

about the number of owners, salaried staff, and wage earners, but does not distinguish between skilled and unskilled workers.

In a scatter diagram, fig. 4, the values of wage level and proportion of salaried staff 1965 is compared with the weighted average of both of them. Iron- and steel-industry together with food and beverage industry are near the averages because of their numerous staff, 110.000 and 65.000 respectively. Textile, clothing, wood and furniture industry show the lowest wage levels, paper and

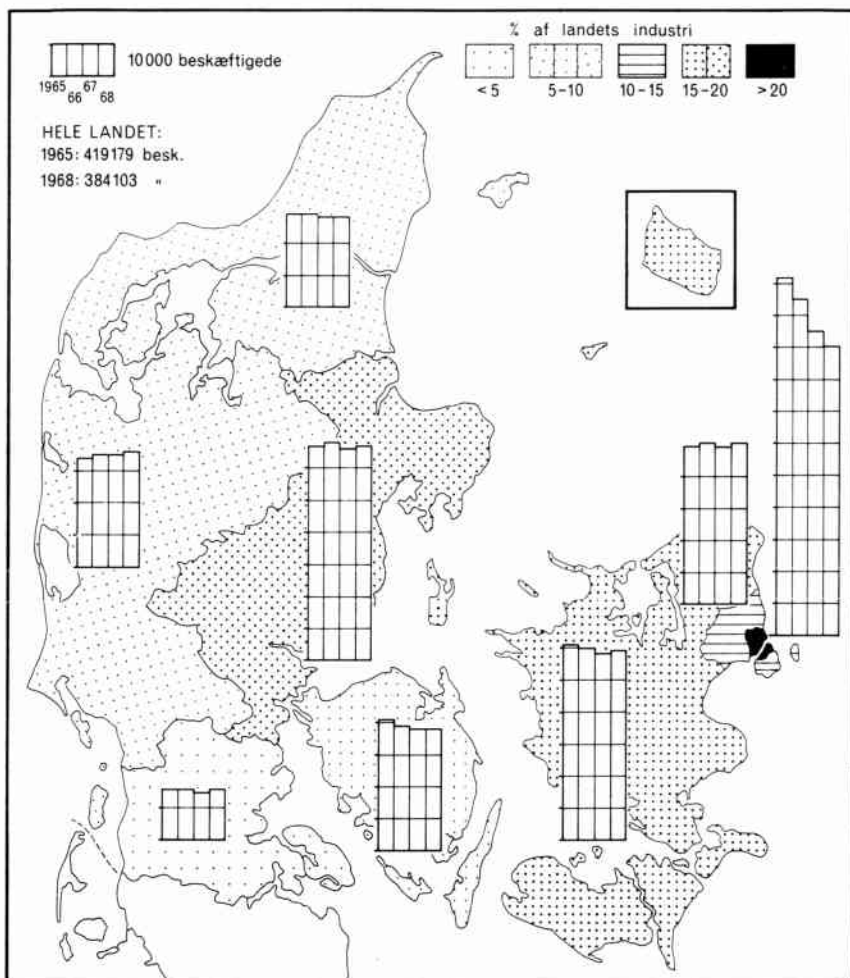


Fig. 3. The geographical distribution of industry based on the total number of employed in 1965, 66, 67 and 68.

Fig. 3. Industribeskæftigelsens geografiske fordeling i 1965, 66, 67 og 68.

graphic industry together with chemical industry the highest. The latter has an extremely high share of salaried staff.

A positive linear relationship is evident but other factors especially the proportion of skilled and unskilled workers and the number of employed women influence the distribution.

In fig. 5 the variables are changed to standard scores and can now be compared with the transformed values of 1968, fig. 6. The grouping observed in 1965 is more distinct in 1968 with 5 points

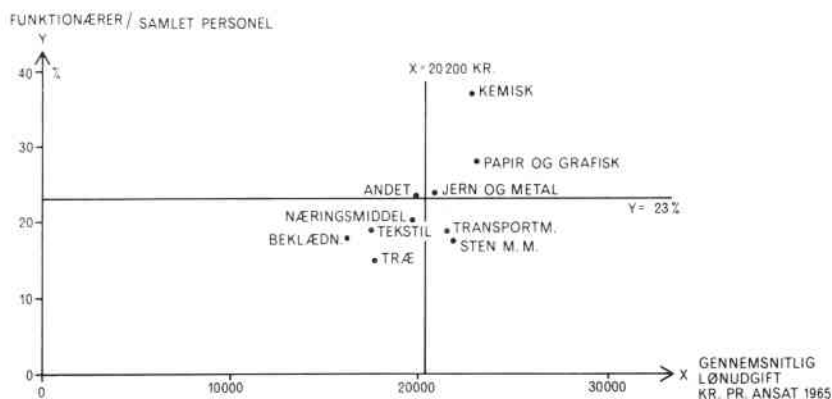


Fig. 4. Diagram of the 10 main industrial groups placed according to annual income and proportion of salaried staff in 1965. The solid lines indicate the weighted average of the two variables.

