

# OFFICE LOCATION AND REGIONAL DEVELOPMENT

## SUÍOMH OIFIGÍ AGUS FORBRAÍOCHT RÉIGIÚNACH

An Foras Forbartha





# **Office Location and Regional Development**

**PROCEEDINGS OF A CONFERENCE**

organised by

**AN FORAS FORBARTHA**

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# INTRODUCTION

This volume contains the proceedings of a two-day conference on **Office Location and Regional Development** held in Dublin on March 1 & 2, 1973.

The conference was organised by An Foras Forbartha (The National Institute for Physical Planning and Construction Research) and was attended by representatives of Central and Local Government, Regional Development Organisations, Local Development Agencies, the professions and the staffs of University departments. The conference was part of the research, education and advisory programme of An Foras Forbartha, aimed at assisting the Government and Local Authorities in their work of implementing their development policies. The specific objectives of the conference were :

1. To review the existing pattern of office location in Ireland.
2. To consider the practice, policies and research in office location in Great Britain, Sweden and the Netherlands, with particular reference to the role of office location in promoting regional growth both for relocated offices and for office employment attracted from outside the country.
3. To consider future policies with regard to office location in Ireland in the context of regional development.
4. To consider the essential characteristics of suitable reception centres.

These proceedings consist of the opening address by the Secretary, Department of Local Government and the five conference papers. Each conference paper is followed by a brief resume of the questions and discussion which followed that paper. The papers relate to an analysis of office location policy statements and actual achievements in Britain, Netherlands, Sweden and Ireland. The proceedings conclude with a summary of the more general discussion in which the implications for Ireland of the five papers were examined and assessed.

Kind permission to use a number of illustrations was granted by **Regional Studies** and the authors of the **Lund Studies in Geography**. To P. W. Daniels, P. O'Sullivan, G. Törnqvist and O. Wärneryd, the editor expresses his thanks for permission to make use of figures which illustrate this proceedings. The cover photograph has been reproduced by courtesy of the "Irish Times". The cover was designed by Des Flynn.

An Foras Forbartha is indebted to the speakers, to the session chairmen, to the chairmen of discussion sessions, T. McDermott and E. T. Sheehy, and to all who helped make the conference a success.

**Michael J. Bannon,**  
**(Editor)**

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## **SPEAKERS**

**MICHAEL B. LAWLESS**, Secretary, Department of Local Government.

**MICHAEL J. BANNON** has been engaged in the regional development research programme of An Foras Forbartha. He has completed a study of office activities in Ireland with particular reference to the concentration of such activities in central Dublin.

**JOHN GODDARD**, Geography Department, London School of Economics, has conducted a number of studies on behalf of the South East Economic Planning Council of Great Britain into the reasons for office concentration in the South East. He has been especially interested in the locational effects of linkages and office communications.

**BERTIL THORNGREN** of the Economic Research Institute in Stockholm has for some years been engaged in an examination of the effect of information flows on regional development. He has recently completed for the Swedish Government a study of information flows within and between Swedish Government offices—with special reference to locational implications.

**JAN TOBY** of the National Planning Agency at The Hague has undertaken a comprehensive review of the achievements and plans of the Dutch Government to re-locate some 22,500 office staff from The Hague to the east of the Netherlands.

**GEORGE YANNOPOULOS** of the Economics Department of Reading University was commissioned by the Location of Offices Bureau to undertake a study of the economic effects and benefits of relocating office employment to towns outside London.

## SESSION IV

### Communication Studies for Government Office Dispersal in Sweden

by

Bertil Thorngren

Chairman :

C. P. Farrell,

Chairman, Office of Public Works.

#### Introduction

Sweden covers an area of 175,000 square miles and is approximately six times the size of Ireland. In terms of distance, it is some 1,500 kms. from Stockholm to the northern boundary of the country and about 800 kms. south to Malmö and the part of the country nearest to Denmark and to continental Europe. The current population of Sweden is just over eight millions, most of whom reside in the Stockholm region or in the southern regions around Gothenburg and Malmö. Most of Sweden's industry, economic activity and employment is likewise located in the southern part of the country. The existing imbalance of population density and job opportunities within different parts of the country presents a serious problem for regional planning, as do the large distances between the towns and cities.

More important than the global population figures, however, is the existing regional differences with respect to the structure of employment. For the most part, Sweden has entered the post-industrial stage of development where increases in employment occur largely in the professions or in the service occupations rather than in the manufacturing labour force. At present, fifty-six per cent of the country's employment is in trade, communications, administration and the professional categories of work; thirty-seven per cent are in mining, manufacturing and construction work and a further seven per cent in agricultural occupations. Obviously the structural transition from manufacturing to service occupations gives rise to many problems in both northern and southern Sweden; the shorter distances within the south, coupled with higher population densities, help smooth out this transition process in the regions south of Stockholm. The declining manufacturing labour force and the lack of suitable alternatives outside this sector both

create very serious structural problems for the development of northern Sweden.

#### Dispersal Policy

The Swedish government has applied a whole range of policies and measures in an attempt to counteract regional imbalances. Capital subsidies and reduced freight charges have been used to encourage more industry to locate or expand within the north or in other sparsely populated areas.

