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THE ECONOMIC WELL-BEING
OF THE RETIRED AND NON-RETIRED ELDERLY:
A STUDY OF SEVEN COUNTRIES

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June 1985

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INTRODUCTION

During the past two decades a massive growth has taken place in Social Security expenditure in industrialized countries. From 1960 to the beginning of the 1980's expenditure on social security increased almost twice as much as gross national product. The rise was particularly marked in transfer payments to the elderly population which became the main component in total social security expenditure in most developed nations. The real increase in expenditure on old-age pensions in OECD countries continued also after the economic crisis which hit the western nations in the mid 1970's. In the early 1980's, expenditure on old-age pensions, for example, amounted to approximately 9% of GNP in West Germany; 5% in Sweden and the United Kingdom; and 3% in the United States (OECD, 1983).

Against the background of the uniform trends that appeared in social security expenditure on the elderly population, it is interesting to study the economic well-being of the elderly at the beginning of the present decade in an international perspective - as it is done in this paper. The results are based on microdata sets from seven countries: Canada, Israel, Norway, Sweden, West Germany, the U.S.A. and the U.K., which were made available for the Luxembourg Income Study (LIS).¹

¹ A detailed description of the LIS data base is presented in the technical paper by Smeeding, Schmaus and Allegrezza (1985).

One would expect to find significant differences among the various countries with regard to the well-being of the elderly population and its various groups. The income level of this population and its composition in each of the countries depend on many factors such as the usual retirement age, the degree of flexibility and liberality with regard to the pension age, the generosity of the social security retirement programs and the role of occupational pension arrangements in the general system of income maintenance for the elderly. Other factors of a more social nature also influence the economic situation of the elderly population, such as the usual patterns of living arrangements for old persons (e.g. living alone versus living with their children).

In all countries participating in the Luxembourg Income Study, except for Norway, the normal retirement age is 65; in Norway it is 67. In Israel, the United Kingdom and in West Germany it is 60 for a woman, and 65 for a man. In some countries there is a possibility of early retirement or deferred retirement. Thus, for example, the social security systems of Sweden, Germany and the United States allow both early and late retirement. Obviously there are differences in the early and later retirement ages. In Israel and in the United Kingdom it is possible only to defer retirement. Another arrangement which may constitute an additional source of difference among countries with regard to the condition of the elderly population and the composition of its incomes, is the option of continuing to work part or full time and at the same time to receive a retirement pension. For example, Sweden has an arrangement for a partial pension whereas the systems in Israel

the U.K., the United States and Norway have a retirement test for old persons of a certain age who continue to work after beginning to receive an old-age pension.

The details of retirement income provisions in various countries reflect all the historic, economic and social factors specific to those countries. The inter-country variations are enormous. However, it is possible to outline some of the more common features of the different countries' schemes. Most countries have a three-tier system of income provision for the aged - the general social security old-age pension, a complementary industry-based system covering virtually all employees and separate private schemes. In addition, governments normally have occupational pension schemes for their own employees.

In all countries, except Israel, the general social insurance system pays earnings-related pensions. In Israel it pays flat-rate benefits. In the United States and West Germany, the pension is only earnings-related whilst in the remaining countries it consists of two tiers: a universal flat-rate pension and an earnings-related pension. In addition, all countries provide some form of social assistance for aged persons with low incomes. Sometimes it is in the form of a specific program for the aged and sometimes it is part of a general social security system.

Occupational pension systems are relatively well developed in Canada, the United Kingdom, the United States and Israel. These countries also have relatively low earning replacement rates under the general social security system. In European countries the role of social retirement is large relative to occupational pensions. These differences are naturally expressed in the composition of old persons' incomes across countries.

The principal aim of this paper is to study the economic well-being of elderly families in the various countries participating in the Luxembourg Income Study. The vast literature on theoretical and empirical measures of inequality and poverty has examined the issues involved in defining the alternative measures of well-being in depth. It concentrates on the different treatments of the "income" concepts (for example, consumption versus income measures and income before direct taxes versus net income) and of the recipient unit concepts (household versus adjustment for unit size). Since these are familiar issues, we will not repeat the discussion on them here (see Atkinson, 1983, Danzinger and Taussing, 1977 and 1979, Danzinger, van der Gaay, Smolensky and Taussing, 1982).

At this stage of the LIS project, we have focussed on cash income components. Noncash income, wealth, consumption, savings and other indicators of well-being have not been studied yet. In this paper we chose to use the net cash income in measuring inequality and poverty and to employ the concept of equivalent income whereby cash income is adjusted by the number of equivalent adults in a family.

The first part of this paper presents the demographic characteristics of the elderly population in the various countries; the distribution of the elderly families by age of the family's head; family type and family size.

The second part examines the percentage of elderly families defined as retired. The inter-country variations, particularly in the pensionable age and in the work patterns of the elderly populations, oblige us to examine a number of definitions of the retired elderly family by means of which it will be possible to make useful comparisons among the countries. The usual

demographic definition of an old person (65+ years) which does not take into account economic variables contains a certain amount of arbitrariness. Accordingly, for our purposes, we shall refer to a number of additional definitions of the elderly family which are based on the family's income composition too. The common denominator of all these definitions is the fact that the age of the family head is 55+ whilst the difference among them arises from their reference to the family's income composition. According to the primary definition, which we shall use in this paper, a retired family is one whose main income is retirement income.

The third part contains a discussion of the relative importance of the various types of income sources and a comparison of elderly families (55+) with families defined as "retired" according to the primary definition which we use in this study.

The fourth part presents a number of indices which illustrate the nature of income distribution in the elderly population from two aspects:

- a) the inequality of income distribution among the various age groups, by means of a comparison of the mean income in each age group with the mean income of all the elderly families;
- b) the inequality of income distribution within each age group.

For this purpose we shall use the relative shares of the quintiles in the total income and Gini Coefficients.

The incidence of poverty among elderly families by the various groups is described in the fifth part.

Finally, we conclude with a short summary of the main findings and with a discussion.

I. DEMOGRAPHIC CHARACTERISTICS OF THE ELDERLY FAMILIES

In this paper we use a detailed breakdown of the elderly families into four groups of family head's age: 55-59, 60-64, 65-74 and 75 and over. As can be seen in Table 1, the distribution of families by the age of the family head varies considerably among the countries surveyed. The percentage of elderly families whose head is aged 55+ in the total population is significantly higher in Norway, West Germany and the United Kingdom, than in the other countries. In Canada and the United States, the percentage of

TABLE 1: PERCENTAGE DISTRIBUTION OF FAMILIES BY AGE OF HEAD

Country	Age of Head						Total Pop.
	-54	55+	55-59	60-64	65-74	75+	
Norway	55.5	44.5	9.0	8.3	15.2	12.1	100.0
W. Germany	56.6	43.4	8.3	5.9	17.5	11.7	100.0
U. Kingdom	57.8	42.2	9.2	6.9	16.8	9.2	100.0
Sweden	59.7	40.3	6.6	7.9	14.1	11.6	100.0
Israel	60.8	39.2	8.2	8.2	15.6	7.2	100.0
U.S.A.	65.7	34.3	7.9	6.9	12.0	7.5	100.0
Canada	68.5	31.5	7.6	6.7	10.6	6.6	100.0

families whose head is aged 55+ is the lowest, whilst Sweden and Israel are in the middle of the scale even though they are nearer to the former group. In Canada 31.5% of all families belong to the 55+ age group compared with 44.5% in Norway which has the highest percentage of families whose head is aged 55+².

If we examine the percentage of elderly families according to the usual definition too, i.e., families whose head is 65 and over, the ranking of the countries remains essentially unchanged. West Germany and Norway are at the top of the scale whereas the United States and Canada are at the bottom. The variance among these countries is most outstanding in the oldest age group, 75 and over. In Norway, the percentage of families in this age group is almost double that in Canada.

Another demographic variable which will serve us in the international comparison of economic well-being among the elderly is the family composition. As may be expected, couples without children and single females are the two main groups among elderly families whose head is 55+ (see Table 2). In all countries except West Germany, single couples constitute the largest group. In Sweden and Israel about 42% of all families in the 55+ age group are single couples whereas in the other countries the rate fluctuates around 34%-38%. In the 55-59, 60-64 and 65-74 age groups single couples also

² In all the tables in this section, the countries appear in a descending order corresponding to their place according to the percentage of families in the 55+ age group among all families. Thus each table acquires an additional dimension alongside the specific variables presented in it.

constitute the largest group even though the proportion of single females increases significantly with age, mainly on the account of other family types (families with children). In the 75+ age group the situation is reversed. In all the countries, except Israel, the percentage of single females is higher than that of single couples. In Sweden, Norway and West Germany, single females are slightly over 50% of all families in the 75+ age group; in the United States, Canada and the United Kingdom 45%-46%. In Israel only 23% of all families in the 75+ age group are single females whereas the percentage of single couples is double: 47%. This difference between Israel and the other countries apparently stems from the former's relatively low rate of divorces and separations. The lowest percentage of single males in the 75+ age group is to be found in Israel and West Germany (approximately 11%) and the highest in Sweden and Norway (17%-18%). Another interesting point relates to the ratio between single males and single females, in the oldest group. The lowest ratio of single females to single males is to be found in Israel (2.1) and the highest - in West Germany (4.8).

