

The cost of social security, 1960-71: some national economic aspects

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Introduction

Since 1949 the ILO has carried out a number of periodic inquiries into the cost of social security in different countries. Their purpose is to gather and present data on the receipts and expenditure of social security schemes within the meaning of the Social Security (Minimum Standards) Convention, 1952 (No. 102); the Convention covers nine branches of social security, namely medical care, sickness, unemployment, old age, employment injury, family responsibility, maternity, invalidity and survivors' benefits. The scope of the inquiries is limited to schemes established by legislation and administered by public, semi-public or autonomous bodies. They do not therefore take account, in certain countries, of the entire system of social security protection, notably the non-statutory schemes and, in particular, private occupational pension schemes, which in many cases provide an important part of the pension coverage. However, the latter have recently been the subject of a special ILO survey.

The results of the eighth inquiry covering the years 1967-71 were published recently in two volumes.² These contain the basic data and comparative tables, together with the necessary notes and comments, but make no attempt to analyse the information presented.

The object of the following article is to use these results to analyse some national economic aspects of social security. As the subject is a vast one, and has already been studied in a number of publications, notably those of the International Social Security Association,³ this article will not attempt to be

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² ILO: *The cost of social security*, Eighth international inquiry, 1967-1971, with a supplement on the cost of non-statutory schemes (Geneva, 1976); and idem: *The cost of social security*, Eighth international inquiry, 1967-1971: basic tables (Geneva, 1976; mimeographed, available on request).

³ See, for instance, ISSA: *Social security and national economy*, Studies and research, No. 1 (Geneva, 1970); and the proceedings of various international conferences of social security actuaries and statisticians organised under the auspices of the ISSA.

exhaustive. Its intention is merely to ascertain the relative importance of social security in the national economy by comparing its costs with levels of economic development in different countries and regions and by comparing the trends in social security development and economic development over the period 1960-71. This period was characterised by rapid economic and social security growth in most parts of the world, and has the advantage for our purposes of excluding the most recent years whose extremely high inflation rates would have affected comparisons in terms of monetary values.

A new feature of the latest ILO inquiry is the presentation of data by regions,¹ which facilitates comparisons not only within regions but also between them. The following analysis concentrates on the latter. Although data were not available for all countries in every region, it is believed that the regional averages are broadly representative.

Two aspects of social security costs are dealt with, namely receipts and expenditure on the one hand and benefit expenditure on the other. The basic data used, which are drawn from the ILO inquiry as regards the cost of social security and from the national accounts statistics compiled by the United Nations as regards national economic indicators, are shown in appendix tables A and B.

Before we examine these, attention should be drawn to the fact that the figures are over-all averages and are thus not necessarily representative of the protection afforded the populations of the countries concerned, especially where the degree of protection is rather low in terms of the number of persons covered and the benefits provided. In this connection the reader is referred to a pilot study on the number of persons protected published as a supplement to the report on the seventh ILO inquiry into the cost of social security.² This showed, for example, that in the case of old-age pensions the proportion of the economically active population covered in most countries of Africa, Asia and Latin America was of the order of 10 to 20 per cent, whereas in Canada and the United States, Europe, Japan and Oceania the corresponding percentages approached 100. In these latter regions the same level of coverage applied in most other branches of social security as well, so that their over-all averages should be fairly representative of the population covered.

Social security receipts and expenditure

Perhaps the clearest measure of the relative importance of social security in the national economy is to be had by expressing social security receipts and expenditure as a proportion of gross domestic product in purchasers' values. Appendix A presents a table showing this relationship at three points of time

¹ The grouping by regions follows that adopted by the ILO *Year book of labour statistics*.

² ILO: *The cost of social security*, Seventh international inquiry, 1964-1966, with a supplement on the scope of social security schemes (Geneva, 1972).

during the 12-year period covered by this article, namely 1960, 1965 and 1971.¹

In order to permit comparisons with a country's level of economic development, the last column indicates the per capita GDP for 1971 in US dollars. Although there are objections to converting national currency data into a common currency at prevailing parities (with certain adjustments made by the UN Statistical Office), this is still the most convenient over-all measure of comparative economic activity. Furthermore, it should be noted that the very large fluctuations experienced on the international monetary market took place only after 1971, so it may be assumed that conversion into a common currency unit for that year gives a sufficiently accurate picture of the differences between the various countries. As per capita GDP figures only exist for market economy countries, this comparison cannot be extended to countries with centrally planned economies.

The relative importance of social security receipts and expenditure

In order to facilitate comparisons between regions, table 1 shows average receipts and expenditure for the year 1971 (or the financial year 1970/71) as a percentage of GDP for each region separately.² These calculations have been made by converting national currency amounts into US dollars using the conversion factors applied by the United Nations. Average receipts and expenditure per head of total population expressed in dollars are also presented. So that the relative importance of each region can be assessed, the number of countries included in each region is indicated, together with their total population. As in some regions certain countries have reached a relatively high standard of social security and have a particularly high GDP, thus weighing rather heavily in the averages, figures are presented both including and excluding these countries. In the case of Europe, only figures for market economy countries could be shown, since conversion factors were not available for expressing the currencies of centrally planned economies in dollars. Moreover, as the importance of social security in the national economy appears to depend on the level of economic development attained, the data for Europe have been combined with those for industrialised countries elsewhere.