Fig. 4. De 10 hovedindustrigrupper placeret efter deres gennemsnitlige årløn og funktionærernes andel af det samlede personel. De indtegnede linier markerer det vejede gennemsnit af de to variable.

clustering around the averages, the three low-wage-points clustering below both of them, chemical industry still with a position of its own because of a big salaried staff and paper- and printing industry because of a high wage level. The distances between the groups have increased. During the three years the total wage bill has increased 34% and the proportion of salaried staff 6,5%. The industries represented with exclusively negative values are considered as one class in the following treatment.

The development of these 8 industrial main groups is shown for the whole country and the 8 parts of it in fig. 7–14. A positive rate of increase means that the group has got an increasing share of the labour force in that part of the country, in Copenhagen it often corresponds with an absolute decrease. These diagrams illustrate a great variation in contrast to the stagnating totals in fig. 3.

Table 1 expresses a summary of the diagrammes, distinguishing between expanding industries, stable industries and declining industries according to the slope of the lines representing the whole country.

If a region's share of the national total of an industry is greater at the end of the period than at the beginning a shift towards the region has occurred, if the proportion is less, there has been a shift away from it. The balance between the 3 groups, table 1, in the regions is important in the future situation of employment and economic capacity.

It appears that the less industrialized parts of the country – or

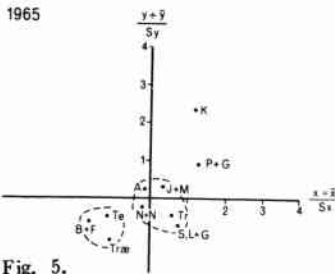


Fig. 5.

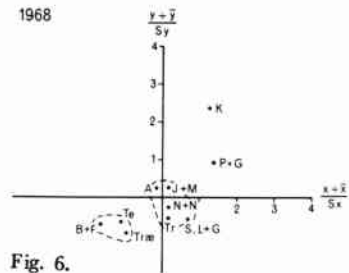


Fig. 6.

Fig. 5. The variables in fig. 4 expressed in standard scores. The encirclements show a classification based on the grouping of points.

Fig. 5. Fordelingen af industrigrupperne i fig. 4 udtrykt i standardiserede værdier. Indkredsningerne viser en klassifikation på grundlag af punktgrupperingen.

Fig. 6. The industrial groups in 1968 placed after the same principles as in fig. 5.

Fig. 6. Fordelingen af industrigrupperne i 1968, udtrykt ved de samme variable som i fig. 5.

more correctly, the counties with highest percentage of agricultural employment, fig. 1 — have a decreasing share of the stable industries and partly of the expanding ones while the declining industries are proceeding. Greater Copenhagen shows the opposite situation and the remaining part a varying picture.

Accordingly the selective spread of Danish industry found in the years 1961-64 has continued in 1965-68 probably as a reaction upon analogous circumstances. Concerning the labour market these circumstances were full employment in the big cities and release of labour in the rural districts, especially of unskilled workers and women. It is a general experience in industrialized countries that full employment encourages the removal of labour from low-wage industries to high-wage industries. Consequently the low-wage industries find better conditions in utilizing the labour reserves of the less prosperous regions of the country.

The productivity of the industrial groups expressed as the proportions of total value added and total employment is shown in fig. 15. Chemical industry has a very high value added per employed person, textile, clothes, and transport-equipment industry show the lowest proportions. The wage-productivity, fig. 16, has a similar distribution as the work-productivity, yet wood and furniture industry have got a more favourable position, while paper and graphic industry here are placed below the average.

Within the industrial main groups individual branches may show different figures of productivity, manufacture of radio and television sets as an example has a much better productivity than the total iron- and steel industry.



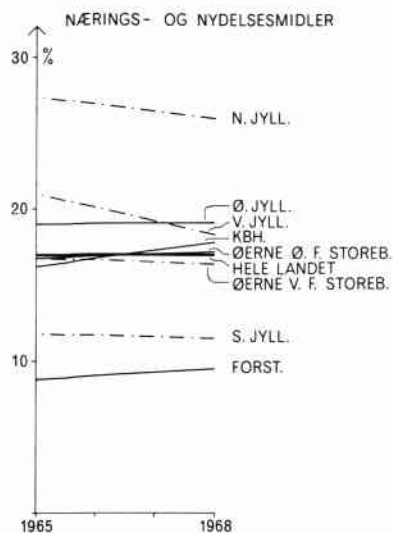


Fig. 7.