During the 1960's, however, it became evident that the relocation of existing industry or the creation of new manufacturing employment in the declining regions needed to be supplemented by efforts to attract service occupations to these areas, if their total labour-force was to increase. Further, the need to move some service occupations from Stockholm was encouraged by the increasing scarcity of manpower in the Stockholm area. The Swedish authorities had obtained some limited experience gained from service relocations which took place in the early 1960's. The National Fishery Board had been established in Gothenburg rather than in Stockholm. The headquarters of the National Defence Industries (Corporation) was moved in 1965 from Stockholm to Eskilstuna, one hundred miles to the west. In addition, the Central Statistics Bureau had set up a data preparation unit in Orebro, about 150 miles west of the capital city.

Following from this experience, the Government set up a Royal Commission in 1969 to investigate the possibility of undertaking a large-scale dispersal of government offices. Following a two-stage procedure the Commission has recommended and the Government has enacted legislation to relocate fifty-four government offices in the period 1972-1980, involving 11,330 government office employees. These 11,330 jobs account for twenty-five per cent of the total civil service employment at national level in the Stockholm region.

## **The Role of Communication Studies**

It is important to point out that the question of dispersal of office type opportunities involves many other questions besides the study of communications patterns and linkages. In some cases the very high levels of investment in buildings, plant or equipment rendered relocation prohibitively expensive. In other cases, such as the Power Board, the ensuing level of disturbance in production was expected to be unacceptable. In addition, special staff problems and other social factors have to be assessed before a final decision is reached. But it is through a study of the communication networks and patterns that one comes to an understanding of the operational necessities of office establishments, particularly in terms of their required locations.

It was decided to make the communication study, KOMM 71, as comprehensive as possible, incorporating all kinds of offices and covering all the staff in each office. The principal reason for such a comprehensive study was to incorporate the source of all possible linkages and, thus, decrease the danger of overlooking indirect linkages. Offices which were not themselves explicitly and directly involved in national policy-making may still operate as informal co-ordinators or catalysers and thus prove of crucial importance. There was also a need to identify contact sources outside the government sector which acted as common denominators in knitting together otherwise independent contact networks, e.g. research agencies.

Throughout the study the emphasis was placed upon the measurement of the character of the communications. Contact volume alone was not in itself considered a relevant indicator of the kind of changes which would follow upon a relocation. In this context it was assumed that routine information could be transmitted through the use of either existing or forthcoming telecommunication facilities. Following an "outside-in" approach, records of office communication linkages to outside sources were matched against existing or planned alternatives in the receiving areas.<sup>1</sup>

In short, the evidence derived from the KOMM '71 study, together with the conclusions drawn from the earlier KOMM '65 and KOMM '68 studies, gave a picture of the feasibility of dispersal and the consequences of differ-

ent dispersal alternatives strictly from a communications viewpoint. This evidence formed part of the total investigation, which included an examination of investment and staff problems, which took place prior to the final recommendations being made by the Royal Commission. The final decisions were made in the light of all existing and planned regional policy proposals for the areas concerned.

## **Methods and results from the communication studies**

As mentioned earlier, the relocation of the headquarters of the National Defence Industries, was one of the pilot relocations. The office was moved to Eskilstuna some 120 kms west of Stockholm in the middle of 1965. A communication study was carried out in March 1965, three months before relocation, and in March 1966, eight months after the move. This before-after study was followed up again in 1967 and further studies of long-run effects are planned.

Some results from the study, KOMM '65, are shown in Table 1. One observation is that the total volume of communication was rather unaffected by the move; the use of face-to-face contacts compared to telephone calls also remained stable. There was little or no substitution of telecommunications for face-to-face contacts; instead the organisation found new commercial contacts (E) in its new location to replace some of its Stockholm sources. Similarly, there was a large increase in the number of the internal contacts with one of the plants in Eskilstuna, where a new R & D department was created. Contacts with the thirteen other plants all over Sweden were largely unaffected. Thus, with respect to internal (I) and commercial (E) contacts the organisation adapted rather rapidly to the new location.

However, different parts of the communication system reacted markedly different to the change. In contrast to the radical change taking place in the internal and commercial subsystems, communications with outside sources like Government, research organisations and other uncontrollable sources were markedly stable, in spite of a travel-time of two hours to Stockholm. These findings acted as a warning against the fallacy of generalising from a simple counting of total communication volumes.

Another study was launched in 1968 in order to reach more general conclusions concerning the structure of the communications system in different regions and organisations.

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1. The procedure used is described in detail in B. Thorngren, **KOMM '71 Preliminary Summary** In English, 1972, 42 pages and appendices (mimeo).

TABLE 1

**Changes in Contact Patterns : A Before and After comparative study**

Location of sources	Outside Contacts		Commercial Contacts		Internal Contacts		Total Contacts	
	O		E		I			
Face-to-face contacts before Relocation (March 1965)								
	%		%		%		%	
City of Stockholm	25	64	27	67	16	39	68	57
City of Eskilstuna	7	18	0	0	4	10	11	9
Rest of Sweden	7	18	13	33	21	51	41	34
	—	—	—	—	—	—	—	—
Total	39	100	40	100	41	100	120	100
Face-to-face contacts after Relocation (March 1966)								
	%		%		%		%	
City of Stockholm	20	45	12	33	11	9	43	21
City of Eskilstuna	15	34	13	36	103	80	131	63
Rest of Sweden	9	21	11	31	14	11	34	16
	—	—	—	—	—	—	—	—
Total	44	100	36	100	128	100	208	100
Telephone contacts before Relocation (March 1965)								
	%		%		%		%	
City of Stockholm	250	68	173	55	57	10	480	38
City of Eskilstuna	33	9	10	3	128	22	171	14
Rest of Sweden	85	23	130	42	389	68	604	48
	—	—	—	—	—	—	—	—
Total	386	100	313	100	574	100	1,255	100
Telephone contacts after Relocation (March 1966)								
	%		%		%		%	
City of Stockholm	194	56	135	46	55	9	384	31
City of Eskilstuna	64	18	39	14	142	24	245	20
Rest of Sweden	91	26	118	40	388	67	597	49
	—	—	—	—	—	—	—	—
Total	349	100	292	100	585	100	1,226	100



Business firms in electronics, the petrochemical industry, printing and in the service sectors were included. All in all, the study covered almost a hundred companies in four different locations: Stockholm, Gotenburg, Sundsvall and Umea.