Another difference among the countries relates to the family type termed "other". This consists of households of old persons without children who live with other adults who are related to the family head or his spouse. In Israel and Canada approximately 20% of elderly families in the 55+ age group belong to this category, in the United States and the United Kingdom - approximately 17% and in West Germany - approximately 11%. The proportion of this family type is larger in the younger groups - 55-64 - than in the older ones - 65+. No household of this type appears in Norway and Sweden since the data of their surveys consider a person over 18 living with other adults as a family per se.

TABLE 2: FAMILY TYPE BY AGE OF FAMILY HEAD (percent)

Country Family Type	Norway			Germany			U.K.			Sweden			Israel			U.S.A.			Canada		
	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+	Total 65- 55+ 74 75+				
Single Male	14	14	18	7	7	11	11	11	13	17	18	17	6	7	11	9	9	12	11	11	14
Single Female	33	35	52	41	44	51	29	31	47	38	37	57	21	26	23	28	31	44	26	29	45
Single Couple	34	41	25	35	36	33	38	43	25	42	44	26	41	46	47	38	42	30	34	40	28
Couple + Children	13	6	1	3	1	-	2	1	-	3	1	-	4	2	3	3	2	1	3	2	0
One-Parent Family	4	3	3	0	-	-	0	-	0	0	-	-	1	1	-	2	1	1	1	1	0
Other + Children*	2	2	1	2	1	-	3	1	0	-	-	-	7	4	2	3	2	0	5	2	1
Other**	-	-	-	12	11	5	17	13	15	-	-	-	20	14	14	17	13	12	20	16	12
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* This type of family includes families with children and with additional adult persons.

** All families without children which are not included in the first three types.

TABLE 3: AVERAGE FAMILY SIZE BY AGE OF HEAD

Age of Head	Country						
	Norway	West Germany	U.K.	Sweden	Israel	U.S.A.	Canada
Total 55+	2.3	2.1	2.4	1.7	3.2	2.6	2.7
55-59	3.2	2.9	2.9	2.0	3.9	3.3	3.3
60-64	2.5	2.2	2.4	1.8	3.5	2.6	2.9
65-74	2.0	1.9	2.1	1.7	3.0	2.3	2.3
75+	1.5	1.6	1.9	1.4	2.2	1.9	1.9

Table 3 presents average size of the elderly family by the age of the family head. In Israel elderly families are larger than in other countries (3.2 persons on the average, per family). On the other hand, Sweden is characterized by the smallest family size - 1.7 persons on the average, per family. The order of the countries by family size is the same in all age groups.

II. WHO ARE THE RETIRED ELDERLY?

In this paper we compare the number of retired families according to five different definitions of a retired family. All the definitions refer to a population aged 55+ but they differ from each other with regard to the family's income sources and composition. According to the primary definition of the retired family (hereinafter: "retired") which we shall use in this section, an elderly retired family is one whose main source of income is retirement income. The definition includes the following elements:

- (a) the family has some retirement income (from social insurance or an occupational pension scheme); and
- (b) the family's earnings from employment do not exceed one quarter of its net income.

The other definitions of the retired family are:

- (1) A family without any earnings from employment.
- (2) A family with retirement income.
- (3) A family without earnings from employment but with income from retirement.
- (4) A family whose income from retirement exceeds its earnings from employment.

Table 4 shows the proportion of retired families in the various countries according to the aforementioned definitions and according to the usual definition (families whose head is aged 65+). The findings refer both to the total family population and to the two most frequent family types among the elderly population: single females and single couples.

According to all the definitions of retirement, it is possible to divide the countries into two groups³: one group includes those countries whose populations are relatively old - Sweden, West Germany and the United Kingdom, which is usually placed third; and another group which includes Israel, Canada and the United States, in which the lowest percentage of retired families is to be found. By definition, in all countries the percentage of families with some retirement income is highest whereas the percentage is lowest according to the definition of a retired family as having no earnings but some income from retirement.

In Sweden and West Germany, 65% of all families (in the 55+ age group) are "retired" according to the primary definition compared with 43% in the United States. The United Kingdom is in the middle of the scale (56%) and Canada and Israel are close to the bottom with 48% of all their elderly families being "retired". Moreover, in Sweden and West Germany the percentage of "retired" families is almost identical to the percentage of families in the 65+ age group, whereas in the United States and Israel one finds the greatest gap between the percentage of "retired" and the percentage of 65+ (a difference of 14.3% in the United States and 10.7% in Israel).

According to the other definitions of retirement, the United States and Canada are characterized, on the one hand, by a relatively low percentage of families without earnings (47%) and, on the other hand, a low percentage of

³ The data on the retirement income in Norway contain only private pensions; therefore this variable is not reliable, and we cannot compare Norway to the other countries.

TABLE 4: THE PROPORTION OF RETIRED FAMILIES WITHIN THE ELDERLY (55+)
ACCORDING TO THE VARIOUS DEFINITIONS AND BY FAMILY TYPE

Percentage of families:	Norway*		West Germany		U.K.		Sweden		Israel		U.S.A.		Canada								
	T	S	T	S	T	S	T	S	T	S	T	S	T	S							
1. head aged 65 and over	61	78	61	67	78	66	62	77	60	64	77	55	58	69	66	57	74	56	55	74	56
2. "retired" as defined for LIS project	16	22	16	65	83	62	56	85	54	65	84	49	47	87	46	43	66	46	48	76	50
3. with zero earnings	45	74	31	71	89	69	55	85	51	54	77	35	45	84	43	47	75	43	47	79	46
4. with some retirement income	18	24	21	76	88	71	74	93	69	84	95	77	70	97	66	60	73	62	65	82	66
5. with both no earnings and some retirement income	13	20	12	62	81	60	53	82	49	54	77	35	43	84	41	40	62	39	43	72	43
6. with retirement income greater than earnings	15	22	16	67	85	65	60	88	58	72	88	59	50	89	49	49	68	50	50	77	53

*See footnote 3.

**T = Total 55+, SF = Single Female, SC = Single Couple

families with some income from retirement (60% and 65% respectively). In West Germany the percentage of families without earnings is the highest (71%) but the percentage of families with some retirement income is also relatively high (76%). In Israel, Sweden and to a certain extent in the United Kingdom, the situation is different. Sweden has the highest percentage of families with retirement income (84%) but, on the other hand, a relatively low percentage of families without any earnings, particularly in comparison with West Germany.

In Israel, the percentage of families without earnings is the lowest (45%) but the percentage of families with retirement income is relatively high. Thus it appears that Sweden and Israel have relatively more families with retirement income who continue to belong to the labour market. This finding is outstanding when the percentage of families with some retirement income (with or without earnings from employment) is compared with the percentage of families with some retirement income but without income from employment. About 30% of the families in Sweden and about 27% of the families in Israel have both income from retirement and earnings in contrast to only 14% in West Germany. Hence, in West Germany most families with retirement income do not continue to work at all. Moreover, a comparison of the percentage of "retired" families with the percentage of families with no earnings whatsoever but with some retirement income leads to the conclusion that in all countries, except Sweden, most "retired" families have no earnings from employment. Sweden has relatively more "retired" families with employment earnings even though, according to the definition, these earnings are very small.

An examination of the proportion of retired families among single females and single couples reveals, as was to be expected, that in all countries the percentage of retired single females according to all definitions is relatively high compared to the elderly population in general, whereas the percentage of retired among single couples is relatively low.

According to almost all definitions (except that based on families with no earnings from employment) the percentage of retired single females is highest in Israel and lowest in the United States. In Israel, the United Kingdom, Sweden and West Germany, approximately 84%-87% of single females aged 55+ are "retired" according to the primary definition, whereas in the United States only 66% of them are "retired". Canada is in the middle of the scale with 76%.

Regarding the single couple population, more or less the same differences were found among all countries as were found with regard to the general elderly population except for the fact that Sweden has an outstandingly low percentage of single couples without earnings⁴, even in comparison with Israel and the United States. 35% of the single couples in Sweden have no earnings and a similar percentage has no earnings but has some income from retirement. 42% of the single couples have both earnings and retirement income. Moreover, the percentage of "retired" single couples in Sweden resembles that in the United States, Israel and Canada and differs from that in West Germany and the United Kingdom.

⁴ Norway has a lower percentage of families without employment income, but as was mentioned above, it cannot be compared with the other countries according to the other definitions.

In all the countries, almost all the members of the two oldest age groups have some retirement income and the differences among the countries are expressed mainly in the percentages of families without earnings (see Tables 1 and 2 in the Appendix). Israel is particularly notable for the fact that 42% of its families in the 65-74 age group and 20% of those in the 75+ age group have employment earnings. The United States, Canada and Sweden also have relatively high percentages of elderly people with employment earnings, compared with countries such as West Germany and the United Kingdom, especially in respect of the 65-74 age group.