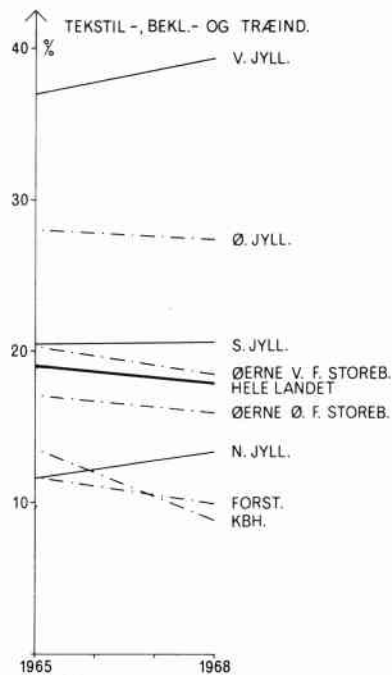


Fig. 8.

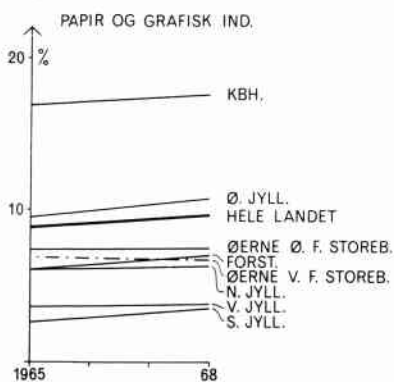


Fig. 9.

Fig. 7. The development 1965-68 in the relative industrial employment within the food and beverages industry. The thin lines indicate increase, the dashed ones decrease. The development of the country in total is shown by the thick line.

Fig. 7. Udviklingen 1965-68 i den relative industribeskæftigelse i nærings- og nydelsesmiddelindustrien. Tynde linier markerer stigning, stiplede fald. Den tykke linie viser udviklingen i landet som helhed.

Fig. 8. The employment in textile, clothes, footwear, wood and furniture industry 1965-68.

Fig. 8. Beskæftigelsen i tekstil-, beklædnings-, fodtøjs-, træ- og møbelindustri 1965-68.

Fig. 9. The employment in paper and graphic industry 1965-68.

Fig. 9. Beskæftigelsen i papir- og grafisk industri 1965-68.



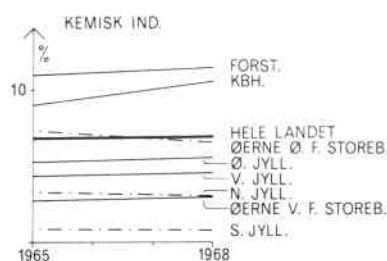


Fig. 10.

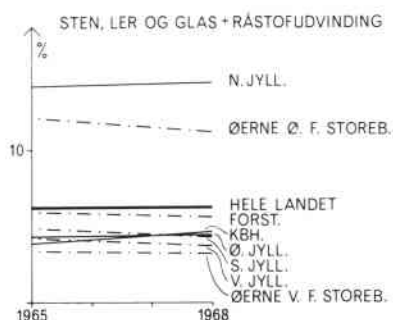


Fig. 11.

Fig. 10. The employment in chemical industry 1965-68.

Fig. 10. *Beskæftigelsen kemisk industri 1965-68.*

Fig. 11. The employment in mining and stone, clay and glass industry 1965-68.

Fig. 11. *Beskæftigelsen i råstoffremstilling samt sten-, ler- og glasindustri 1965-68.*

Labour costs have an increasing share of the industrial input and consequently influence the possibility of competition and growth. As labour become scarce in the prosperous regions, wages are likely to rise. For firms with a low labour cost structure ( a great proportion of unskilled workers) and a low value added per employed person, this local inflation may determine a location in other regions, where wages tend to be lower.

Two other great inputs influence the industrial dispersion, land requirement and capital. High land values and shortage of industrial areas in the cities increase the competition between the branches. Expanding industries are likely to build up the existing site or to locate in the suburbs. Firms with a weaker economy locate in peripheral regions where land values are low. Besides that various types of buildings, i.e. dairies, farms and little schools in the rural districts, given up and offered for sale at low prices, are taken over by small factories. These facts encourage the selective spread, fig. 17.

Generally speaking the capital market belongs to the external economies bound up with big population-agglomerations as do centers of education, information and research. Together with the differentiated labour supply external economies are very attractive to industry and act as a pull effect of the cities.

Of course liquid capital is mobile and local capital plays a role by forming new foundations due to personal contact, but the big capital market operates in the progressive centers of population.