¹ It should be noted that in countries with centrally planned economies a different system of national accounts is applied. The national accounts aggregate generally used there is the *net material product* (NMP), which is defined as the total net value of goods and productive services, including turnover taxes, produced by the economy. It does not include economic activities not contributing directly to material production, e.g. public administration, defence, or personal and professional services. The figures in Appendix A based on this aggregate are therefore not directly comparable with those based on GDP. Since the latter include several activities not included in the former, the percentages based on NMP are somewhat higher than they would be if based on GDP.

² It should be noted that, for lack of relevant data, not all the countries listed in Appendix A could be included in these averages (see footnotes to table 1).

Table 1. Social security receipts and expenditure by regions, 1971

Region	No. of countries	Total population (millions)	Per cent of GDP		Per head of total population (US \$)	
			Receipts	Expenditure	Receipts	Expenditure
Africa ¹	11	141	4.0	2.3	8.5	4.8
America ²	13	428	11.5	10.2	341	303
Excluding Canada and USA	11	201	4.7	4.3	26	24
Asia ³	10	739	6.8	4.8	26	18
Excluding Israel and Japan	8	631	3.2	2.0	3.9	2.4
Europe ⁴	19	338	17.2	16.3	421	397
Europe plus Australia and New Zealand	21	353	16.9	15.9	415	391
do. plus Canada and USA	23	580	14.2	13.0	494	453
do. plus Israel and Japan	25	688	13.6	12.3	441	400

¹ Not including Mauritania and Niger.

² Not including Trinidad and Tobago.

³ Not including Burma.

⁴ Market economy countries only.

The figures in table 1 enable us to compare the data for individual countries in Appendix A with the over-all average for the region. As regards regional differences it can be noted, for example, that the over-all figures for eight Asian countries excluding Israel and Japan are lower than those for the 11 African countries, and that this difference is greater in terms of dollars per head than in terms of GDP percentages. Of course, the African population figure is much lower than the Asian one, and in the latter case India—with its population of 542 million—weighs heavily in the average. The figures for America excluding Canada and the United States are only slightly higher than those for Africa and Asia in terms of GDP percentages, but the difference becomes **more** important in terms of dollars per head. This can be explained by the higher level of GDP per head in America (see the last column of Appendix A).

The industrialised countries present an entirely different picture from that of the developing countries in Africa, America and Asia, and this difference is further accentuated if the per capita receipts and expenditure in dollars are considered.

Over the whole period 1960-71 it can be seen from Appendix A that in most countries the relative importance of social security gradually increased, with receipts and expenditure generally rising faster than GDP. In some countries, however, the percentage declined, although this does not necessarily reflect a falling standard of social security for the population covered, especially where the degree of protection is relatively low.

As already noted, the European centrally planned economies could not be included in table 1, but Appendix A shows that their social security receipts and expenditure as a proportion of NMP were mainly within the 10-15 per cent range and fairly stable over the period.

Social security and savings

It can be seen from Appendix A that in some countries there is a substantial difference between receipts and expenditure. This difference results mainly from allocations to the technical reserves and contingency funds and from surpluses produced by certain schemes and services. It should be emphasised that the difference is the net result of the transactions of all these schemes and services, some of which may show surpluses and others deficits. Nevertheless, it may to some extent indicate whether the social security system is confined to transfers and redistribution of income, or whether it provides for a certain amount of capital accumulation. Consequently, this difference, if positive, can be taken as a measure of the degree of capital accumulation under the system.

The figures show that the relative difference between receipts and expenditure is generally much smaller in the industrialised than in the developing countries. This is mainly due to the fact that in the former countries social security schemes are fairly well developed and capital accumulation is as a rule relatively low. In most developing countries, by contrast, the schemes are of more recent origin and, especially if there are provident funds and pension schemes which have not yet matured, there is usually a rather high degree of capital accumulation. The relative importance of this difference does not directly indicate the degree to which the social security system contributes to national savings and capital formation. This, of course, will depend on the extent to which the capital accumulation generated by the social security system has been placed in productive investments, and on the relative importance of the system in the national economy. To demonstrate this latter fact the total difference between receipts and expenditure expressed in national currency units has been assumed to represent the total savings of the system and has been related to the savings component in the national accounts statistics. The 1971 figures concerning the countries for which the relevant data on savings were available in the UN national accounts statistics are given in table 2.¹

While it can be seen from Appendix A that the social security schemes of developing countries have as a rule a relatively high degree of capital accu-

¹ It may be noted that in the UN national accounts statistics the capital transactions accounts for some countries give a breakdown of savings where an item "social security" can be identified under the heading "general government". However, the definition of social security for the purposes of the UN system of national accounts is much more limited than that applied in the ILO inquiries, and the two sets of figures are therefore not directly comparable.

Table 2. Difference between social security receipts and expenditure, and national savings, 1971