III. THE RELATIVE IMPORTANCE OF THE VARIOUS INCOME SOURCES

One of the important dimensions according to which it is customary to compare the economic status of the elderly population in various countries is the composition of its income and the contribution of each of the income sources to its standard of living. The best way to evaluate the relative contribution of the various income sources to the elderly's living standard is to study the distribution of net income. However, the available data does not include net incomes from all of the possible income sources but only total net income and total tax payments. Accordingly, we can only study the distribution of gross income by income sources and the share of net income in total gross income.

In the following analysis we shall distinguish between income arising from the family's economic activity and from transfer payments. Income arising from economic activity (market income) includes earnings from employment, property and occupational pension schemes whilst transfer income includes social insurance transfers, means-tested transfers and private transfers.

All elderly families - Table 5 presents the distribution of the gross income by its components of the elderly population and of the elderly in the 65-74 and 75+ age groups⁵.

⁵ Data on the income composition of elderly families in the 55-59 and 60-64 age groups are presented in Tables 3 and 4 in the Appendix.

TABLE 5: COMPOSITION OF GROSS INCOME BY INCOME TYPES (All elderly units)

Income Type	Country																				
	Norway						West														
	65-74		75+		65-74		75+		U.K.		Sweden		Israel		U.S.A.		Canada				
1. Income before tax and transfer	69	54	24	53	31	24	69	51	39	46	21	15	85	75	68	79	63	53	79	62	51
a. Earnings	61	41	6	43	17	8	54	26	17	39	12	2	64	42	21	58	32	17	56	28	13
b. Property Income	5	6	8	2	2	4	7	10	10	7	9	13	10	13	22	13	18	24	17	22	30
c. Occupational Pension	3	7	10	8	12	12	8	15	12	-	-	-	11	20	25	8	13	12	6	12	8
2. Transfer Income	31	46	76	47	68	76	31	49	61	54	79	85	15	25	32	20	37	47	20	37	47
3. Public Transfers	30	45	76	47	68	76	31	49	61	54	79	85	14	23	30	20	37	47	20	37	47
a. Social Insurance Transfers	30	45	75	46	67	75	28	46	54	51	76	78	14	23	29	19	35	45	18	35	45
b. Means-tested Transfers	0	0	1	1	1	1	3	3	7	3	3	7	0	0	1	1	2	2	2	2	2
4. Private Transfers	1	1	-	0	0	-	0	0	0	-	-	-	1	2	2	0	0	0	-	-	-
5. Other Income	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	1	1	2
6. Direct Taxes	23	19	8	13	5	4	15	11	8	30	28	17	22	14	9	18	11	8	12	9	7
7. Net Income	77	81	92	87	95	96	85	89	92	70	72	83	78	86	91	82	89	92	88	91	93

In all countries except Sweden, market income (before taxes and transfer payments) is the main component in the income of families in the 55+ age group, particularly in countries with relatively young populations: Israel, the United States and Canada. In Sweden, the relative share of transfer income in total income is greater than that of market income. Market income constitutes 85% of gross income in Israel and 79% in Canada and the United States. On the other hand, in Sweden and Germany whose populations are relatively old, the relative share of market income is very low: 46% and 53% respectively. In Norway and the United Kingdom, market income contributes 69% of total income.

An examination of the types of income that constitute market income reveals that the relative share of employment earnings and occupational pensions is the highest in Israel.⁶ In the United States and Canada income from property (13% and 17% of gross income respectively) is particularly prominent whilst the relative importance of employment earnings is not very different from that in the United Kingdom and Norway. The relative share of

⁶ When one tries to interpret the data, one should keep in mind that one of the various factors, which cause differences in the composition of gross income in the studied countries, is the percentage of families of the "Other" type. This category includes nuclear families with other adults who have income from work, thus affecting the income composition of these families. This phenomenon exists mainly in Israel, U.S.A. and Canada.

market income in Sweden is low not only because of the low share of employment earnings but also due to the absence of separate data on income from occupational pensions.⁷

An important result emerging from the data is that in countries in which the role of the occupational pension scheme is relatively important, (such as Israel) or in which income from property constitutes a relatively large part of income (Canada and the United States), the contribution of transfer income to the elderly's standard of living is markedly low. It is possible that the savings patterns which are sometimes to be found in these countries in the form of financial saving or pension funds, arise from the awareness that social insurance guarantees a relatively low old-age pension. In Israel, for example, social insurance guarantees a uniform (flat rate) old-age pension which provides the recipient with only a minimum subsistence but does not enable him to preserve the standard of living which he enjoyed prior to his retirement. Accordingly, there is a tendency to exploit the alternative options: saving and insurance in occupational pension funds. It is also possible that in countries in which the occupational pension system plays an important role in the elderly's income maintenance, the general social system guarantees a relatively low replacement rate.

⁷ The national pension scheme in Sweden includes a basic pension (AFP) and a supplementary pension (ATP) which provides for earnings - related payments. The occupational pension programs are closely integrated with the national scheme. Within the Swedish survey, occupational pensions are included in the transfer payments section.

The average rate of taxation (which includes income tax and the payroll taxes paid by employees) imposed on the elderly families' income is highest in Sweden (30%) and lowest in Canada⁸ and West Germany (12% and 13% respectively). In Israel and Norway also elderly persons pay relatively high taxes, approximately 23% of gross income. In view of the fact that in Sweden the average tax rate is 30% of gross income, over half of which derives from transfer payments, it may be concluded that taxation on transfer income in Sweden is relatively high. In other countries the elderly receive favorable tax treatment, or else old-age pensions are not taxable as in Israel and the United States. This finding will be stressed in the discussion on the population of "retired" families according to the primary definition.

It is important to note that in some of the countries with relatively high average tax rates, government participation in the financing of social insurance pensions and other transfer payments to elderly families is also relatively high. Thus, for example, in Sweden, the government bears approximately 30% of the expenditure on the basic pension of the national scheme from its general revenue. In Israel, approximately 15% of the old-age benefits are financed from general taxation as are all assistance payments to old persons who have no income except the basic national insurance benefit. Moreover, the occupational pension of civil servants and employees of public institutions is financed entirely from general revenue.

⁸ The figure for Canada is affected by the absence of payroll taxes in the Canadian data.

The data on the income composition of families in the 65-74 and 75+ age groups shows (as expected) that in all countries the relative share of their market income falls, the relative share of transfer income grows and the percentage of net income rises in total gross income as the family head's age rises. The fall in the relative contribution of market income to elderly families' standard of living is particularly outstanding in Sweden, Norway and West Germany. In Sweden, market income constitutes only 15% of the total income of families in the 75+ age group and 24% in West Germany and Norway. In contrast, the findings relating to Israel, the United States and Canada are somewhat surprising since market income in these countries is still the main component in the income of families in the highest age group. In Israel about two thirds of their gross income are market income and only one-third is transfer income. In the United States and Canada the gross income is almost equally divided between market and transfer income.

An examination of the various components of market income reveals that as the relative share of earnings falls, the relative importance of income from property and occupational pension grows. About one-third of the gross income of families in the 75+ age group in Canada and nearly one quarter of the income of these families in the United States and Israel are from property. The rise in the relative proportion of income from property may have a number of explanations: first of all, studies on old persons' saving behaviour have indicated that old persons continue to save after retirement, so that their accumulated property grows as they get older. Secondly, there may have been a greater tendency to save in the past since the pension systems, especially the occupational one, were less developed.

Thirdly, it is possible that in absolute terms, income from property does not rise and the entire increase is due to reduction in income of old persons as they advance in years.

"Retired" families - Another interesting comparison is that which deals with the income composition of elderly families (in the 55+ age group) in contrast to that of "retired" families according to the primary definition used in this research. As can be seen in Table 6, in all countries retired families in all age groups have almost no earnings from employment (0%-2% of gross income). On the other hand, the relative share of income from property and occupational pensions in total income is higher among retired families than among all elderly families. The difference in the relative share of income from property between these two groups is very marked in Canada, the United States and Israel, whilst the difference in the relative share of occupational pensions between these two groups is significant in all the countries. In Sweden and West Germany transfer income constitutes the largest part of "retired" families' income: 89% and 84% respectively. On the other hand, in Israel it still constitutes less than half of the gross income: 42%.

In all countries, except Sweden, the "retired" families pay a very low average rate of tax which ranges from 1% in West Germany to 11% in Norway. In Sweden, the rate remains very high even for the retired families: 21%.