Starting from a theoretical model outlining different kinds of communications subsystems linking organisations to different segments of the outside world, data was collected using special diary sheets.<sup>2</sup> In brief, the KOMM '68 study and a study of office firms in London by Goddard, arrived at the conclusion that the different kind of communications systems suggested by the theoretical model were general enough to be identified both in the four Swedish regions and in the London region.<sup>3</sup> Also, the classification cut across border lines between different industries and different activities.

Fig. 10, Sources of Information in the Development Space (page 27 above), has shown that the three subsystems, i.e. programme, planning and orientation networks, have quite different properties with respect to regional distribution, substitutability of telephone for face-to-face contacts, as well as other factors of relevance to the dispersal decision. The three categories or subsystems identified in Fig 10 formed an important theoretical starting point for the KOMM '71 study. The diagram suggests that the location of information sources in a development space represents the varying degrees of accessibility of different types of information.

Thus:

- i The utilisation of already available alternatives within **programme processes** might imply the exchange of information with only the most adjacent segments of the development space.
- ii. The development and choice considerations going on within the context **planning process** demand more comprehensive connections to potential social values and to potential technology as well as connections to the day-to-day socio-economic and technological environment.
- iii. The **orientation processes**, the scanning of the development space for new alternatives, demand the most far reaching relations.

2. For a more detailed examination of the findings of these studies see, Thorngren, B., "How Do Contact Systems affect Regional Development?", *Environment and Planning*, Vol. 2, 1970, pages 409-427.

Goddard, J., *Office Linkages and Location: A Study of Communications and Spatial Patterns in Central London*, Pergamon Press (Progress in Planning), Oxford, 1973.

3. J. Goddard, *ibid.*

As Goddard has indicated above, 'programme contacts' tend to be of rather short duration, rather formalised and routine between people who know one another. In dispersal terms such contacts could be maintained over a wide distance. 'Planning contacts' connect potential technology with potential social values and so involve much of the Research and Development activities. In this type of contact the type of information involved is more qualified; there are more people involved as a rule and there are specific targets to be achieved. Many of the contacts necessitated by applied research work are of this type: generally their purpose is to conduct Research and Development work into the nature and design of the new technology required to fulfil given objectives. There is a definite policy and a specific environment involved. By contrast, 'orientation contacts' are loose, complicated, varied, less structured and often involve many people in delicate discussions and confidential meetings.

Fig. 11, A Classification of Personal Contacts (page 28 above), summarised the findings of a survey into such factors as the length of meetings, the number of participants, the extent to which meetings were pre-arranged and the scope of the contacts. The diagram also indicates the extent to which participants are known to one another. 'Orientation contacts', represented by the outer and heavier line show very high values on all indices. At the core of the diagram 'programme contacts' are shown in class 2; these are not normally preplanned and are limited in scope between few people. In between these two there are 'planning contacts' (class 3).

Comparable results were also obtained from a desk diary study of Swedish firms in which an attempt was made to analyse the behaviour of firms over a ten year time span. The study sought to discover what changes occurred in respect of capital investment, staff changes and Research Development work in these firms. The results of this study distinguished between "stable" firms, having the same volume and types of contacts over time, and firms associated with increasing inputs into research, having a high level of technological production to similar customers through time. These latter groups involve contacts of the planning type. By contrast, the study revealed firms where both technology and the product changed continuously, often for a changing market; these latter groups involved a high level of orientation contacts. In spatial terms, the study revealed that companies located in northern Sweden usually relate to the "planning" type, despite this advanced technology, while firms in the

Stockholm area are increasingly involved in "orientation" processes.

Another interesting fact derived from the studies mentioned above is the direct comparability and structural similarity of the contact patterns in cities so far apart and so diversified as Malmö, Sundsvall, Gothenburg, Stockholm and London. The structure of communications has been shown to be similar within countries, between countries and over time.<sup>4</sup>