Region and country	Difference between receipts and expenditure (1)	National savings (2)	Col. 1/col. 2 (3)
	<i>millions of national currency units</i>		<i>%</i>
Africa			
Egypt	171.6	337.9 ¹	50.8 ²
Libyan Arab Rep.	12.64	345	3.7
Mauritius	7.38	212 ¹	3.5
Morocco ³	49.21	1 600	3.1
Tunisia	6.38	120.0	5.3
Zambia	14.86	278.6	5.3
America			
Brazil ⁴	374.7	14 200	2.6
Canada	1 879.9	8 781	21.4
Colombia	824.01	13 706	6.0
Costa Rica	113.5	799.3	14.2
Dominican Rep.	3.66	76.0	4.8
El Salvador ⁵	1.04	105	1.0
Honduras	0.81	152.6	0.5
Jamaica	15.11	115.9	13.0
United States	13 828	74 000	18.7
Venezuela	184.3	8 760	2.1
Asia			
India	4 406.6	43 800	10.1
Japan	1 684 486	19 695 000	8.6
Malaysia ⁵	205.05	848	24.2
Philippines	365.14	4 777	7.6
Europe (market economies)			
Austria	2 249	80 500	2.8
Belgium	13 080.7	220 700	5.9
Denmark	521.2	13 071	4.0
Finland	664.3	9 736	6.8
France	1 226	155 500	0.8
Germany (Fed. Rep.)	5 565	122 100	4.6
Greece	3 572	61 600	5.8
Iceland	747.9	6 963	10.7
Ireland	1.1	195.8	0.6
Italy	447 786	8 515 000	5.3
Luxembourg	1 009.3	8 967	11.3
Netherlands	4 947.4	22 660	21.8
Norway	767.1	14 010	5.5
Portugal	3 482.6	32 300	10.8
Sweden	8 405.7	24 800	33.9
Switzerland ⁴	1 187.3	14 985	7.9
Turkey	1 941.1	21 800	8.9
United Kingdom	282	5 645	5.0
Oceania			
Australia	247.1	5 502	4.5
New Zealand	43.1	889	4.8

¹ Including consumption of fixed capital. ² The very high percentage for Egypt can be explained by the relatively wide difference between receipts and expenditure and by the fact that national savings were considerably lower in 1971 than in preceding years. For example, the corresponding percentage was 38.5 in 1970. ³ 1970. ⁴ 1969. ⁵ 1968.

mulation, the figures in table 2 show that their contribution to national savings is in most cases rather small, generally less than 10 per cent. This is due to the relatively minor importance of social security in their national economies. There are exceptions such as Costa Rica, Egypt, India, Jamaica and Malaysia, all of which have pensions or provident fund schemes with a high degree of capital accumulation. Conversely the social security schemes of industrialised countries generally have a lower degree of capital accumulation but make a larger contribution to national savings owing to their greater importance in the national economy.

The relationship between social security resources and the level of economic activity

It is instructive to examine the relationship between the level of economic activity (using GDP per head in US dollars as a yardstick) and the relative level of resources allocated to social security (as measured by receipts expressed as a percentage of GDP). This can be done by means of correlation analysis. For example, it is possible to demonstrate a fairly strong linear correlation with a coefficient of 0.82, as illustrated in the scatter diagram overleaf.¹

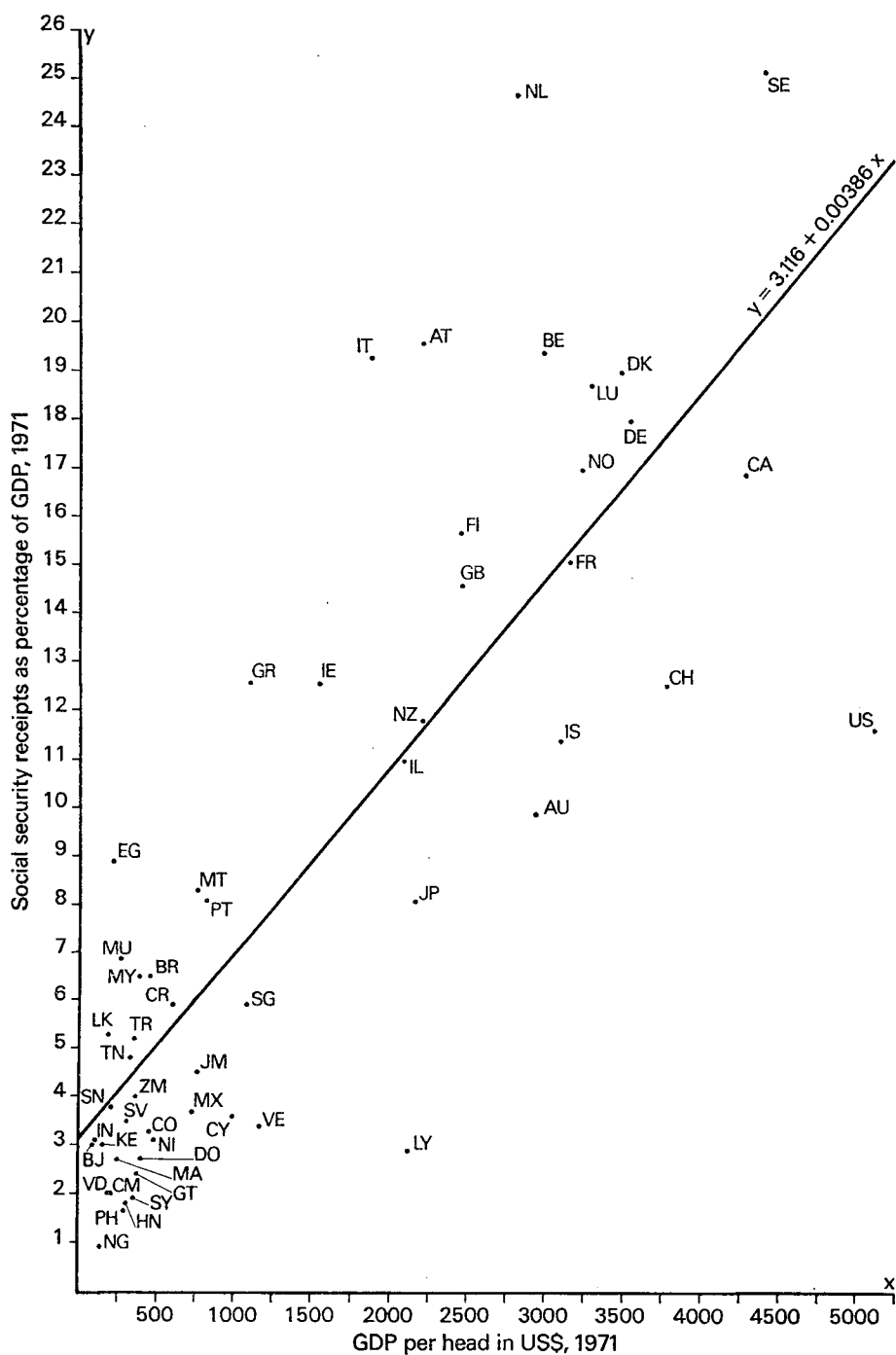
Table 3. Social security receipts and expenditure by level of per capita GDP, 1971