Experiences during the history of industry show that labour force is mobile and this fact is confirmed by the immigration of

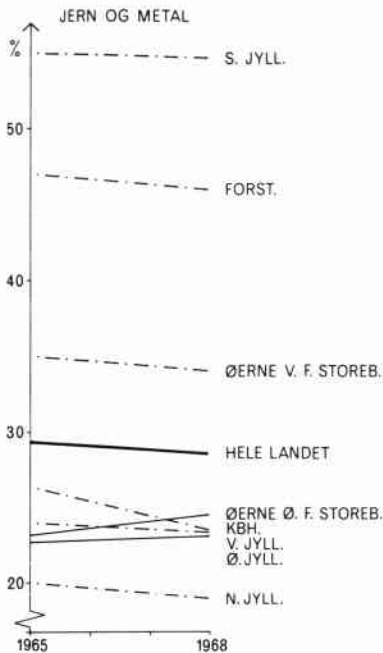


Fig. 12.

Fig. 12. The employment in iron, steel and metal industry 1965-68.

Fig. 12. *Beskæftigelsen i jern- og metalindustri 1965-68.*

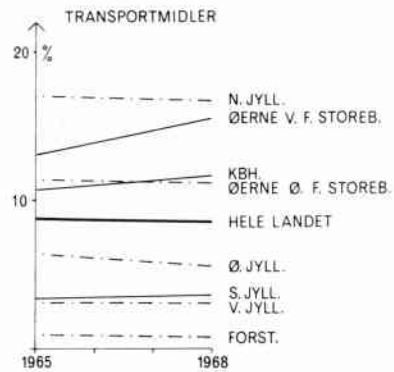


Fig. 13.

Fig. 13. The employment in transport equipment industry 1965-68.

Fig. 13. *Beskæftigelsen i transportmiddelindustri 1965-68.*

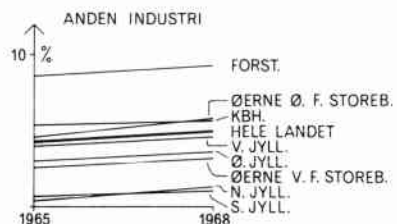


Fig. 14.

Fig. 14. The employment in "other" industry 1965-68.

Fig. 14. *Beskæftigelsen i anden industri 1965-68.*

workers from abroad during the latest years. At first glance it appears to present a simple solution to persuade the unemployed to move from areas of excess supply of labour to areas of excess demand. By way of objection it is urged that the emigration from a region may slow down the economy here and widen the divergence between incomes in different regions. An increased immigration for instance to the Copenhagen area would most likely increase the inflationary pressure and raise socio-economic problems.

Therefore the policy of the state and the local government is to bring work to the workers by encouraging firms to move to the unemployed labour force, i.e. to the peripheral regions. The amount and qualifications of the man power determine the categories of manufacture responding.

The contribution of the government is expressed in the

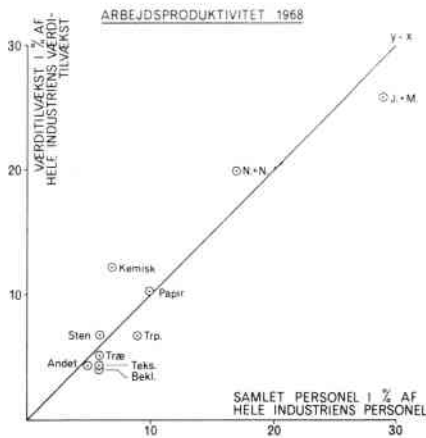


Fig. 15.

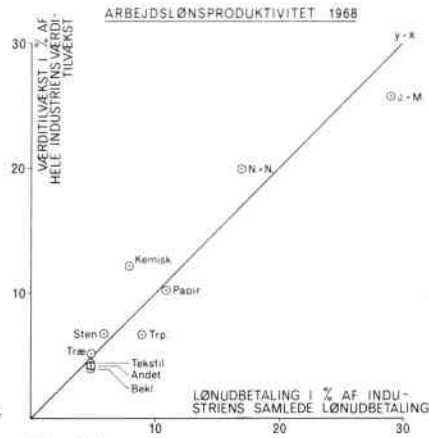


Fig. 16.

Fig. 15. The work productivity of the industrial groups expressed as the proportion of total value added and total employment 1968.

Fig. 15. *Industrigruppernes arbejdsproduktivitet i 1968, angivet ved forholdet mellem deres andele af den samlede værditilvækst og det samlede personale.*

Fig. 16. The wage productivity of the industrial groups expressed as the proportion of total value added and total wage bill 1968.

Fig. 16. *Industrigruppernes lønproduktivitet i 1968, angivet ved forholdet mellem deres andele af den samlede værditilvækst og den samlede lønudbetaling.*

legislation of regional development with the aim to support the economies of potential regions of depopulation. These are great parts of Northern, Western and Southern Jutland, Lolland-Falster, Bornholm and some small islands. The laws give security for loans to firms as well as to economic activities of the local governments. A new law in 1969 was authorized to give taxation relief in case of investments and financial assistance to foundation of industrial undertakings and re-education of workers. These laws apply to the counties of Ålborg, Hjørring, Thisted, Tønder and Bornholm.