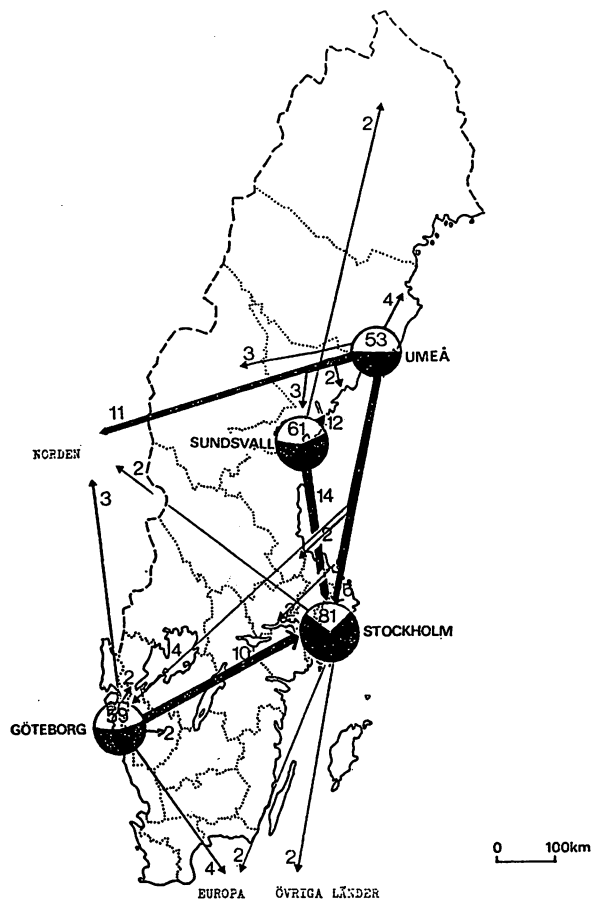


Fig. 14—Orientation Contacts, KOMM 68 (percentage Distribution).

Figure 14, illustrates the pattern of "orientation" contacts which was revealed by the KOMM '68 study. "Orientation" contacts were largely confined to the Stockholm region (eighty-one per cent) or to places outside Sweden or outside Scandinavia (six per cent). In terms of "orientation" processes the whole country is focussed upon the Stockholm area. By contrast, other results from the KOMM '68 study revealed a different picture, Fig. 15. The pattern of "planning"

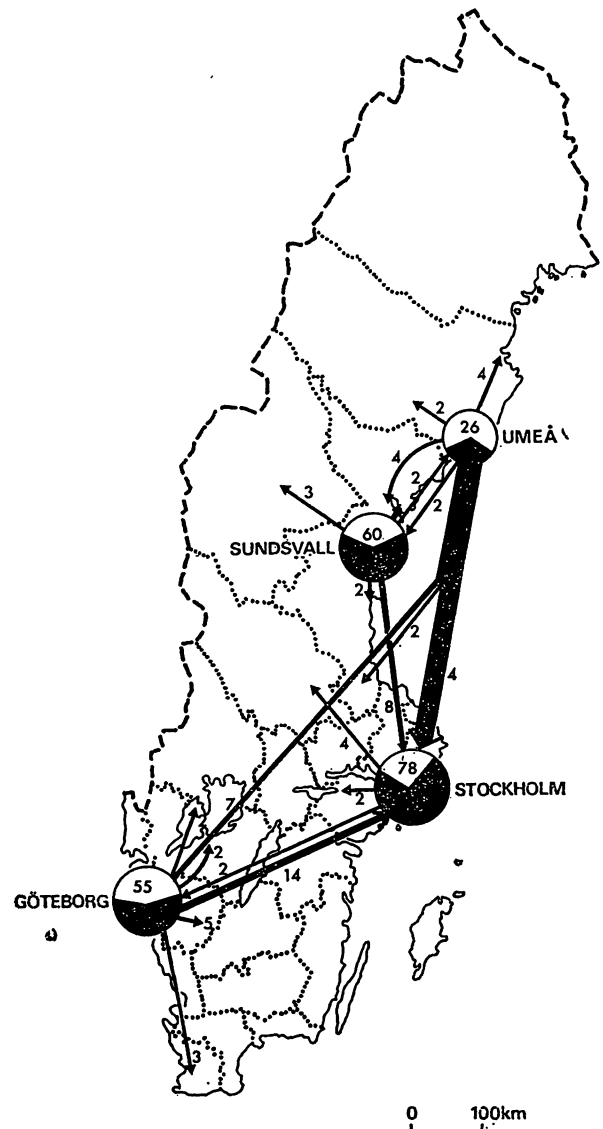


Fig. 15—Planning Contacts, KOMM 68 (percentage Distribution).

contacts is confined within the country and a large proportion of the communications load is self-sufficient. Thus, for example, some seventy-eight per cent of the "planning" contacts generated in the Stockholm area also terminate in Stockholm; for Sundsvall the figure is sixty per cent. Only fifty-five per cent of all "planning" contacts emmanating from Gothenburg also terminate in that city. In the case of Umea the figure is only twenty-six per cent. An interesting feature of Fig. 15 is the high degree of contact from the cities of Sundsvall and Umea with the cities of Stockholm and Gothenburg, even though these two northern cities have little evidence of contact between one another. Sweden's problem is the failure of the northern cities to interconnect with one another: instead they relate to the southern growth areas.