Per capita GDP per annum (US \$)	No. of countries	Total population (millions)	Per cent of GDP		Per head of total population (US \$)	
			Receipts	Expenditure	Receipts	Expenditure
0-299	12 ¹	740	3.2	2.0	4.0	2.5
300-599	12 ²	198	5.4	4.8	22	20
600-1,999	10 ³	141	13.6	12.9	170	161
2,000 and over	20	579	13.4	12.1	485	438
(a) 2,000-2,999	10 ⁴	206	12.2	10.4	257	221
(b) 3,000 and over	10 ⁵	373	13.7	12.5	611	558

¹ Cameroon, Egypt, Honduras, India, Kenya, Mauritius, Morocco, Nigeria, Philippines, Senegal, Sri Lanka, Viet Nam. ² Brazil, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Malaysia, Nicaragua, Syrian Arab Republic, Tunisia, Turkey, Zambia. ³ Cyprus, Greece, Ireland, Italy, Jamaica, Malta, Mexico, Portugal, Singapore, Venezuela. ⁴ Australia, Austria, Finland, Iceland, Israel, Japan, Libyan Arab Republic, Netherlands, New Zealand, United Kingdom. ⁵ Belgium, Canada, Denmark, France, Federal Republic of Germany, Luxembourg, Norway, Sweden, Switzerland, United States.

This correlation can also be illustrated by grouping countries by level of per capita GDP. In table 3 the averages for each group have been calculated in the same way as the regional averages in table 1, namely by converting the

¹ On the basis of 1963 data a similar but non-linear correlation in respect of social security expenditure, albeit with a downward trend after a certain level of per capita GDP, was found by Professor A. van Buggenhout in the ILO study: *L'impact macro-économique de la sécurité sociale* (Geneva, 1970).



national currency values for each country into US dollars using the conversion factors applied by the United Nations.

It is interesting to note that social security receipts and expenditure as a percentage of GDP in the highest per capita GDP group (US\$2,000 and over per annum) are lower than those of the preceding group (US\$600-1,999 per annum). Thus the curve of the relationship between per capita GDP and social security receipts as a percentage of GDP appears to flatten out and even turn slightly downwards at about this point. However, if the highest group is divided into two subgroups, the average drops in the first subgroup and then picks up again in the second. This can be explained first by the fact that these are weighted averages, where countries with large populations (and consequently a relatively high GDP) weigh more heavily than smaller ones, and second by examining the composition of the two subgroups. It will be seen that the first (US\$2,000-2,999) is more heterogeneous as regards level of development and the relative importance of social security than the second.

The over-all tendency comes out even more clearly in the last two columns of table 3, which show total receipts and expenditure per head of total population expressed in US dollars. It has already been observed in connection with table 1 that differences between countries (or groups of countries) noted in respect of percentages of GDP are accentuated when expressed in per capita terms. When making comparisons, however, one should keep in mind the warning given at the beginning of this article that the average figures do not necessarily represent the level of social security enjoyed by the population covered, since both the scope of benefits and the degree of protection vary substantially from one country to another.

Key to diagram

AT	Austria	GT	Guatemala	NG	Nigeria
AU	Australia	HN	Honduras	NI	Nicaragua
BE	Belgium	IE	Ireland	NL	Netherlands
BJ	Benin	IL	Israel	NO	Norway
BR	Brazil	IN	India	NZ	New Zealand
CA	Canada	IS	Iceland	PH	Philippines
CH	Switzerland	IT	Italy	PT	Portugal
CM	Cameroon	JM	Jamaica	SE	Sweden
CO	Colombia	JP	Japan	SG	Singapore
CR	Costa Rica	KE	Kenya	SN	Senegal
CY	Cyprus	LK	Sri Lanka	SV	El Salvador
DE	Germany (Fed. Rep.)	LU	Luxembourg	SY	Syrian Arab Rep.
DK	Denmark	LY	Libyan Arab Rep.	TN	Tunisia
DO	Dominican Rep.	MA	Morocco	TR	Turkey
EG	Egypt	MT	Malta	US	United States
FI	Finland	MU	Mauritius	VD	Rep. of Viet Nam
FR	France	MX	Mexico	VE	Venezuela
GB	United Kingdom	MY	Malaysia	ZM	Zambia
GR	Greece				