Information about the contributions of the local governments is rendered through an investigation published in the periodical "Dansk Arbejde" in October-November 1966. According to a questionnaire distributed to 1100 municipalities is given a review of unoccupied industrial areas. 422 replies show that 292 municipalities have made industrial areas ready for development and 296 have reserved such areas. Other facilities i.e. dwellings, traffic conditions and possibilities of financing are also stated as well as the size of the labour force, fig. 18.

The information about the reserves of labour is not complete enough to give a general picture of the distribution of unemploy-

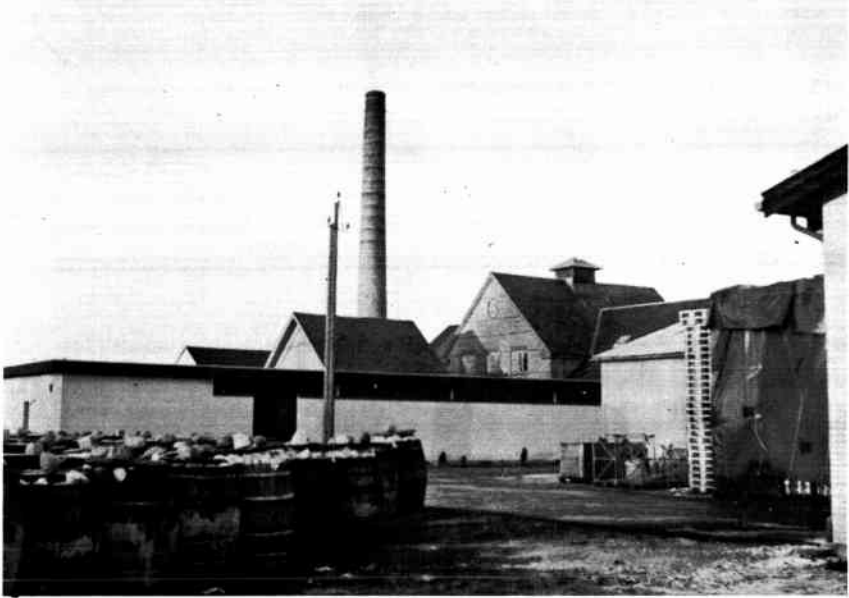


Fig. 17. Closed co-operative dairies are often overtaken by minor industries. Blauenfeldt & Tvede, Manufacturer of food Stuffs, Strøby. (Phot. R.H.J. 1971)

Fig. 17. Nedlagt andelsmejeri overtaget af Blauenfeldt og Tvede, levedsmiddelfabrik, Strøby. (Fot. R.H.J. 1971)

ment in the country because of the approximate figures and the lack of answers from more than half of the investigated municipalities. On the other hand those with problems in this connection are possibly those who have answered the questionnaire. The figures are as follows:

Greater Copenhagen	0 unemployed
Islan e.o. Storebælt	2900 unemployed (Maribo county 1600)
Islan w.o. Storebælt	2400 unemployed
Eastern Jutland	4200 unemployed (Århus county 0)
Northern Jutland	8300 unemployed (Hjørring county 4500)
Western Jutland	6300 unemployed
Southern Jutland	1400 unemployed (Tønder county 800)

Diversities between the various parts of the country are great, Northern and Western Jutland has a remarkable need for industrial enterprises. The official statistics concerning the geographical distribution of unemployment (Stat. Efterr. 1966) is of more inferior use, in the first instance because it includes all sorts of business, secondly because only persons under labour insurance are included and former rural workers are not insured until they are industrially employed.



Fig. 18. Industrial areas acquired and sold by the local government in Stevns municipality. In the background a clothes factory. (Phot. R.H.J. 1971)

*Fig. 18. Industriarealer udlagt af Stevns kommune. I baggrunden en mindre beklædningsindustri. (Fot. R.H.J. 1971)*

An unbalanced employment situation like this must involve alterations endeavouring a new equilibrium between population and occupation. A precondition of a more balanced distribution of industry is that a large number of firms wish to move or to expand. Expanding in big size is unlikely to occur if the economy as a whole is not expanding. If firms desire to move this movement can be channelled into the appropriate areas provided the inducements offered are sufficient.

In a succeeding investigation published in *Dansk Arbejde* this is confirmed by 56 firms moved to rural municipalities in 1960-64 (*Dansk Arbejde*). A questionnaire answered by those firms gives the background of the decision to move away from the old location and the decision to relocate to a particular site. Unfortunately the branches to which the firms belong, are not stated.

The cause most frequently mentioned was land requirement and labour shortage in the old place. Adjacent areas were too expensive or not obtainable, shortage of unskilled workers, especially women, acute, and productivity and stability of the staff unsatisfying. The nuisance caused by traffic problems was marked frequently too.