4. For details of these investigations see: Thorngren, B., *op. cit.* and Goddard, J., *ibid.*

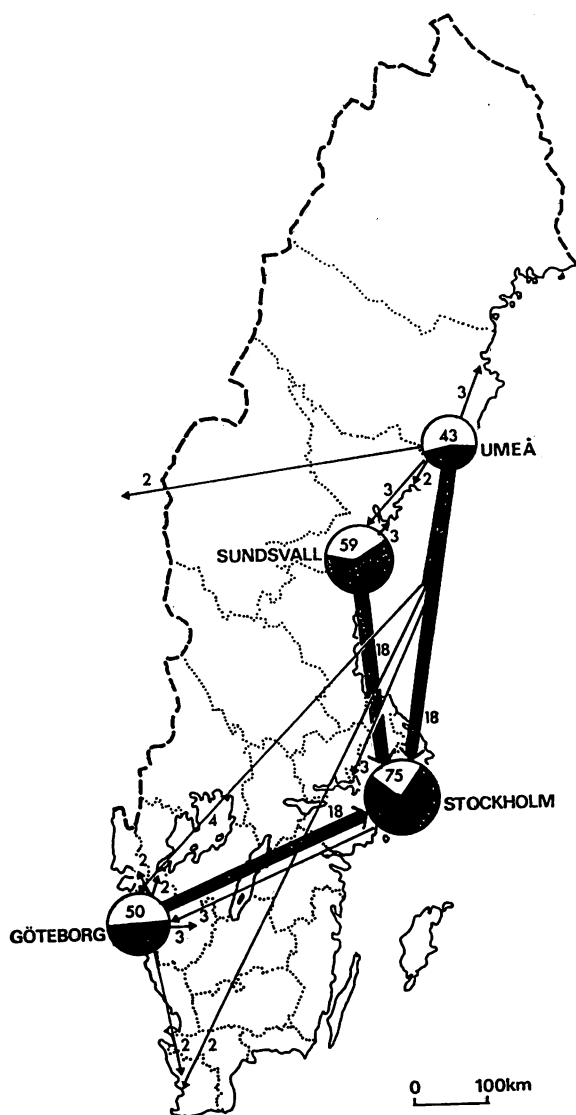


Fig. 16—Programme Contacts, KOMM 68 (percentage Distribution).

Figure 16, illustrates the pattern of "programme" contacts derived from the KOMM '68 study. A high percentage of "programme" contacts are seen to be confined to the city of origin (Stockholm 75%; Gothenburg 50%). Both the cities of Sundsvall and Umea have a relatively high degree of self-contained "programme" contacts, but even for these routine contacts there is still a high level of involvement with Stockholm. A small proportion of routine contacts are with places outside the country.

The principle thing to remember from the illustrations is that different communication networks generate very different patterns. This point is best illustrated by an examination of a comparison of the contact pattern of firms in Umea and Sundsvall. Umea is a university centre while Sundsvall is dominated by a high concentration of heavy

industry with limited professional or administrative opportunities. As a result of this different social structure, "orientation" processes take place in Umea while Sundsvall has a higher level of "planning" processes.

Communications studies have also revealed that a high proportion of contacts by business firms take place within a very confined spatial framework. Both the Stockholm and London research found that up to one third of all personal contacts involved a walking distance of not more than ten minutes. Almost half of all recorded personal communications took place within a distance involving a travel time of not more than one hour, see Table 2 which gives details of distance involved and the mode used to make contact. The proportion of personal contacts involving greater intervals of travel time is low and of limited significance, Table 2.

Again the structural similarity of contacts in all these studies is striking; the contact structure is not greatly affected by the great differences in the size of these cities.

In contrast to the foregoing, the recent study of Swedish government offices revealed that only thirteen per cent of all personal contacts take place within a ten minute walking time; thirty-seven per cent take place in the ten to thirty minute interval. A total of eighteen per cent of all personal contacts involve travel distances greater than two hours. Clearly the communications structures of business and government are quite different; the latter group has a contact network much more widely extended in space. Business contacts are much more localised. As a result of these differences, alternative policies may have to be applied in each case.

#### KOMM '71

The KOMM '71 study of communications within Swedish government offices took place within the context of the theoretical framework set out above. A total of twenty thousand and civil servants participated in the study which was conducted over two periods of three days each. A total of 120,000 contacts were recorded of which just over 20,000 involved personal face-to-face meetings. Of the participants, 6,000 were involved in face-to-face contacts. Contacts varied strongly both within and between agencies. Table 3 shows that the contact sources were broken into twenty-four groups of which seventeen were located in Stockholm. The thirty-four government agencies involved in the study were classified into nine groups on the basis of internally similar connections to external contact sources. The first three groups, A, B,



TABLE 2

## The Structure of Personal Contact Events in %

	KOMM '68	LONDON '69	GOV. LOC. '70 - '72	KOMM '71
<i>Direction</i>				
Give information	27	20	25	22
Receive information	25	15	18	21
Mutual exchange of information	48	65	56	57
<i>Range</i>				
One limited question	38	57	56	47
Several limited questions	40	35	36	36
General broad information	22	8	8	17
Total number of observations	2.169	1.544	929	20.243
<i>Region</i>				
Greater Stockholm	85			69
Centre of Sweden				16
South of Sweden	9			6
North of Sweden				5
Foreign country	6			5
<i>Travelling time</i>				
No travelling time				
Less than 10 min.	32	27		13
10 - 30 min.	49	48		37
30 min. to 1 hour	10	11		21
1 - 2 hours	4	8		11
More than 2 hours	5	6		18
<i>Transportation</i>				
Walking	19	22		
Car	69	56		
Bus, underground	12	17		
Train	3	4		
Aeroplane	0	1		