Social security benefit expenditure

Various series measuring the volume and relative importance of social security benefit expenditure have been worked out, and some of the more significant ones which can be prepared on the basis of the ILO inquiry data are presented in Appendix B. The first series corresponds to those given in the preceding section for total receipts and expenditure, namely the ratio of benefit expenditure to total consumption expenditure (or material consumption in the case of the centrally planned economies) in 1960, 1965 and 1971. Total consumption expenditure has been selected as it has been assumed that social security benefits are mainly used for consumption and that very little goes to savings. Since the savings component in GDP varies from country to country, it may be more significant to relate benefit expenditure to consumption expenditure rather than to GDP or some other national accounts aggregate. Furthermore, the total of public and private consumption has been used because some social security benefit expenditure is included in the national accounts under public consumption, notably medical care provided by public health services. In order to indicate the relative importance of medical care expenditure,¹ the second series presents the total of such expenditure as a percentage of total benefit expenditure in 1971. The third series aims at demonstrating how real per capita benefit expenditure evolved during the two periods 1960-65 and 1965-71. Using 1960 and 1965 respectively as the base years, indices are presented of total benefit expenditure per head of total population as adjusted by consumer price indices. Finally, applying the conversion rates used by the United Nations, total benefit and medical care expenditure in 1971 per head of total population are expressed in terms of US dollars.

Regional comparisons

As in the case of receipts and expenditure, regional averages have been calculated for benefit expenditure after conversion of national currency into US dollars using the UN conversion factors. The results are presented in table 4.²

Table 4 makes it possible to compare the data concerning individual countries in Appendix B with the over-all regional averages. For lack of space this comparison must be left to the reader, so the following comments are confined to regional differences. The regional differences in total benefit

¹ For the purposes of the ILO inquiries medical care includes preventive and curative medical care (e.g. general practitioner and specialist treatment, hospitalisation including treatment and board, pharmaceuticals, dental care, laboratory examinations, rehabilitation and provision of prosthetic appliances).

² Here again, owing to lack of the necessary conversion factors or other data, not all the countries listed in Appendix B could be included in the averages (see footnotes to table 4 for details).

Table 4. Social security benefit expenditure (and its medical care component) by regions, 1971

Region	No. of countries	Total population (millions)	Benefit expenditure as % of consumption expenditure		Medical care as % of all benefit expenditure	Benefit expenditure per head of total population (US \$)	
			All benefit expenditure	Medical care		All benefit expenditure	Medical care
Africa ¹	9	131	2.8	1.7	62	4.6	2.9
America ²	12	332	11.8	3.2	27	359	98
Excluding Canada and USA	10	104	3.2	2.2	70	16	11
Asia ³	9	720	6.3	3.6	57	16	9.2
Excluding Israel and Japan	7	612	2.3	1.1	48	2.3	1.1
Europe ⁴	19	338	20.4	5.5	27	372	101
Europe plus Australia and New Zealand	21	353	20.0	5.5	27	367	101
do. plus Canada and USA	23	580	15.4	4.2	27	426	115
do. plus Israel and Japan	25	688	14.9	4.2	28	374	106

¹ Not including Cameroon, Mauritania, Niger and Senegal. ² Not including Brazil and Trinidad and Tobago. ³ Not including Burma and Viet Nam. ⁴ Market economy countries only.

expenditure as a percentage of total consumption expenditure present much the same picture as the percentages of GDP shown in table 1. However, when the comparison is limited to medical care expenditure, the differences between regions are narrowed. This can be explained by the next column—medical care expenditure as a percentage of total benefit expenditure—which shows that in developing countries the proportion of benefit expenditure devoted to medical care is substantially higher than in the industrialised ones. In fact, there seems to be a certain stability in this ratio among industrialised countries with fairly well developed social security schemes, since in most of them medical care accounts for about 30 per cent of total benefit expenditure. In the Third World countries with less developed social security schemes the main emphasis is on medical care rather than on cash benefits, the corresponding ratio being generally around 60 or 70 per cent, i.e. more than double that of the industrialised countries. If we go more deeply into the structure of social security schemes, we see that in the case of African countries the high ratio can be attributed to the importance of public health services¹ in their social security systems. In Latin American countries, on the other hand, the high ratio can be attributed rather to medical care provided under social insurance schemes. In Asian countries there are greater variations in the relative importance of medical care costs, reflecting the more heterogeneous development of social security in that region. The last two columns of table 4, which give per capita benefit amounts in US dollars, bring out these regional differences more clearly.

It has again not been possible to calculate an over-all average for the centrally planned economies in Europe. Nevertheless, while bearing in mind that the figures based on national accounts aggregates are not comparable with those of the market economy countries, it can be seen that in the majority of these countries benefit expenditure as a percentage of consumption expenditure is situated in the 15-20 per cent range. On the other hand, it is interesting to note that the proportion of medical care in total benefit expenditure is generally around 30 per cent, as in the case of the European market economy countries.

Comparisons by level of per capita GDP

In the same way as for receipts and expenditure, averages of benefit expenditure for different levels of per capita GDP are presented in table 5.

This reveals a number of interesting features. First, benefit expenditure as a percentage of consumption expenditure increases rapidly with a rising level of per capita GDP. It may be recalled that a similar trend was noted in the previous section with respect to social security receipts. However, it can

¹ In some cases the figures for medical care provided under public health services are somewhat overestimated owing to insufficient detail in the available data. For further information on this point see the introduction to ILO: *The cost of social security*, Eighth international inquiry..., op. cit.