The choice of the particular new location is mainly determined

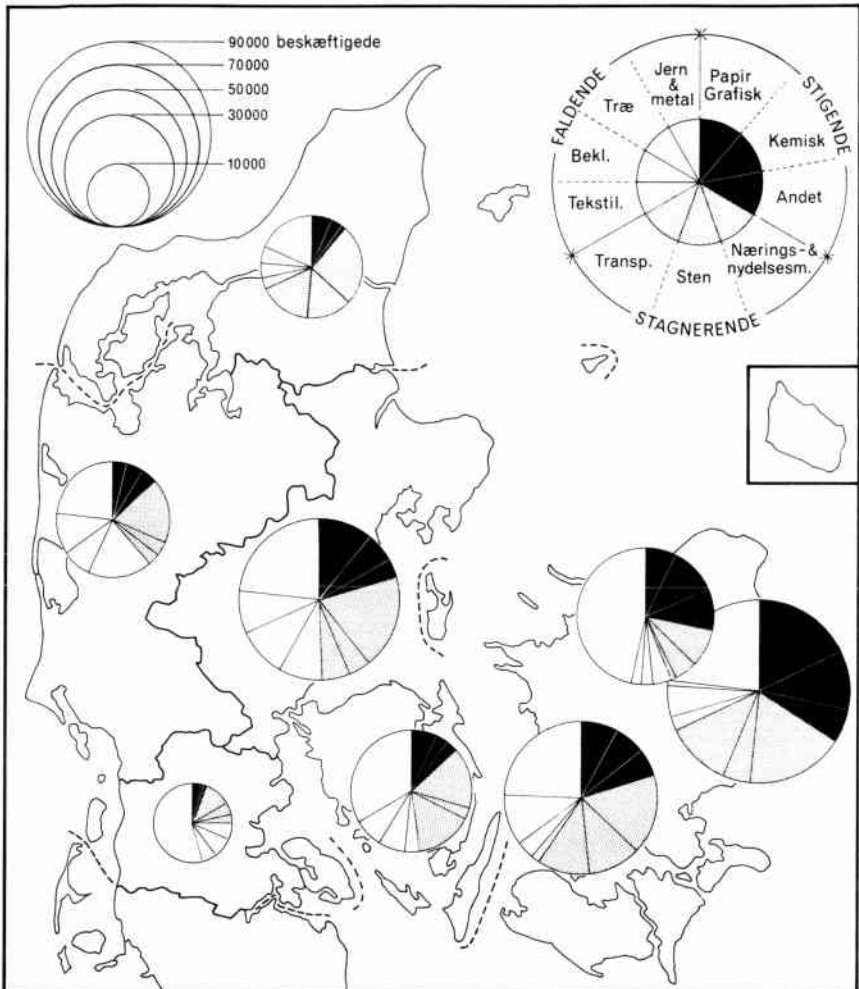


Fig. 19. The total industrial employment together with the distribution on trades in the Danish provinces. 1968. Calculated for the whole country: Black sectors represent the expanding industries, dotted sectors represent the almost stable industries and white sectors the declining industries.

Fig. 19. De danske landsdeles samlede industribesæftigelse og dens fordeling på hovedgrupper i 1968.

by cheap and sufficient areas and by female labour. Differences in transport costs are inconsiderable because of the small size and the efficient road system of the country.

A parallel investigation of a number of firms not wanting to move and a number of newly established firms is desirable, but not obtainable.

An account from the Secretariat of Planning in Denmark based on material from the Development Council of Western Jutland (LPUS nr. 11, 1970) states that firms moving to this part of the country represent a more differentiated composition of trades than newly established firms do. The latter mostly comprise textile, clothing and furniture industries already strongly represented.

In fig. 19 the total industrial employment of the different parts of the country 1968 is shown together with the distribution on trades. The greatest concentration of expanding industries occurs in Copenhagen proper, chemical industry is dependent on external economies, partly in view of the special structure of the rather big firms, partly in view of the demands of the employees as regards housing and education. Outside Copenhagen the share of the employment is determined by single big establishments with special needs of localization.

Paper and graphic industries have more than half of their staff in the Copenhagen area. The dense population is a big market itself and makes a big non basic industry, to which these trades belong. Ulman and Dacey (1960) showed that the non basic employment as derived from the minimum requirement technique tends to increase with the logarithm to the population of a city, this influences the industrial composition in cities of different size. Besides, the remaining industries buy great quantities of embargo and advertisement. Stafford (1960) has proved that the magnitude of the paperboard container industry vary directly in relation to the magnitude of the market in U.S.A.

"Other industry" is a mixed group. It comprises partly rather new productions, partly productions with a high position in the hierarchie. To both types Copenhagen is attractive. Some small firms utilize the supply of buildings and labour in the rural districts mostly in the eastern parts of the country.