TABLE 3

## Planning-contact relations

Contact Source	A		B		C		DA		DB		DF		DA - DF		EA		EC 1		EC 2		Total	
	Nr	%	Nr.	%	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%	Nr	%
Greater - Stockholm																						
Stage 1 - agencies	54	4,3	28	3,7	11	1,0	28	2,7	27	4,8	8	3,5	63	3,4	165	5,0	82	2,5	136	2,0	383	2,9
Central agencies	260	20,8	45	6,0	53	4,6	81	7,9	29	5,1	113	47,7	223	12,2	301	9,1	64	1,9	182	2,7	547	4,1
Ministries	161	12,9	71	9,5	152	4,5	118	11,5	7	1,2	13	5,5	138	7,6	250	7,6	60	1,8	100	1,5	410	3,1
Interest organizations	179	14,3	31	4,1	65	5,7	87	8,5	18	3,2	5	2,1	110	6,0	299	9,1	95	2,9	174	2,6	568	4,2
Research	61	4,9	222	29,6	42	3,7	30	2,9	70	12,4	2	0,8	102	5,6	83	2,5	15	0,5	134	2,0	232	1,7
Industry, larger	22	1,8	23	3,1	54	4,7	36	3,5	6	1,1	0	0,0	42	2,3	57	1,7	52	1,6	1023	15,0	1123	8,4
Industry, smaller	32	2,6	33	4,4	470	6,1	32	3,1	38	6,7	0	0,0	70	3,8	175	5,3	268	8,1	878	12,9	1321	9,9
Banks, insurance comp.	60	4,8	1	0,1	15	1,3	6	0,6	2	0,4	8	3,4	16	0,9	3	0,1	669	20,2	66	1,0	738	5,5
Consultants, computer firms	250	20,0	49	6,5	491	42,7	85	8,3	54	9,6	11	4,6	150	8,2	488	14,8	374	11,3	902	13,3	1764	13,2
Wholesale, retail	31	2,5	31	4,1	78	6,8	27	2,6	109	19,3	1	0,4	137	7,5	127	3,9	206	6,2	386	5,7	719	5,4
Transport firms	5	0,4	3	0,4	17	1,5	7	0,7	10	1,8	5	2,1	22	1,2	28	0,9	40	1,2	161	2,4	229	1,7
Other service firms	11	0,9	14	1,9	72	6,3	17	1,7	6	1,1	0	0,0	23	1,3	55	1,7	50	1,5	147	2,2	252	1,9
Massmedia	9	0,7	10	1,3	19	1,7	7	0,7	0	0,0	0	0,0	7	0,4	39	1,2	22	0,7	55	0,8	116	0,9
Individuals	7	0,6	14	1,9	36	3,1	22	2,2	6	1,1	4	1,7	32	1,8	50	1,5	31	0,9	32	0,5	113	0,8
Miscellaneous	5	0,4	6	0,8	6	0,5	11	1,1	8	1,4	1	0,4	20	1,1	26	0,8	18	0,5	46	0,7	90	0,7
Reg/Loc org, own	6	0,5	7	0,9	2	0,2	81	7,9	0	0,0	0	0,0	81	4,4	891	27,0	1043	31,5	2156	31,7	4090	30,5
Reg/Loc org, others	100	8,0	161	21,5	68	5,9	347	34,0	174	30,9	66	27,9	587	32,2	258	7,8	222	6,7	225	3,3	705	5,3
TOTAL	1253	100	749	100	1151	100	1022	100	564	100	237	100	1823	100	3295	100	3311	100	6803	100	13409	100
Rest of Sweden																						
Research	36	19,3	160	55,8	11	2,9	23	3,5	9	6,2	0	0,0	32	3,6	88	3,4	11	1,0	30	0,4	129	1,1
Industry	13	7,0	18	6,3	57	14,8	24	3,6	21	14,5	1	1,3	46	5,2	103	4,0	52	4,9	838	10,4	993	8,5
Service	34	18,2	23	8,0	163	42,3	9	1,4	21	14,5	0	0,0	30	3,4	156	6,0	85	8,0	331	4,1	572	4,9
Miscellaneous	4	2,1	7	2,4	20	5,2	18	2,7	7	4,8	0	0,0	25	2,8	37	1,4	16	1,5	68	0,9	121	1,0
Reg/Loc org, own	11	5,9	1	0,4	71	18,4	158	24,0	0	0,0	0	0,0	158	17,9	1788	68,7	707	66,6	6592	82,0	9087	77,7
Reg/Loc org, others	89	47,6	78	27,2	63	16,4	427	64,8	87	60,0	77	98,7	591	67,0	430	16,5	191	18,0	177	2,2	798	6,8
TOTAL	187	100	287	100	385	100	659	100	145	100	78	100	882	100	2602	100	1062	100	8036	100	11700	100
Abroad	11		14		3		23		17		0		40		30		31		192		253	
TOTAL	1451		1050		1539		1704		726		315		2745		5927		4404		15031		25362	

and C are of special interest in as much as a limited number of contact sources dominate their present exchange of information. Their exchange of information is more important in volume than in terms of mutual contacts. Group A is strongly connected to the central functions of government and is therefore not suitable for dispersal. Another group, B, has thirty per cent of all contacts with research firms while group C related to consulting and data analysis firms.

The other six groups have the common characteristics of being dominated by contacts with three sources, i.e. within their own groups or with regional/local institutions. They accounted for sixty per cent of the total contact outside the Stockholm area, see Table 3. Also from a contact viewpoint, each agency could be said to form a cluster by itself as they are all large contact sources. Ultimately these agencies were combined into three groups on the basis of attachment to central institutions, research and computer firms.