Table 5. Social security benefit expenditure (and its medical care component) by level of per capita GDP, 1971

Per capita GDP per annum (US \$)	No. of countries	Total population (millions)	Benefit expenditure as % of consumption expenditure		Medical care as % of all benefit expenditure	Benefit expenditure per head of total population (US \$)	
			All benefit expenditure	Medical care		All benefit expenditure	Medical care
0-299	9 ¹	712	2.3	1.1	50	2.3	1.2
300-599	11 ²	102	3.3	1.6	48	10	4.9
600-1,999	10 ³	141	14.7	4.2	29	146	42
2,000 and over	20	579	14.7	4.2	28	411	117
(a) 2,000-2,999	10 ⁴	206	14.0	4.8	35	205	71
(b) 3,000 and over	10 ⁵	373	14.8	4.0	27	524	142

¹ Egypt, Honduras, India, Kenya, Mauritius, Morocco, Nigeria, Philippines, Sri Lanka. ² Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Malaysia, Nicaragua, Syrian Arab Republic, Tunisia, Turkey, Zambia. ³ Cyprus, Greece, Ireland, Italy, Jamaica, Malta, Mexico, Portugal, Singapore, Venezuela. ⁴ Australia, Austria, Finland, Iceland, Israel, Japan, Libyan Arab Republic, Netherlands, New Zealand, United Kingdom. ⁵ Belgium, Canada, Denmark, France, Federal Republic of Germany, Luxembourg, Norway, Sweden, Switzerland, United States.

be seen that for the two groups US\$600-1,999 and US\$2,000 and over this proportion is identical as regards both total benefits and medical care. This would indicate that the curve, rapidly rising to begin with, flattens out after a certain level. But if the two subgroups of the highest group are considered, it will be seen that the total benefit expenditure percentage drops to 14.0 and then increases to 14.8, whereas medical care expenditure first increases to 4.8 and then drops to 4.0 per cent, reflecting a higher proportion of medical care expenditure in the first subgroup than in the second. Apart from this variation, already discussed in the commentary on table 3, it can be seen that the share of medical care in total benefit expenditure decreases with increasing per capita GDP, a phenomenon already noted in connection with the regional comparisons made above, where it was found that, as a rule, developing countries devote a larger proportion of benefit expenditure to medical care than industrialised ones.

Trends in benefit expenditure and economic growth

Two columns in Appendix B show the development of average benefit expenditure per head of total population in constant prices. These figures are reached by calculating the average per capita benefit expenditure in current national currency units, and adjusting it by the appropriate consumer price index. On the basis of these results the two series of indices presented in Appendix B have been calculated in principle for two periods, 1960-65 and 1965-71. It is rather difficult to analyse or compare these indices, in particular because the periods covered are not always the same. In order to find a basis of comparison, therefore, the average annual rate of compound increase over each of the above-mentioned periods has been calculated for a number of countries (see table 6). So that benefit growth can be compared with economic growth, average annual growth rates of per capita GDP at constant prices are indicated for the market economy countries, whereas for the centrally planned ones the table lists average annual growth rates of per capita net material product, also at constant prices. These rates are drawn from the UN *Yearbook of national accounts statistics, 1973*, where as a rule the rates refer to 1960-65 and 1965-70. The latter period, therefore, does not coincide exactly with the period 1965-71 to which the benefit expenditure figures apply, but as the comparison is made in terms of average annual rates of growth it may be considered sufficiently valid.

It should be emphasised that table 6 only includes countries for which the relevant data were available and where a relatively high proportion of the population is covered, so that per capita values of benefit expenditure are fairly representative. The countries are not grouped by regions as in the other tables but are listed in the same order. Owing to their different systems of national accounts, the market economy countries are presented separately from the centrally planned ones.

Table 6. Average annual growth rates of per capita benefit expenditure and gross domestic product (or net material product) at constant prices

Country	Average annual growth rate (%)			
	Per capita benefit expenditure adjusted by consumer price index		Per capita GDP or net material product at constant prices ¹	
	1960-65	1965-71	1960-65	1965-70
<i>Market economy countries</i>			<i>Based on GDP</i>	
Canada	0.2	7.9	3.9	3.1
United States	3.7	9.7	3.4	2.5
Israel	4.4	12.4	5.8	5.8
Japan	12.9	10.0	9.1	11.2
Austria	7.0	6.4	3.7	4.4
Belgium	6.5	7.5	4.5	4.4
Denmark	7.1	10.8	4.3	4.4
Finland	8.6	10.2	4.4	4.8
France	9.2	3.9	4.5	5.0
Germany (Fed. Rep.)	5.6	5.9	3.6	4.0
Greece	.	10.5	7.1	7.0
Iceland	7.9	8.6	3.0	2.1
Ireland	5.7	8.0	3.4	4.8
Italy	10.3	8.5	4.7	5.4
Luxembourg	5.2	6.0	2.2	2.3
Malta	5.6	10.1	0.8	9.3 ²
Netherlands	12.7	9.9	3.6	4.8
Norway	7.0	11.6	4.4	3.7
Portugal	5.7	6.6	5.5	5.2
Sweden	10.1	9.4	4.3	3.1
Switzerland	7.7	7.1	2.9	2.0 ²
Turkey	7.9	17.7	2.8	3.7
United Kingdom	4.1	5.0	2.5	1.7
Australia	3.9	4.5	3.2	3.9
New Zealand	0.6	0.3	.	.
<i>Centrally planned economies</i>			<i>Based on net material product</i>	
Bulgaria	7.0 ³	12.6	6.1	7.8
Czechoslovakia	3.5	8.9	0.5	6.4
German Dem. Rep.	.	6.7 ⁴	2.9	5.5
Hungary	.	8.8 ⁴	4.2	6.4
Poland	5.9	8.0	4.6	5.1
Romania	.	9.4	8.2	6.2
USSR	7.3	7.8	4.7	6.6
Byelorussian SSR	.	9.1	6.4	7.9
Ukrainian SSR	8.5	8.4	5.1	6.2
Yugoslavia	7.9	4.9	6.6 ⁵	5.0 ⁵

¹ Source: United Nations: *Yearbook of national accounts statistics, 1973*, Vol. III: International tables (New York, 1975). ² 1965-69. ³ 1961-65. ⁴ 1967-71. ⁵ Based on gross material product.