Finally, the data on the income composition on the "retired" families in the various age groups reveal small differences among the various groups from which one may conclude that in all the countries this population is quite homogeneous. Nevertheless, it is worth mentioning that the relative share of

TABLE 6: COMPOSITION OF GROSS INCOME BY INCOME TYPES (Only Retired Units)

Income Type	West																					
	Norway		Germany		U.K.		Sweden		Israel		U.S.A.		Canada									
	55+	65-	55+	65-	55+	65-	55+	65-	55+	65-	55+	65-	55+	65-								
1. Income before tax and transfer	38	39	37	16	17	16	32	34	28	11	11	13	58	58	62	49	47	43	49	47	45	
a. Earnings	2	3	1	1	1	0	1	2	1	1	2	1	2	1	1	1	1	2	1	2	2	1
b. Property Income	9	8	9	2	2	3	11	11	13	10	9	12	25	26	30	26	25	28	31	29	34	
c. Occupational Pension	27	28	27	13	14	13	20	22	5	-	-	-	31	31	31	22	20	14	16	16	10	
2. Transfer Income	62	61	63	84	83	84	68	66	72	89	89	87	42	42	38	50	52	56	49	51	53	
3. Public Transfers	62	61	63	84	83	84	68	66	72	89	89	87	38	39	36	50	52	56	49	51	53	
a. Social Insurance Transfers	62	61	63	83	82	83	62	61	64	83	85	80	37	38	35	48	50	54	47	49	51	
b. Means-tested Transfers	0	0	0	1	1	1	6	5	8	6	4	7	1	1	1	2	2	2	2	2	2	
4. Private Transfers	0	0	0	0	0	0	0	0	0	-	-	-	4	3	2	0	0	0	0	0	0	
5. Other Income	0	0	0	0	0	0	0	0	0	-	-	-	0	0	0	1	1	1	2	2	2	
6. Direct Taxes	11	12	10	1	1	1	7	7	6	21	25	17	2	2	2	6	5	4	6	6	5	
7. Net Income	89	88	90	99	99	99	93	93	94	79	75	83	98	98	98	94	95	96	94	94	95	

income from property among the retired families rises with their age. On the other hand, in the United States, Canada and the United Kingdom, the higher the age group, the smaller the share of the occupational pension, whilst in the other countries its relative share remains more or less constant.

IV. DISTRIBUTIONAL CHARACTERISTICS OF ELDERLY FAMILIES' INCOME

The characteristics of the income distribution of elderly families in each of the countries and an international comparison of it will be analyzed from two viewpoints: one is the income distribution among the various age groups within the elderly population. The simplest method of assessing the economic status of each age group is to compare their average income to the average of the total elderly population. In addition, the economic status of "retired" elderly families will be compared to that of all the elderly families. The second viewpoint relates to income distribution within each age group in terms of the relative income shares of the different quintiles and Gini coefficients. Two alternative income measures of the economic status of the various elderly groups will be presented: one based on net income per family and the other on equivalent net income, i.e., net income adjusted for family size. The equivalence scale we decided to use within the LIS project gives a value of 0.5 for the first person in any unit, a value of 0.25 for each individual from the second to the ninth and a value of 3.0 to all units with 10 or more members.

A. Relative Mean Incomes Among the Various Age Groups

Table 7 shows the relative mean net incomes for the different age of head groups in the various countries⁹. The data are presented separately

⁹ When using income survey data, one should bear in mind that sometimes negative or zero incomes result. Among the countries surveyed it is most prevalent in Germany where 2.7% of all families have zero incomes. The large majority of these German families are elderly. The results presented in this paper do not take this factor into consideration. This will, however, be done at a later stage. Relating to the problem of zero incomes in Germany by omitting these records or by imputing an "assigned income" will increase the share of the bottom quintile, decrease the poverty rates, and it may also change the relative mean incomes of the various elderly groups.

for all the elderly families and for "retired" families only. Looking at the figures for all the elderly families we see that the pattern is similar in all countries. In each country relative mean net income declines as age increases.

In Norway the steepest decline in the relative mean is from the 65-74 to the 75+ age group, whilst in Germany it is from the 55-59 to the 60-64 age group. This finding is consistent with the fact that West Germany has a relatively high proportion of families that have retired completely from employment in the 60-64 age group, whereas in Norway the retirement age is higher (67 or 70). In the other countries, the relative mean falls most sharply from the 60-64 to the 65-74 age group.

Relative mean net income of the 55-59 age group in the United Kingdom is the highest in the seven countries surveyed (158). This is followed by West Germany and Norway with 156 and 144 respectively. The relative mean net income in the 75+ age group is lowest in Norway and the United Kingdom (63) and highest in Israel (78). If the ratio of high to low relative mean net income within a country is taken as a crude measure of income dispersion or inequality among age groups within that country, then the United Kingdom and Norway have the widest dispersion and Israel and Sweden have the narrowest. Relative mean net income for the 75+ age group in the United Kingdom is 40% of that for the 55-59 age group, compared with 55% in Israel. The corresponding data for Norway and Sweden are 43% and 53% respectively and for West Germany, the United States and Canada - 48%.

Table 7 also contains data that refer to "retired" families only. A comparison was made between the mean income of each "retired" age group and that of all the elderly families ("retired" and "non-retired"), from which it is possible to draw conclusions both with regard to the relationship among the relative mean incomes of the "retired" age groups and with regard to the relative economic status of the "retired" families compared with that of all the elderly families.

We shall first consider the comparison of relative mean incomes among the various age groups within the "retired" population. In general, the data show that in each of the countries the income dispersion among the four age groups is significantly smaller than that which was found in the general elderly population. This finding is particularly outstanding in West Germany, the United Kingdom, Sweden and Canada. In these countries small differences were observed in the relative means of the first three age groups and the decline in the relative mean of the highest age group - 75+ - is relatively moderate. The ratio of the lowest to the highest relative mean in West Germany and the United Kingdom is the highest - about 0.9. In Sweden and Canada, too, this ratio is high: about 0.85.

In the United States, on the other hand, a systematic decline in the relative means appears also in the "retired" population and a relatively substantial inequality was found in the distribution of income among the age groups. The relative mean of the 75+ age group is only two-thirds of that of the 55-59 age group. In Israel the pattern of relationships among the relative means of the age groups in the "retired" population is the opposite of that which characterizes the other countries. The relative mean income

TABLE 7: RELATIVE MEAN NET INCOME BY AGE OF HEAD (55+)

<u>Country</u>							
<u>Age of Head</u>	<u>Norway</u>	<u>Germany</u>	<u>U.K.</u>	<u>Sweden</u>	<u>Israel</u>	<u>U.S.A.</u>	<u>Canada</u>
<u>Elderly and Retired Families:</u>							
Total 55+	100	100	100	100	100	100	100
55-59	144	156	158	136	141	140	137
60-64	123	105	124	119	112	113	117
65-74	91	89	79	96	82	87	85
75+	62	75	63	72	78	67	65
<u>Only Retired Families:*</u>							
Total 55+	77	79	58	81	64	68	63
55-59	--	81	60	85	49	91	67
60-64	--	79	58	87	54	86	67
65-74	83	82	61	89	63	72	66
75+	72	75	53	71	71	60	58

* The mean net incomes of the "retired" families relative to the mean net income of all the elderly families (55+).

rises with age and the relative situation of the older age groups is better than that of the younger age groups. The relative mean of the 75+ age group is 140% of that of the 55-59 age group. In Israel the relative mean of the 55-59 age group is the lowest of all the countries.

The difference between Israel and the other countries stems from the fact that in Israel income from property is distributed most unequally among the various age groups in the "retired" population. The relative mean property income of the 75+ age group is ten times as high as that of the youngest age group and double that of the 60-64 age group.

A comparison of the relative means of the "retired" families with those of all the elderly families reveals, as expected, that the economic situation of the "retired" families in all age groups is worse. This finding is especially outstanding in the United Kingdom where the net income of the "retired" families (aged 55+) is only 58% of that of elderly families in general. On the other hand, in Sweden, West Germany and Norway, the relative situation of the "retired" families is better than that in the other countries and their relative means in these countries are 81, 79 and 77 respectively.

The gap between the economic situation of the "retired" families and that of the general elderly population is very significant in the two younger age groups, whereas in the older age groups the gap is very narrow. This finding was to be expected in view of the fact that the decisive majority of the families in the two older age groups are "retired". In Israel and the United Kingdom, the relative means of the "retired" families in the 55-59 age group are 35% and 38% respectively of the relative means of the families in

this age group in the general elderly population. In Sweden and the United States, on the other hand, the relative situation of the "retired" families in the 55-59 age group is better than that in the other countries. Their income constitutes approximately 65% of the income of the elderly families in the 55-59 age group.

Table 8 presents the equivalent relative mean net incomes from which we may draw conclusions regarding the impact of the adjustment of income for family size. Compared with the relative means per family (in Table 7), the adjusted relative means are lower for the 55-59 and 60-64 age groups and higher for the two older age groups, since the families in the younger age groups are relatively larger than in the older age groups. However, the pattern of decline in the relative mean with the rise in age is preserved.

As a result, the income dispersion among age groups is smaller than that obtained for net income unadjusted for family size. The ratio of the highest relative mean (in the 55-59 age group) to the lowest relative mean (in the 75+ age group) remains highest in the United Kingdom (1.9) and lowest in Israel (1.4). In the remaining countries the ratio is 1.5-1.6.