The location pattern of the stable industries varies very much. In the food industry (dairies not included) the size of the firms tend to increase, 60 of 641 firms have 45% of the employment. Yet in this case transport costs of the expensive raw products limit the concentration (economy of scale). Because of this structure the food industry is important in all parts of the country, most in Copenhagen, relatively most in Northern Jutland.

In stone, clay and glass industries brick works and concrete works dominate the employment. The distribution of material generally is determining plant location, but local markets and history also influence the pattern. Most important is Northern Jutland and the Islands east of Storebælt.

The transport equipment industry is dominated by large plants. 14 of the 194 establishments employ more than 500 persons each. The localization of these 14 plants nearly show the total distribution pattern. The shipyards are seen to determine the size of the sectors in fig. 19. This industry compete with the iron and steel industry concerning skilled workers and substitute one another, compare for instance Fyn with Southern Jutland and Copenhagen with its suburbs.

Iron and steel industry has an economic key position because of the production of machines and semi-manufactured articles besides that of consumers' goods. It has the highest figures of employment in all parts of the country except in Northern Jutland. While iron, steel and machine industries work in large plants the metal ware firms are of small and medium size. Because of that and of their relatively low productivity they make use of the industrial supply of the rural districts.

Clothes and footwear industries show a surprising choice of location. Traditionally they belong to the city-industries but in the latest years they tend to follow the labour market into the peripheral regions in order to be able to compete on the export market as well as on the home market.

The textile industry has similar difficulties and has answered with and expansion of the traditional centers in Central Jutland. Besides it shows a certain degree of progress in the Islands east of Storebælt.

The wood and furniture industry has as already mentioned a position of its own because of a better wage productivity than other declining industries. Because of this it survives in the prosperous areas, i.e. Copenhagen and Eastern Jutland, yet the rest of Jutland shows the greatest progress.

The development of industrial location patterns may thus be regarded as a dynamic process enacted within a certain spatial probability framework. The main features are the industrialization of the rural districts and the concentration of advanced industries in Greater Copenhagen and partly in the major townships.

Industrialization of rural districts is a difficult process and brings a one-sided combination of trades mostly generally declining ones because of the limited facilities. Therefore they remain very sensitive to economic instability. The modern expanding industries prefer a population basis only offered in large cities. When this milieu is created the conditions of growth and acceleration of the industrializing process are present.



### Resumé

Trods væksten i kommunikationsmuligheder viser folketællingerne 1960 og 1965 og Danmarks Statistiks beskæftigelsesundersøgelse 1969, at de regionale forskelle i erhvervsstrukturen er bevaret. Dette gælder også fremstillingsvirksomhed.

Trekantsdiagrammet fig. 1 beskriver erhvervsfordelingen i de daværende danske amter i 1969. Alle har mindst 25% beskæftiget i industri, Nord-, Vest- og dele af Sydjylland har endnu over 20% i landbrug, og i amterne ved København samt i Århus og Åbenrå amter har serviceerhvervene mere end 50% af beskæftigelsen.

En undersøgelse, der viste, at der foregik en selektiv industrispredning i 1961-64, (*Ruth Helkiær Jensen*,) er ført videre på grundlag af Danmarks Statistiks offentliggørelse af industriens geografiske fordeling 1968. (Stat. Efterr 17/1971). Tal fra 1961 og 1968 kan ikke helt sammenlignes, da ISIC's branchegruppering er brugt fra 1965.

Fig. 2 og 3 viser, at væksten i antallet af industribeskæftigede er afløst af stagnation med små konjunkturbestemte udsving. Hovedstaden har fortsat fald, hvorved det samlede tal er gået ned. Det generelle fordelingsmønster er uændret med Storkøbenhavn som det industrielle tyngdepunkt. Tallene oplyser intet om produktionens størrelse.

Til karakteristik af arbejdsstyrken i de 10 hovedgrupper er anvendt lønniveau og funktionærernes andel af de ansatte.

I et spredningsdiagram (fig. 4) er disse variable for 1965, sammenlignet med deres vejede gennemsnit. Det viser en vis samvariation, men mønsteret er også bestemt af andre faktorer, især forholdet mellem faglært og ufaglært arbejdskraft. Ved standardisering af værdierne fås fig. 5, der nu kan sammenlignes med de tilsvarende 1968-værdier i fig. 6. Grupperingen er i løbet af de 3 år blevet mere udtalt med 5 punkter omkring gennemsnittene og 3 med negative værdier, mens kemisk industri og papir- og grafisk industri har forbedret deres særposition yderligere, især lønmæssigt. De 3 lavest liggende industrigrupper vil blive betragtet under et i det følgende.