The 1971 study also sought to define areas suitable for reception of office opportunities. It was essential to determine what combinations and groups of activities had similar or complementary requirements and so could move to the same place. Since the objective of the exercise was to move opportunities rather than people the emphasis was on the generation of multiplier benefits to the regions of reception. As stated above, the study did not emphasise the relocation of people with few benefits for the reception area. On the other hand, the most sensitive functions — orientation processes — required a heavy dependence on the Stockholm area and relocation of these would prove damaging to the office itself and possibly to the economy in general. Consequently emphasis was placed on relocating offices characterised by "planning" processes—agencies with highly qualified and well paid staff having rather narrowly defined areas of work. Often these agencies had specific contacts with other agencies outside the government sector. In so far as possible, agencies were to be relocated to centres which provided services and facilities matching their particular requirements as shown in Table 3.

On the basis of the information made available by the communication study and in the light of all other relevant information the government approved the proposal to relocate 11,330 office jobs (see Table 4).

#### **The Content of the Dispersal Decision**

A full list of the offices selected for relocation is given in Table 4 together with information

on the town to which the relocation will take place and the number of employees involved. The offices involved fall into the following categories:

- i. Research establishments and allied institutions,
  - e.g. the National Defence Research Institute
  - the National Institute for Testing Materials
  - the Swedish Meteorological and Hydrological Institution.
- ii. Education establishments,
  - e.g. the College of Forestry
  - the College of Librarians
  - the Army Technical School
  - the Telecommunication School.
- iii. Certain agencies with a limited policy content,
  - e.g. The National Land Survey Board
  - the Royal Mint
  - the National Civil Aviation Administration
  - the National Board of Agriculture.
- iv. Self-contained parts of agencies remaining in Stockholm,
  - e.g. the computer unit of the National Social Insurance Board.

From the communication point of view, the offices chosen for relocation are characterised by their high dependence on "planning" type communications, representing qualified but rather narrow exchanges of information with a restricted set of outside sources. The consideration of factors other than communications may have given rise to exceptions from this principle. Generally speaking, however, routine government office activities as well as activities having an exceptionally high content of "orientation" contacts (i.e. scanning and policy-making communications) were not included in the final dispersal recommendations. In order to fulfil the regional policy requirements and to improve the labour-market structures of the reception areas, very highly qualified office operations containing a large share of high ranking positions were considered for dispersal. Dispersal was dependent on the availability of suitable and feasible alternative communication channels being available. Research and educational establishments were high on the list of suitable candidates for the fulfilment of these objectives. Routine government office operations would not give rise to the desired level of regional spread effects, and the demand for labour in routine office operations can be expected to decline in the long run. Consequently, routine operations were not included in the dispersal recommendations,



even though the communications damage arising from relocation might be very small.

It was decided that, if at all possible, office opportunities should be moved to centres of 100,000 or more, Table 4. It was desirable to confine relocations to the larger centres, since these could provide reasonable service facilities and could also benefit most from the injection of additional activities. This figure had to be reduced in the more northerly provinces where the degree of urban concentration is less and the urban centres are small in size. A total of fifteen locations will receive blocks of Central Administration office opportunities: of these, seven are situated in "the forest provinces" north of Stockholm, Fig 17. The most northerly reception centre is Luleå some 1,000 kms. to the north of Stockholm and just outside the Arctic Circle. In most cases there was a matching of the requirements of the relocating office and the facilities offered by a selected centre, e.g. the presence of a university was an asset in the selection of new locations for research operations. In order to reinforce opportunities for interaction within reception areas, offices with similar requirements with respect of outside linkages were designated to go to the same area. Thus, Karlstad in western Sweden will receive units in the defence sector while the university towns of Umeå and Linköping are to receive research type establishments.

According to the Royal Commission's calculations, the total Exchequer costs are estimated to be about £2,500 per relocation employee. This calculation includes the benefits payable to relocating civil servants, the payments in respect of premature retirements and the costs of recruiting new personnel. It is further estimated that these figures are some fifteen per cent less per employee than in the case of relocating private industrial opportunities. Since land and building costs are lower outside Stockholm, the ultimate savings in investment will more or less cover the costs of the whole operation. The total investment (gross) in land, buildings and equipment is estimated as being of the order of £42 million.<sup>5</sup>