If data for the "retired" population only are studied it appears that the relative means based on adjusted income are higher than those based on income not adjusted for family size, in all age groups. The reason is that "retired" families are of smaller size than the elderly families in general. The relative economic situation of the "retired" population (compared with the general elderly population) according to equivalent net income is better than that according to net income per family. The relative mean equivalent income of all "retired" families (aged 55+) is highest in West Germany, Norway and Sweden (about 90) and lowest in the United Kingdom (70).

TABLE 8: RELATIVE MEAN EQUIVALENT NET INCOME* BY AGE OF HEAD (55+)

Country Age of Head	Norway	West Germany	U.K.	Sweden	Israel	U.S.A.	Canada
<u>Elderly and Retired Families:</u>							
Total 55+	100	100	100	100	100	100	100
55-59	121	134	140	126	124	124	120
60-64	116	101	121	114	109	110	111
65-74	98	93	84	97	89	93	93
75+	76	86	73	80	87	78	78
<u>Only Retired Families:**</u>							
Total 55+	91	90	70	87	77	80	77
55-59	--	83	70	100	64	96	74
60-64	--	92	74	95	69	91	78
65-74	96	91	72	93	75	83	80
75+	86	89	67	80	84	74	74

* The equivalent net income is weighted by families.

** The mean equivalent net income of the "retired" families relative to the mean equivalent net income of all the elderly families (55+).

B. Income Distribution Within Age Groups

Another important aspect of the distribution of income among the elderly families is the relative distribution within each age-of-head group. Table 9 presents the relative shares of the top and bottom quintiles in total net income in each of the four age groups and the Gini coefficients, the income distribution being constructed on the basis of per family net income.¹⁰ The data show that the patterns of change in the relative shares of the quintiles and the Gini coefficients among the various age groups are not uniform in all the countries. In all countries, except West Germany, the Gini coefficient of the 60-64 age group is higher than that of the 55-59 age group. In Sweden, the United Kingdom, Germany and Canada, the Gini coefficient declines gradually from the 60-64 to the 75+ age group. In the United States it declines in the 65-74 age group and then rises again whilst in Norway it rises in the 65-74 age group and then remains unchanged. In Israel, the Gini coefficient rises systematically with age, the sharpest increase occurring in the transition from the 65-74 to the 75+ age group. In the other countries (except Sweden) the main change in the Gini coefficient takes place between the first two age groups.

The distribution of income in each of the age groups is more equal in Sweden than in the other countries. Norway occupies the second place and the United Kingdom is generally ranked third. This finding is expressed in the Gini coefficient and the relative shares of the quintiles; in Sweden the Gini coefficient is the lowest in all age groups. Moreover, the relative share of

¹⁰ The families are ranked by family net income and each quintile includes 20% of the families.

the bottom quintile is the highest, whilst the share of the top quintile is the lowest among all the countries surveyed.

In Germany, the distribution of income in the 55-59 age group is the least equal of all the countries as is the case in the United States in the 60-64 and 65-74 age groups. Inequality of income distribution in the oldest group is highest in Israel.

The differences between Sweden and the other countries, especially the United States and Israel increase as one goes from the 55-59 age group to the oldest age group. In Sweden, the income of the top quintile in the 55-59 age group is 3.3 times as high as the income in the bottom quintile and the ratio falls to 2.3 in the 75+ age group. Moreover, the Gini coefficient in the 75+ age group is 30% lower than in the 55-59 age group. On the other hand, in Israel, for example, the ratio of income in the top quintile to income in the bottom quintile rises from 5.4 in the 55-59 age group to 9.6 in the 75+ age group and the Gini coefficient increases by about 45%. The Gini coefficients in the 75+ age group in Israel and the United States are 2.5 and 2.3 times as high, respectively, than in Sweden.

The characteristics of income distribution based on equivalent net income are presented in Table 10¹¹. A comparison of the income distribution data based on equivalent net income with the data based on net income per family shows that Gini coefficients calculated on the basis of

¹¹ The families are ranked by equivalent net income and each quintile includes 20% of the persons.

TABLE 9: BOTTOM AND TOP QUINTILE INCOME SHARES AND GINI COEFFICIENT

WITHIN EACH AGE GROUP OF FAMILY'S HEAD

(Based on Net Income per Family)

Age of Head	Country	West						
	Norway	Germany	U.K.	Sweden	Israel	U.S.A.	Canada	
55-59	Bottom Quintile	8.0	5.3	7.2	9.8	7.2	4.5	5.4
	Top Quintile	34.3	46.8	38.5	32.1	38.9	39.5	38.8
	Gini Coeff.	0.2672	0.4210	0.3166	0.2331	0.3227	0.3527	0.3369
60-64	Bottom Quintile	7.2	5.2	6.1	10.1	6.3	3.0	4.5
	Top Quintile	35.7	41.7	42.4	33.7	41.3	43.6	41.7
	Gini Coeff.	0.2894	0.3573	0.3648	0.2475	0.3618	0.4118	0.3769
65-74	Bottom Quintile	8.4	6.2	8.5	11.9	6.6	5.3	6.9
	Top Quintile	38.9	42.0	43.2	32.3	45.4	44.6	43.9
	Gini Coeff.	0.3069	0.3525	0.3418	0.2126	0.3881	0.3943	0.3686
75+	Bottom Quintile	9.9	4.8	10.0	13.2	5.5	6.0	8.3
	Top Quintile	37.7	41.0	43.2	30.5	52.6	47.0	44.2
	Gini Coeff.	0.3069	0.3635	0.3183	0.1803	0.4671	0.4067	0.3564

equivalent net income are lower; moreover, the share of the lowest quintile is higher whereas the share of the highest quintile is lower. This finding is true for all age groups in all the countries¹². However, the patterns of change of the relative distribution as age rises resemble, more or less, those obtained from the per family income distribution.

A comparison of the extent of inequality across the various age groups within the different countries, according to equivalent income shows that in Sweden and Norway, income distribution in all age groups is more equal than in the other countries. On the other hand, in the 55-59 age group, the inequality is highest in West Germany, whilst in the other age groups Israel is ranked first.

Adjustment of income for family size affects income distribution in Sweden more than in Israel. Therefore the differences between them with regard to the distribution of the adjusted income are even greater, particularly in the older age groups. For instance, the relative share of the bottom quintile of the 75+ age group in Sweden is double that in Israel (15% in contrast to 7.5%), whereas the share of the top quintile is almost half as small (27% in contrast to 50%). The Gini coefficient for this age group in Israel is 3.4 times as high as that in Sweden.

Finally, it is important to note that in those countries in which market income constitutes an important component in total income of the elderly, a relatively high inequality was found compared with the other countries.

¹² These results stem from the fact that the percentage of the small families (singles and couples without children), in the lowest quintile of income distribution per family is higher than their percentage in the highest quintile.

Earnings from employment and especially income from occupational pensions and property are generally distributed less equally than social insurance transfer payments. In Israel and the United States, the share of market income and especially of occupational pensions and income from property in total income rise with age and it is possible that this fact causes the income of the elderly in the older age groups to be less equally distributed. On the other hand, in Sweden, transfer income constitutes the main component of old persons' incomes and its distribution is more equal, especially in the older age groups.

TABLE 10: BOTTOM AND TOP QUINTILE INCOME SHARES AND GINI COEFFICIENTS
WITHIN EACH AGE GROUP OF FAMILY'S HEAD
 (Based on Equivalent Net Income)

Age of Head	Country							
	Quintile	Norway	West Germany	U.K.	Sweden	Israel	U.S.A.	Canada
55-59	Bottom Quintile	9.9	7.4	9.7	10.7	7.5	5.9	7.8
	Top Quintile	32.9	42.8	32.8	29.7	40.0	37.1	35.5
	Gini Coeff.	0.2313	0.3593	0.2324	0.1942	0.3264	0.3143	0.2820
60-64	Bottom Quintile	10.4	6.9	8.4	11.0	6.9	4.6	6.7
	Top Quintile	32.6	36.1	35.5	30.0	43.0	39.6	37.7
	Gini Coeff.	0.2259	0.2963	0.2803	0.1931	0.3573	0.3534	0.3136
65-74	Bottom Quintile	10.5	7.1	10.9	14.1	7.7	6.6	8.7
	Top Quintile	35.3	36.7	37.6	28.5	43.7	40.8	39.7
	Gini Coeff.	0.2495	0.2981	0.2656	0.1426	0.3599	0.3416	0.3092
75+	Bottom Quintile	11.4	5.6	12.0	15.1	7.4	7.0	10.0
	Top Quintile	34.6	39.7	36.8	27.3	50.4	42.9	39.6
	Gini Coeff.	0.2293	0.3395	0.2403	0.1258	0.4288	0.3554	0.2807

V. Poverty in the Elderly Population

In this section we compare the extent of poverty and the characteristics of the poor population in the various countries. We shall present two alternative definitions of poverty: according to the first, a family belonging to the bottom quintile of the equivalent net income of all families (elderly and non-elderly) is considered to be poor;¹³ according to the second, a poor family is one whose equivalent net income is lower than 50% of the median equivalent net income.

a. Poverty Rates

Table 11 presents the poverty rates of the general elderly population and the various age groups according to both definitions of poverty. According to the first definition, the incidence of poverty among all elderly families in the United Kingdom is significantly higher than in the other countries; 40% of the elderly families are in the bottom quintile. In other countries, small differences were observed in the incidence of poverty; the percentages of poor elderly families in Sweden and Israel are the lowest: 21% and 22% respectively, whilst in the United States, West Germany, Canada and Norway they range from 24% to 27%.