Udviklingen i disse 8 industrigrupper er vist for landsdele og hele landet i fig. 7-14. På landsbasis kan man skelne mellem *vækstindustrier*: Kemisk industri, papir- og grafisk industri samt anden industri, *stabile industrier*: næringsmiddelindustri, transportindustri, og endelig *faldindustrier*: Tekstil-beklædnings, træ- og møbelindustri samt jern- og metalindustri. Tabel 1 er et resumé af fig. 7-14, der viser, at i de svagest industrialiserende landsdele har de stabile og tildels vækstindustrierne aftagende andele, mens faldindustrierne vokser. Storkøbenhavn viser det omvendte billede, mens resten af landet varierer.

Den selektive spredningsproces fortsætter altså i 1965-68 i overensstemmelse med en tilsvarende kontinuitet på arbejdskraftmarkedet: Frigørelse af arbejdskraft fra landbruget og fuld beskæftigelse i de større byer, det sidste begunstiger erfaringsmæssigt højtløns-industrierne.

Branchernes arbejdsproduktivitet og lønproduktivitet (fig. 15 og 16) bekræfter i store træk de påviste forskelle mellem industrigrupperne og bidrager sammen med andre store inputs, arealer og kapitalmarked til differentieringen i landsdelenes branchesammensætning, bl.a. som følge af konkurrencen på de mest eftertragtede lokaliteter.

Af disse inputs er kapital og arbejdskraft delvis mobile, men påvirkes med forskellig styrke af lokaliteter og brancher. Generelt regnes kapitalmarkedet til agglomerationsfordelene, men ledige arealer og arbejdskraft kan flytte den. Flytning af arbejdskraft i stor målestok søges forhindret ved indsats fra stat og kommuner i de potentielle affolkningsområder, for statens vedkommende sker

det gennem egnsudviklingslove, der hjemler støtte til erhvervsstimulerende aktiviteter, for kommunernes især ved udlægning af industriarealer og ved boligbyggeri.

En undersøgelse, foranlediget af tidsskriftet *Dansk Arbejde*, giver et indtryk af 422 kommuners bestræbelser for at skaffe industriarealer og faciliteter og indeholder desuden en oversigt over deres arbejdskraftreserver. Ifølge dette materiale viser Nord- og Vestjylland den største erhvervsmæssige underforsyning, hvilket også fremgår af Danmarks Statistiks opgørelse af arbejdsledigheden på samme tidspunkt. Spørgsmålet er så, om virksomhederne har behov for disse tilbud ved flytninger eller nyoprettelser.

Industrilokaliseringen er altså resultatet af de pull- og pushvirkninger, virksomhederne udsættes for (konkurrence og behov). Landsdelenes samlede industribeskæftigelse og dens fordeling på hovedgrupper i 1968 er afbildet i fig. 18, der viser koncentrationen af vækstindustrier i de stærkest industrialiserede områder, især i København, og den stærke repræsentation af faldindustrier i Nord-, Vest- og Sydjylland. Mest iøjnefaldende er tekstil-beklædnings- og træindustri i Vestjylland og jern- og metalindustri i Sydjylland. De stabile industrier viser en større variation, ofte fordi de klassiske lokaliseringsfaktorer (råstoffer, havne etc.) stadig har afgørende betydning.

Den forstærkning af avancerede industrier med stor produktivitet, der finder sted i det storkøbenhavnske område og de større købstæder, kræver et befolkningsunderlag, som landdistrikterne ikke kan præstere. Industrialisering af landbrugsområder fører derfor til en ensidig branchesammensætning af industrier, der kan udnytte de tilbud, det rurale miljø giver.

## Litteratur

Danmarks Statistik (1967):

Den danske industris geografiske fordeling 1965. Stat. Efterretn. 67:19.

Danmarks Statistik (1968):

Arbejdsløsheden okt. 1968. Stat. Efterretn. 68:75.

Danmarks Statistik (1970): Den regionale erhvervsstruktur ved beskæftigelsesundersøgelsen den 7. maj 1969. Stat. Efterretn. 70:16.

Danmarks Statistik (1971):

Den danske industris geografiske fordeling 1968. Stat. Efterretn. 71:17.

Danmarks Statistik (1971):

Industristatistik 1968. Stat. Medd. 1971:2.

Dansk Arbejde (1966):

Danmarks industriarealer 1966. Hefte 58:10, 58:11, 59:1.

Dansk Arbejde (1968):

Lokaliseringsforholdene før og efter en flytning. Hefte 60:12.

Jensen, Ruth Helkjaer (1967):

Spredes industrien i Danmark? *Geografisk Tidsskrift* bd. 66.

Manners (1962):

Regional Protection, a Factor in Economic Geography. *Econ. Geogr.* Vol. XXXVIII.

Needleman & Scott (1964):

Regional Problems and Location of Industry Policy in Britain. *Urban Studies* I.

Nielsen, Lene Leth (1970):

Industriduviklingen i Vestjylland. Landsplanudviklingens sekretariat.

Smith, David M. (1971):

*Industrial Location*. New York.