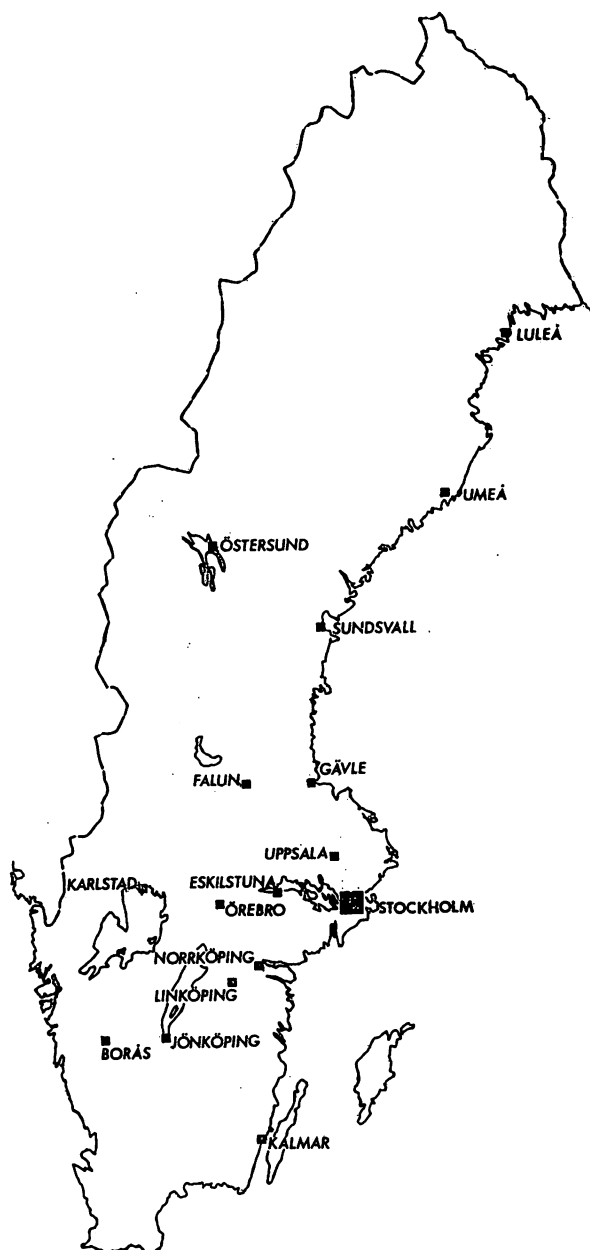


Fig. 17—Centres receiving Government Activities.

Government dispersal is not to be considered as an isolated event. The policy builds upon earlier measures within other fields of regional policy. Also, to obtain the full benefits, communication facilities within as well as between receiving areas must be built and improved.

As the dispersal programme will be implemented progressively during the years 1972-1980, research programmes are intended to follow the progress and to suggest possible applications of new information technology.<sup>6</sup>

5. The presentation given has drawn heavily upon a draft paper, "Swedish Government Urban Policy and Relocation Policy", in **National Settlement Strategies — a Framework for Regional Development**, Report from E.F.T.A. on New Patterns of Settlement, to be published 1973.

For a broader presentation cf. also: **Report on Regional Policy in Sweden**, Mimeo, March 2, 1973, Swedish Ministry of Labour and Housing.

The full report of the Royal Commission is available in Swedish only. The Chairman of the Commission has been Pierre Vinde, Department of Finance.

6. **Information Technology and Regional Policies**, Joint Working Group, the Swedish Board for Technological Research and the Expert Group on Regional Studies, Ministry of Labour and Housing.

**TABLE 4. LOCATION AND SCALE OF GOVERNMENT OFFICE RELOCATION**

Name of Reception Centre	Population of Centre 1968*	Name of Establishment	No. of employees involved	Total No. of Job opportunities going to each centre	Name of Reception Centre	Population of Centre 1968*	Name of Establishment	No. of employees involved	Total No. of Job opportunities going to each centre
Lulea	36,000	The Geographical Survey of Sweden (part of)	100	500	Karlstad	53,000	The Recruiting Administration of the Armed Forces	75	1,110
Umea	52,000	Lulea University of Technology	400				The Institute of Military Psychology	40	
		The College of Forestry	330	1,270			The Medical Board of the Armed Forces	110	
		The National Institute of Occupational Health	40				The Material Administration of the Armed Forces (part of)	400	
		The National Defence Research Institute (part of)	350				The Civil Administration of the Armed Forces	285	
Ostersund	27,000	The National Bacteriological Laboratory	550				The Civil Defence Board	200	
		The Quarter Master School	50	290	Orebro	87,000	The Central Bureau of Statistics (part of)	700	770
		The Army Technical School	200				The Central Registrar of Motor Vehicles	70	
		The Graduate School of Social Work and Public Administration	40				The Central Register of Driving Licences		
Sundsvall	62,000	The National Government Employee Pensions Board	245	805	Eskilstuna	174,000	The Royal Mint and the Dept. of Weights and Measures (part of)	50	650
		The Central Students' Grants Committee	90				The Royal Fortification Administration	600	
		The National Social Insurance Board (part of)	200		Uppsala	168,000	The Swedish National Food Administration	185	345
		The Fiscal Court of Appeal	25		Norrköping	93,000	The Geological Survey of Sweden (part of)	160	
		The Organisation Board of the Judiciary Administration**	75				The National Immigration and Naturalization Board	210	1,505
		The National Board of Education (part of)	50				The Swedish Meteorological and Hydrological Institute	400	
Gävle	61,000	The National Patent and Registration Office (part of)	120				The National Civil Aviation Administration	305	
		The National Land Survey Board	170	920			The National Administration of Shipping and Navigation	290	
		The Geographical Survey Office	520				The Swedish Correctional Administration	300	
		The Central Board for Real Estate Data.	70		Jönköping	54,000	The National Board of Agriculture	185	430
Falun/Borlänge	48,000	The National Institute for Building Research	160				The National Board of Forestry	95	
		The Swedish Forest Service	400	1,195			The National Agricultural Marketing Board	150	415
		The National Road Administration	700		Boras	70,000	The National Institute for Materials Testing	220	
		The National Road Safety Office	95				The College of Librarians	40	
Linköping	78,000	The National Laboratory of Forensic Science	60	875			The National Institute for Corporate Development	120	
		The National Laboratory of Forensic Chemistry	85				The National Inspectorate of Fire Services		
		The Swedish Geotechnical Institute	80				National Fire Technical College	35	
		National Swedish Road and Traffic Research	150				The National Swedish Inspectorate of Explosives and Flammable Liquids		
		The Material Administration of the Armed Forces (part of)	100		Kalmar	38,000	The National Telecommunications Administration (part of)	250	250
		The National Defence Research Institute (part of)	400						
GRANT TOTAL									11,330

\* Population figures obtained from *Pear's Cyclopaedia*, 1971-72.

\*\* This Board will change its name.