In all the countries there is an upward trend in the percentage of families belonging to the bottom quintiles with a rise in age, even though

¹³ The families are ranked according to their equivalent net income and the quintiles are tabulated according to an equal number of persons. By this poverty measure, the bottom 20% of persons (but not families) are termed poor in each country.

TABLE 11: POVERTY RATES BY AGE OF HEAD (55+)
ACCORDING TO THE TWO DEFINITIONS OF POVERTY

	<u>Norway</u>	<u>West Germany</u>	<u>U.K.</u>	<u>Sweden</u>	<u>Israel</u>	<u>U.S.A.</u>	<u>Canada</u>
<u>Families in Bottom Quintile of Equivalent Net Income:</u>							
55-59	12.2	12.0	10.6	9.7	9.6	14.8	15.9
60-64	13.2	22.7	22.1	9.9	17.8	22.0	23.3
65-74	25.7	24.9	49.3	15.1	25.9	24.6	29.2
75+	49.5	35.8	67.0	43.0	34.4	34.7	40.6
Total 55+	27.0	25.0	40.3	21.3	21.9	24.1	27.1
<u>Families with Equivalent Net Income Less Than 50% of the Median Equivalent Net Income:</u>							
55-59	3.4	6.1	6.1	3.4	4.1	13.1	11.3
60-64	3.7	9.8	9.9	3.5	14.9	19.2	15.6
65-74	2.8	12.6	19.6	0.2	20.1	19.7	11.5
75+	8.1	15.8	25.1	--	31.3	28.0	14.3
Total 55+	4.5	11.8	16.3	1.3	17.6	19.9	12.9

the rates of increase are not uniform for all the countries. In the two oldest age groups, poverty rates are highest in the United Kingdom whilst the poverty rate in the 55-59 age group is among the lowest. About 50% of the elderly families in the United Kingdom in the 65-74 age group and 67% of the families in the 75+ age group are in the bottom quintile. Moreover, the poverty rate in the oldest age group is six times higher than in the 55-59 age group. In contrast to the United Kingdom, in Canada, the United States, West Germany and Israel the rates of increase in the percentage of families in the bottom quintile from the 55-59 to the 75+ age group is less marked. In Sweden and Norway, the poverty rates of the first two age groups are almost equal whereas the rate of poverty in the 75+ age group is about four times as high as that in the two younger age groups (43% in contrast to 10% in Sweden, and 50% in contrast to 13% in Norway).

These findings are more or less consistent with the patterns of change in the relative mean of the equivalent net incomes based on age. For example, in the United Kingdom the relative mean net income in the 75+ age group is the lowest compared with that in the other countries, whilst in the 55-59 age group it is the highest. Moreover, the gap between the relative means of these two age groups in the United Kingdom is the widest. On the other hand, in Canada, the United States and Israel, the gap is the narrowest.

In all the countries, the number of poor families according to the second definition is lower than that according to the first definition. This phenomenon stems from the skewness of the income distribution curve. In Sweden and Norway, the percentage of elderly families with incomes less than

half the median income is markedly lower than the corresponding percentage in the other countries. Only about 1% of all elderly families in Sweden and 4.5% of them in Norway have an income lower than half the median income. Moreover, in these two countries, the difference in the number of poor families according to the two definitions is the greatest among the countries surveyed. Almost all the elderly families in the lowest quintile in Sweden and Norway have an income which exceeds half the median income. On the other hand, the United States and Israel have the highest percentages of families with incomes below half the median income: 19.9% and 17.6% respectively, and most of the elderly families in the lowest quintile have an income below half the median income. (In statistical terms it may be said that the income distribution in the United States and Israel is more skewed than in the other countries.) In the United Kingdom, which was ranked first among the countries by the percentage of elderly families in the bottom quintile, the percentage of elderly families with incomes below half the median income is less than that in the United States and Israel, i.e., 16.3%. In the United Kingdom, too, the income of over half the elderly families in the bottom quintile is higher than half the median income. In Canada and West Germany¹⁴, the number of poor families according to the second definition is approximately half that according to the first definition.

¹⁴ As was mentioned in footnote 9 above, if we include assigned equivalent income to the zero records in Germany, the poverty rates in the various groups decrease about 30%.

TABLE 12: POVERTY RATES BY FAMILY TYPE (55+)
ACCORDING TO THE TWO DEFINITIONS OF POVERTY

<u>Country</u>	<u>West</u>						
<u>Family Type</u>	<u>Norway</u>	<u>Germany</u>	<u>U.K.</u>	<u>Sweden</u>	<u>Israel</u>	<u>U.S.A.</u>	<u>Canada</u>
<u>Families in Bottom Quintile of Equivalent Net Income:</u>							
Single Male	38.2	23.0	46.1	29.0	19.0	32.7	39.0
Single Female	43.7	31.5	67.1	27.7	36.5	40.4	48.0
Single Couple	12.8	22.0	34.0	11.8	15.9	14.2	15.7
Other	14.9	16.6	12.5	26.5	20.5	17.5	17.5
<u>Families with Equivalent Net Income Less Than 50%</u>							
<u>of the Median Equivalent Net Income:</u>							
Single Male	8.8	11.6	21.4	2.0	19.0	27.0	17.3
Single Female	6.1	13.3	29.2	0.4	32.4	33.9	21.8
Single Couple	1.6	11.3	12.3	1.4	11.0	11.3	6.7
Other	3.7	9.7	3.6	8.2	16.1	14.7	10.7

An examination of the percentage of families whose income is lower than half the median income in the various age groups reveals that in the 55-59 and 60-64 age groups there are more poor families in the United States and Canada than in the other countries, whilst in the two older age groups, the percentage of poor is highest in Israel, followed by the United States, and the United Kingdom. 31% of the elderly families aged 75+ in Israel and 28% in the United States are poor. Compared with the other countries, the relative mean income of the 75+ age group in Israel is the highest but, on the other hand, the inequality of the income distribution in this age group is the highest and, therefore, so is the poverty rate. In Sweden all the families in the two oldest age groups have an income in excess of half the median income.

Table 12 presents poverty rates by type of family and according to the two definitions of poverty. In general, in all the countries poverty is more frequent among single females than among single males or single couples. Poverty rates among single females is over three times as high in Canada, Norway and the United States and 2-2.5 times as high in Israel, Sweden and the United Kingdom than among single couples. In West Germany the differences in the poverty rates of these family types are smaller. The ranking of the countries by the extent of poverty in each of the family types is similar to the ranking by poverty among the elderly families in general.

b. Characteristics of the Poor Population

1. Composition of the poor population

Tables 13 and 14 present the composition of the poor population by age and family type, according to the two definitions of poverty. As expected

TABLE 13: COMPOSITION OF POOR POPULATION (55+)
BY DEMOGRAPHIC CHARACTERISTICS (in percentages)
Families in Bottom Quintile of Equivalent Net Income

	<u>Norway</u>	<u>West Germany</u>	<u>U.K.</u>	<u>Sweden</u>	<u>Israel</u>	<u>U.S.A.</u>	<u>Canada</u>
<u>Age Group of Family Head</u>							
55-59	8.6	9.2	5.7	7.2	7.8	14.2	14.4
60-64	9.1	12.3	9.0	9.4	15.6	18.4	18.1
65-74	33.0	40.1	48.8	24.9	46.7	35.9	36.1
75+	49.2	38.4	36.5	58.5	29.9	31.5	31.4
<u>Family Type</u>							
Single Male	19.8	6.1	12.1	23.8	5.2	12.7	15.1
Single Female	54.3	51.3	48.6	49.2	36.4	46.8	46.5
Couple	16.8	31.3	32.4	23.5	29.9	22.2	19.8
Other	9.1	11.2	6.8	3.5	28.6	18.2	18.7

TABLE 14: COMPOSITION OF POOR POPULATION (55+)
BY DEMOGRAPHIC CHARACTERISTICS (in percentages)
Families with Equivalent Net Income Less than 50%
of the Median Equivalent Net Income

	<u>Norway</u>	<u>West Germany</u>	<u>U.K.</u>	<u>Sweden</u>	<u>Israel</u>	<u>U.S.A.</u>	<u>Canada</u>
<u>Age Group of Family Head</u>							
55-59	15.6	9.9	8.3	43.5	6.3	15.2	21.4
60-64	15.6	11.2	9.9	52.2	17.2	19.3	25.6
65-74	18.8	42.9	48.0	4.3	45.3	34.7	29.7
75+	50.0	35.9	33.8	--	31.2	30.8	23.3
<u>Family Type</u>							
Single Male	31.3	6.5	14.0	27.3	6.3	12.7	14.2
Single Female	43.7	45.6	52.2	13.6	39.1	47.4	44.4
Couple	12.5	33.9	29.0	40.9	23.4	21.5	18.1
Other	12.5	13.8	4.8	18.2	31.2	18.4	23.3

the majority of the elderly poor consists of families in the two oldest age groups, whilst the proportion of the 55-59 and 60-64 age groups in the poor population is relatively small. This finding does not stem only from the fact that the families in the 65-74 and 75+ age groups constitute between 55% to 67% of all the families aged 55+, but also from the fact that the poverty rates in these groups are much higher than those characterizing the younger age groups. The representation of the 65-74 and mainly the 75+ age groups among poor elderly families in general is even much higher than their representation among elderly families in general.