Examination of the rates of increase of per capita benefit expenditure at constant prices shows that, of the 24 market economy countries covered for both periods, the average rate of increase was higher for the period 1965-71 than for the period 1960-65 in 16, whereas for eight of them it was lower. Of the six centrally planned economies for which data were available for both periods, the rate of increase was higher for 1965-71 than for 1960-65 in four cases. For the majority of countries, in other words, real average benefit expenditure grew faster in the second period than in the first. There were a number of reasons for this, including improvements and extensions to the social security schemes, but in some cases it was also due to structural changes in the social security systems, measures of co-ordination, increases in the incidence and cost of benefits, and so on.

If the period 1960-65 is examined with an eye to the respective growth rates of per capita benefit expenditure and per capita GDP, it will be seen that, with the exception of only Canada and Israel, the rate of increase of benefit expenditure was in all cases higher than that of GDP. In other words during the years 1960-65 social security benefits, as expressed by per capita benefit expenditure at constant prices, grew on average faster than the economy as measured by per capita GDP at constant prices. The same is true of the years 1965-71, where it should be noted that the only three exceptions all had a substantially higher rate of increase of per capita benefit expenditure during the period 1960-65 than in 1965-71 (i.e. Japan 12.9 as against 10.0 per cent, France 9.2 as against 3.9 per cent, and Yugoslavia 7.9 as against 4.9 per cent).

Summary of findings

The main object of this article has been to present the results of some preliminary research into a few of the national economic aspects of social security that can be analysed on the basis of the ILO inquiries into the cost of social security covering the period 1960-71. As our analysis is based on global results and averages, the validity of the findings is limited by the extent to which the data used are representative of the social security protection of the population covered. This analysis is therefore not in any way exhaustive; on the contrary, the author believes that the results of the ILO and other inquiries make it feasible to go more deeply into the subject—particularly at the national level—than has been possible here. Indeed, it is to be hoped that this article will encourage such research. Nevertheless, the following findings may be considered generally valid:

1. During the period under review the relative importance of social security in the national economy (as measured by the ratio of receipts and expenditure to gross national product or net material product) increased substantially in most of the countries considered.

2. The relative economic importance of social security is much lower in regions consisting mainly of developing countries, chiefly because their social

security coverage, in terms of both persons protected and the level of benefits provided, is still rudimentary compared with that of the industrialised regions.

3. As might be assumed *a priori*, there is a fairly strong correlation between the level of economic activity and the scale of resources allocated to social security.

4. In some countries, particularly the developing ones, there is a fairly high degree of capital accumulation by the social security system. On the other hand, it appears that generally speaking the contribution to national savings is relatively larger in industrialised countries than in developing ones. This is due to the proportionately greater importance of social security in the economies of the former.

5. The ratio of benefit expenditure to total consumption expenditure differs greatly between the various regions and between groups of countries classified by per capita GDP. These differences correspond largely to those found in respect of receipts and expenditure in relation to GDP. Corresponding but more pronounced differences are found when the countries are examined with respect to average per capita benefit expenditure in US dollars.

6. The ratio of medical care expenditure to total benefit expenditure is, as a rule, fairly high (of the order of 60-70 per cent) in Africa and Latin America, the emphasis being on public health services in the former and on social insurance medical services in the latter. The picture is more varied in the Asian countries surveyed, while in the industrialised countries of Europe (both market and centrally planned economies), North America and Oceania the proportions are much lower (mainly around 30 per cent). A similar dichotomy emerges if the countries are classified by level of per capita GDP. This is due to the fact that in countries with well developed social security schemes pensions, sickness, unemployment, family and other benefits account for a relatively larger share of expenditure than medical care.

7. In 20 out of 30 countries where a relatively high proportion of the population is covered and for which the calculation could be made, real per capita benefit expenditure grew faster on average in the period 1965-71 than in the period 1960-65. Further, with very few exceptions, its rate of growth exceeded the corresponding rate of growth of per capita GDP during both periods.

Appendix A. Cost of social security, 1960-71: receipts and expenditure as percentage of GDP, and per capita GDP in 1971

Region and country	As % of GDP						Per capita GDP in 1971 (US \$) ¹
	Receipts			Expenditure			
	1960	1965	1971	1960	1965	1971	

<i>Africa</i>							
Benin	.	.	3.0 ²	.	.	2.9 ²	82 ²
Cameroon ³	.	1.6	2.0	.	1.5	1.7	187
Egypt	3.2	7.4 ⁴	8.9 ³	1.3	2.6 ⁴	3.4 ³	216
Kenya	3.3 ⁵	2.8 ⁶	3.0	2.5 ⁵	1.8 ⁶	2.0	154
Libyan Arab Rep. ³	.	2.0 ⁷	2.9	.	1.6 ⁷	2.0	2 114
Mauritania	0.4	1.7 ⁸	.	0.3	1.5 ⁸	.	154 ³
Mauritius ³	.	7.8 ⁴	6.9	.	7.3 ⁴	6.3	257
Morocco	.	3.1 ⁶	2.7	.	2.8 ⁶	2.4	242
Niger	.	1.1 ⁴	.	.	1.0 ⁴	.	74 ²
Nigeria ³	0.6 ⁹	1.3 ⁴	0.9	0.6 ⁹	1.1 ⁴	0.7	140
Senegal ³	.	4.2 ⁴	3.8	.	3.0 ⁴	3.6	198
Tunisia	.	3.4	4.8	.	3.1	4.1	315
Zambia	.	2.4	4.0 ³	.	2.1	2.7 ³	360