Nevertheless, there are differences among the countries regarding the composition of the poor population which result from differences in the distribution of families by age and differences in poverty rates. In all countries, except for the United States and Canada, 80%-85% of the elderly families in the bottom quintile are families that belong to the 65+ age group. In the United States and Canada, whose populations are less older, the corresponding proportion is 67%. In Sweden and Norway, the proportion of poor families in the 75+ age group among poor families in general is particularly high - approximately 60% and 50% respectively, in contrast to Canada, the United States and Israel, where it is approximately 30%. In the United Kingdom and West Germany, approximately 38% of the poor elderly families are aged 75+.

According to the second definition, too, the families in the 65+ age group constitute the decisive majority of the poor elderly families, even though in most of the countries the proportion of families in the 55-59 and 60-64 age groups has risen slightly. In Sweden, almost all the elderly

families whose income is less than half the median income are families in the first two age groups.

If we examine the composition of poor families by family type we see, again as expected, that the single females are the largest group. In all the countries, except Israel, about half of the poor population consists of single females. In Israel - only 36%, since their share in the general elderly family population is low compared with the other countries. Similar findings are obtained from the second definition of poverty as well.

2. Economic characteristics of poor families

The data in Table 15 show the percentage of poor families who have earnings from employment, income from retirement, means-tested benefits and who are homeowners, compared with the corresponding percentages for elderly families in general.

In all the countries the poor elderly families are characterized by a lower percentage of families with earnings from employment than among the general population of elderly families. This finding is especially prominent in West Germany and the United Kingdom. In the United Kingdom, 9% of elderly families in the bottom quintile have earnings from employment, in contrast to 45% of elderly families in general. The corresponding values for West Germany are 8% and 29% respectively. On the other hand, in the other countries, one fifth to a quarter of poor families (in the bottom quintile) have earnings from employment, whilst the proportion among all families ranges between 46% and 58%. A similar picture is received when studying the data of the poor families in the oldest age groups: 65-74 and 75+.

TABLE 15: ECONOMIC CHARACTERISTICS OF THE POOR ELDERLY FAMILIES
IN COMPARISON TO ALL THE ELDERLY FAMILIES (in percentages)

	Norway*		West Germany		U.K.		Sweden		Israel		U.S.A.		Canada								
	65- 55+	74 75+	65- 55+	74 75+	65- 55+	74 75+	65- 55+	74 75+	65- 55+	74 75+	65- 55+	74 75+	65- 55+	74 75+							
<u>Families with Earnings</u>																					
Total 55+	55	53	14	29	17	5	45	28	11	46	34	10	55	42	20	53	39	17	53	36	15
Poor 1**	20	25	5	8	4	1	9	8	2	27	31	9	26	25	4	23	17	7	21	15	4
Poor 2***	34	50	6	9	4	-	7	4	2	91	-	-	17	17	5	22	16	7	24	20	5
<u>Families with Retirement Income</u>																					
Total 55+	18	47	32	76	91	92	74	98	99	84	100	100	70	94	100	60	91	95	65	98	99
Poor 1	12	12	16	69	71	82	93	99	99	90	100	100	83	92	96	62	85	88	75	97	99
Poor 2	13	17	19	50	53	63	91	98	100	27	-	-	84	93	100	59	82	86	62	95	100
<u>Families with Means Tested Benefits</u>																					
Poor 1	6	6	6	19	22	14	37	32	45	46	44	53	27	19	26	30	33	28	41	37	39
Poor 2	3	-	6	17	19	14	23	21	26	23	-	-	28	24	25	32	35	30	41	33	23
<u>Homeowners</u>																					
Total 55+	42	44	22	44	44	37	46	47	41	27	27	16	78	81	70	77	77	70	65	64	51
Poor 1	21	26	11	49	51	46	37	39	35	20	26	15	58	69	57	65	65	63	50	53	41
Poor 2	16	33	-	50	53	40	47	48	48	27	-	-	59	69	60	64	64	64	49	56	36

* See footnote 3.

** Poor 1 - Bottom quintile of equivalent net income

*** Poor 2 - 50% of the median equivalent net income.

In all the countries except for West Germany, the percentage of poor families with retirement income is higher than, or almost identical to, that of elderly families in general. In the 65-74 and 75+ age groups there is no real difference between the general population and the poor population and almost all families have retirement income. On the other hand, the percentage of poor in the 55-59 and 60-64 age groups with retirement income is higher than among all elderly families in these age groups.

In West Germany the poor population contains relatively less families with retirement income than the general elderly population. Only 70% of the families in the bottom quintile and 50% of families with income below half the median income have retirement income, compared with 76% among elderly families in general. It thus appears that a relatively high percentage of poor families in West Germany has neither retirement income nor earnings.

In all countries, except Norway, a relatively high percentage of the poor also receive means-tested benefits. Approximately 23% of the families with an income of less than half the median income in the United Kingdom and Sweden receive means-tested benefits, as do approximately 30% in the United States and Israel. In Canada the percentage is higher - 40%. However, it is worth noting that there are limitations to the international comparison of this income item. In Canada it also includes components that are not really means-tested. In Norway social assistance is not included in means-tested income; and in Israel a part of these benefits are paid together with the old-age benefit.

Finally, Table 15 presents an additional dimension of the economic situation of elderly families - home ownership. In Israel, the United States and Canada, relatively more elderly families are homeowners than in the other countries: 78% in Israel and the United States and 65% in Canada. In contrast, only 27% of elderly families in Sweden own their homes. In Germany, the United Kingdom and Norway, the proportion ranges between 42% and 46%. However, the percentage of homeowners among the poor families in Israel, Canada and the United States is significantly lower than among the general population of elderly families.

VI. SUMMARY AND CONCLUSIONS

In this paper we have studied a number of aspects of the economic well-being of the elderly population across several countries, such as the income composition of gross income, income dispersion among subgroups within the elderly population, inequality of income distribution within each age group and finally the extent of poverty.

We used a number of alternative definitions of a retired family based not only on the age of the family's head (55+) but also on the family's income sources and composition. According to all the definitions, the percentage of retired families among elderly families in general is higher in Sweden, West Germany and the United Kingdom than in Israel, Canada and the United States whose populations are relatively young. Like Canada and the United States, Israel has a relatively low percentage of families without earnings from employment but, in contrast to them, Israel is characterized by a larger percentage of families with some retirement income. Like Sweden, West Germany has a high percentage of families with retirement income but, in contrast to Sweden, West Germany is characterized by a higher percentage of families without earnings from employment.

It was found that in all the countries almost all the families in the 65-74 and 75+ age groups are retired according to all the definitions and the differences among the countries are expressed mainly in the percentage of families without earnings. Israel is particularly outstanding with 42% of its families in the 65-74 age group and 20% of its families in the 75+ age group having earnings.

The differences among the countries with regard to the percentage of families without earnings from employment, with retirement income, etc. are reflected in the composition of the elderly families' income. In Sweden and West Germany, earnings constitute a relatively small component in the total income of all elderly families aged 55+. There is a particularly marked difference between Sweden and Israel. In Israel, earnings contribute 64% to total income, in contrast to 39% in Sweden. The relative share of other market income, occupational pensions and income from property, is higher in the United States, Canada and Israel than in other countries. In Sweden and West Germany, on the other hand, the contribution of transfer income (especially from social insurance) to the standard of living of elderly families is particularly high.

In all the countries the relative share of earnings in total income was found to fall gradually with age, whereas the relative share of transfer income rises with age. As the relative share of earnings from employment decreases, the relative share of income from property and occupational pension schemes grows in importance. This finding was particularly prominent in Israel, the United States and Canada.

A study of the "retired" population only, reveals that the share of earnings from employment is negligible (0-2%) in all the countries but in Israel, the United States and Canada market income still constitutes at least 50% of the retired families' total income, because the relative share of occupational pensions and income from property in particular is relatively high in these countries.

The first index by means of which we compared the economic well-being of the elderly families across the various countries, was the relative mean net incomes. The data referring to all the elderly families aged 55+ showed that in each of the countries, the relative means before adjustment for family size, fell with a rise in age. In all the countries except West Germany and Norway, the steepest fall in the relative mean occurred between the 60-64 and the 65-74 age groups. In West Germany, the sharpest decline took place between the 55-59 and 60-64 age groups and in Norway - between the 65-74 and 75+ age groups.

The income dispersion among age groups (the ratio of high to low relative means in each country) is widest in the United Kingdom and Norway and narrowest in Israel and Sweden. The relative means in the United Kingdom and Norway in the 75+ age group is the lowest, whereas in Israel it is the highest.

A study of the relative means of "retired" families only leads to two conclusions: first, in all the countries, income dispersion across age groups is smaller than among elderly families. This finding is particularly outstanding in West Germany, Sweden, the United Kingdom and Canada where small differences were observed in the relative means of the first three age groups. Moreover, the fall in the relative mean of the 75+ age group was relatively slight. Secondly, in all the countries the economic situation of the "retired" families is worse than that of the elderly families in general, the gap being particularly marked in the first two age groups. In Sweden, West Germany and Norway, the relative situation of the "retired" families is better than in the other countries.

Adjustment of income for family size did not change the ranking of the countries by relative means and income dispersion among the age groups. However, in all the countries, this adjustment decreases the income gaps among the age groups compared with that obtained before adjustment for family size. Moreover, according to equivalent net income, the relative situation of the retired families is better than according to per family income.

Another aspect of the elderly families' income distribution which was studied, was the distribution within each age group. A comparison of the countries showed that in Sweden, the inequality in each of the age groups was low compared with the other countries. On the other hand, in Israel which like Sweden is characterized by a small income dispersion among the age groups, the inequality of income distribution is high within each of the age groups, especially in the 75+ age group. In the United States too, the inequality of income distribution within the oldest age group is very high compared with the other countries. The differences between Sweden and the other countries, especially Israel and the United States, become larger as age rises. The Gini coefficient of the 75+ age group is 2.5 and 2.3 times as high in Israel and the United States than in Sweden.

In order to examine the extent of poverty in the various countries we used two alternative definitions of poverty. When the countries are ranked in order of the percentage of elderly families in the bottom quintile, the United Kingdom is first with 40% of elderly families aged 55+ in the lowest quintile whilst Sweden and Israel have the lowest poverty rates - 21%. In the other countries the proportions range from 24% to 27%. In the two oldest

age groups, the United Kingdom is also characterized by a high percentage of elderly families in the bottom quintile. Moreover, the incidence of poverty in the 75+ age group is six times higher than in the 55-59 age group. In the other countries, the differences in the incidence of poverty between these two age groups are less pronounced. These findings are consistent with those relating to relative means.

The data on the poverty rate according to the second definition present a different picture. The percentage of elderly families whose income is below half the median income is highest in Israel and the United States - 19.9% and 17.5% respectively. This finding is particularly outstanding in the 65-74 and 75+ age groups. In these countries, most elderly families in the bottom quintile have an income below half the median income. On the other hand, only about 1% of all the families in Sweden and 4.5% of the families in Norway have an income below half the median income. It thus appears that almost all the elderly families in these countries which are in the bottom quintile have an income in excess of half the median income. In Canada, West Germany and the United Kingdom, approximately half of the elderly families in the bottom quintile have an income above half the median income.

In conclusion, in the countries in which market income constitutes a relatively large component in the total income of elderly families (as in Israel and the United States) there is also relatively high inequality in the distribution of income within each of the age groups. Earnings and income from occupational pensions and property in particular are generally distributed less equally than transfer income. In Sweden, where transfer

income constitutes the largest component in elderly persons' incomes, inequality is low. Furthermore, most elderly families, especially in the older age groups - 65-74 and 75+ receive social insurance pensions, but in many countries, and especially in Israel the United States, Canada and the United Kingdom, this income leaves many families with an income level below half the median income. In Sweden, on the other hand, the system is more generous. The average level of transfer income per family is relatively high and all the families in the oldest age group have an income in excess of half the median income.

APPENDIX

TABLE 1: THE PROPORTION OF RETIRED FAMILIES WITHIN THE AGE GROUP 65-74
 ACCORDING TO THE VARIOUS DEFINITIONS AND BY FAMILY TYPE

Percentage of families:	Norway*		West Germany		U.K.		Sweden		Israel		U.S.A.		Canada								
	T	S	T	S	T	S	T	S	T	S	T	S	T	S							
	65-74	F	65-74	F	65-74	F	65-74	F	65-74	F	65-74	F	65-74	F							
1. "retired" as defined for LIS project	22	27	22	22	79	87	80	77	92	80	83	94	73	66	80	68	73	92	75		
2. with zero earnings	47	72	32	83	93	85	71	66	85	49	58	92	52	61	79	58	64	88	86		
3. with some retirement income	47	32	29	91	92	91	91	98	98	98	100	100	100	91	92	93	98	99	98		
4. with both no earnings and some retirement income	26	23	13	75	85	77	71	87	71	66	85	49	58	92	52	74	57	64	87	63	
5. with retirement income greater than earnings	34	26	20	82	89	84	84	95	89	94	97	91	68	94	65	74	85	77	78	94	80

*See footnote 3 in text.

**T = Total 65-74, SF = Single Female, SC = Single Couple.

TABLE 2: THE PROPORTION OF RETIRED FAMILIES WITHIN THE AGE GROUP 75+
ACCORDING TO THE VARIOUS DEFINITIONS AND BY FAMILY TYPE

Percentage of families:	Norway*		West Germany		U.K.		Sweden		Israel		U.S.A.		Canada						
	T	S	T	S	T	S	T	S	T	S	T	S	T	S					
	75+	F	75+	F	75+	F	75+	F	75+	F	75+	F	75+	F					
1. "retired" as defined for LIS project	31	29	38	89	93	89	90	98	98	98	86	100	87	84	91	87	90	97	95
2. with zero earnings	86	94	72	95	97	94	89	98	94	83	80	100	80	83	96	81	85	96	89
3. with some retirement income	32	30	42	92	93	92	99	98	100	100	100	100	100	95	93	97	99	99	100
4. with both no earnings and some retirement income	27	28	32	87	90	88	88	97	94	83	80	100	80	79	89	79	85	95	88
5. with retirement income greater than earnings	30	29	38	89	93	90	91	98	99	99	88	100	87	87	92	91	91	98	96

*See footnote 3 in text.

**T = Total 75+, SF = Single Female, SC = Single Couple.

TABLE 3: COMPOSITION OF GROSS INCOME BY INCOME TYPES (All elderly units)

Income Type	Country													
	Norway		Germany		U.K.		Sweden		Israel		U.S.A.		Canada	
	55-59	60-64	55-59	60-64	55-59	60-64	55-59	60-64	55-59	60-64	55-59	60-64	55-59	60-64
1. Income before tax and transfer	91	85	86	57	88	79	82	64	95	90	94	91	93	90
a. Earnings	88	81	83	51	83	68	79	59	88	78	83	74	82	72
b. Property Income	3	4	1	0	3	5	3	5	4	7	7	10	9	13
c. Occupational Pension	--	--	2	6	2	6	--	--	3	5	4	7	2	5
2. Transfer Income	9	15	14	43	12	21	18	36	5	10	6	8	6	9
3. Public Transfers	8	13	14	43	12	20	18	36	5	9	5	8	6	9
a. Social Insurance Transfers	8	13	13	42	11	18	17	35	4	8	4	7	4	7
b. Means-tested Transfers	0	0	1	1	1	2	1	1	0	1	1	1	2	2
4. Private Transfers	1	2	0	--	0	1	--	--	1	1	0	0	--	--
5. Other Income	0	--	--	--	--	--	--	--	--	--	0	1	1	1
6. Direct Taxes	29	28	24	15	19	17	36	35	32	26	24	23	15	14
7. Net Income	71	72	76	85	81	83	64	65	68	74	76	77	85	86

TABLE 4: COMPOSITION OF GROSS INCOME BY INCOME TYPES (Only Retired Units)

Income Type	Country*											
	Germany		U.K.		Sweden		Israel		U.S.A.		Canada	
	55-59	60-64	55-59	60-64	55-59	60-64	55-59	60-64	55-59	60-64	55-59	60-64
1. Income before tax and transfer	15	15	31	38	6	9	51	47	74	81	66	70
a. Earnings	1	1	1	1	3	2	2	3	5	4	4	2
b. Property Income	1	1	6	12	3	7	4	14	14	22	30	33
c. Occupational Pension	13	13	24	25	--	--	45	30	65	55	32	35
2. Transfer Income	85	85	69	62	94	91	49	53	16	19	31	27
3. Public Transfers	85	85	69	61	94	91	40	43	16	18	31	27
a. Social Insurance Transfers	84	84	58	54	85	85	37	42	15	17	24	24
b. Means-tested Transfers	2	1	11	7	9	6	2	1	1	1	6	3
4. Private Transfers	0	0	0	1	--	--	10	9	0	0	0	0
5. Other Income	0	0	0	0	--	--	0	0	1	1	3	3
6. Direct Taxes	4	1	3	7	20	24	3	2	13	12	8	8
7. Net Income	96	99	97	93	80	76	97	98	87	88	92	92

*There are no retired units in these age groups in Norway

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