<i>America</i>							
Brazil	.	5.4	6.5	.	5.1	6.2	452
Canada ³	9.8	10.7	16.9	9.2	9.4	14.7	4 317
Colombia	.	1.1	3.3	.	1.1	2.8	442
Costa Rica	2.9 ¹⁰	3.8	5.9	1.9 ¹⁰	2.3	4.2	586
Dominican Rep.	.	3.3 ⁶	2.7	.	3.0 ⁶	2.5	390
El Salvador	2.2	2.4	3.5	2.1	2.2	3.1	304
Guatemala	2.0 ⁸	2.0	2.4	1.9 ⁸	2.0	2.3	371
Honduras	.	1.1	1.8	.	1.0	1.7	290
Jamaica ³	.	2.9	4.5	.	2.7	3.1	740
Mexico	2.4 ¹⁰	2.9	3.7	2.0	2.7	3.2	712
Nicaragua	2.5 ¹¹	2.5	3.1	2.1 ¹¹	2.1	2.5	471
Trinidad and Tobago	.	2.9	.	.	2.9	.	878 ²
United States ³	7.5	8.1	11.7	6.8	7.1	10.5	5 121
Venezuela	2.6 ³	3.0	3.4	2.5 ³	3.1	3.0	1 151

<i>Asia</i>							
Burma	.	0.9 ³	.	.	0.8 ³	.	82 ²
Cyprus	2.8	3.2	3.6	2.5	2.3	3.0	973
India ³	1.9	1.9	3.1	1.4	1.3	2.0	98
Israel ³	7.3 ¹²	7.1	11.0	6.6 ¹²	6.1	9.0	2 098
Japan ³	6.0 ¹²	6.6	8.1	4.9 ¹²	5.1	5.7	2 176
Malaysia	4.9	5.4	6.5	3.0	3.0	3.4	376
Philippines ³	2.0	1.8 ⁴	1.7	1.0	0.9 ⁴	1.0	283
Singapore	.	5.0	5.9	.	3.3	2.7	1 073
Sri Lanka ³	4.3	4.1	5.3	3.5	3.4	3.6	175
Syrian Arab Rep.	.	1.7	1.9	.	0.7	1.0	345
Viet Nam (Rep.)	1.2	0.7 ⁶	2.0	1.1	0.7 ⁶	2.0	178

The cost of social security

Region and country	As % of GDP						Per capita GDP in 1971 (US \$) ¹
	Receipts			Expenditure			
	1960	1965	1971	1960	1965	1971	

<i>Europe</i>							
<i>Market economies :</i>							
Austria	16.2	18.2	19.6	15.4	17.6	19.0	2 219
Belgium	15.5	17.2	19.4	15.3	16.1	18.4	3 007
Denmark ³	11.1	12.7	19.0	11.1	12.1	18.5	3 491
Finland	9.4	12.5	15.7	8.8	10.6	14.3	2 473
France	13.2	15.5	15.1	13.2	15.6	15.0	3 175
Germany (Fed. Rep.)	16.3	17.1	18.0	15.5	16.5	17.3	3 571
Greece	.	9.9	12.6	.	8.9	11.5	1 198
Iceland	8.5	8.8	11.4	6.9	7.2	10.0	2 984
Ireland ³	9.3	10.3	12.6	9.3	10.2	12.5	1 542
Italy	13.1	15.9	19.3	11.6	14.8	18.6	1 887
Luxembourg	16.4	18.2	18.7	13.9	15.8	16.9	3 304
Malta ³	7.1 ¹¹	9.0	8.3	6.6 ¹¹	9.0	9.4	718
Netherlands	13.0	18.2	24.7	11.0	15.5	20.9	2 818
Norway	9.9 ³	11.7	17.0	9.4 ³	10.9	16.2	3 247
Portugal	7.2	6.9	8.1	5.3	5.3	6.3	810
Sweden	11.1	16.8	25.2	11.0	13.8	20.6	4 431
Switzerland	10.1	10.4	12.6	7.6	8.8	10.8	3 787
Turkey	2.7	3.1	5.2	1.4	1.7	4.1	345
United Kingdom ³	11.0	12.1	14.6	10.6	11.8	14.8	2 454
<i>Centrally planned economies : ¹³</i>							
Bulgaria	11.1 ¹⁰	11.2	14.8	10.7 ¹⁰	10.0	14.5	.
Czechoslovakia	15.4	18.2	18.1	15.4	18.2	18.1	.
German Dem. Rep.	.	12.6 ⁶	13.6	.	12.8 ⁶	13.6	.
Hungary	9.2 ¹⁰	10.7	11.3	9.2	10.7	11.3	.
Poland	9.1	9.6	10.8	8.9	9.3	10.4	.
USSR ¹⁴	10.2	11.6	12.2	10.2	11.6	12.2	.
Ukrainian SSR	9.1	10.6	12.4	9.1	10.6	12.4	.
Yugoslavia ¹⁵	10.6	12.4	13.9	11.4	12.4	12.9	.
<i>Oceania</i>							
Australia ³	8.9 ¹²	9.4	9.9	8.3 ¹²	8.7	9.2	2 939
New Zealand ³	13.4 ¹²	12.2	11.8	13.1 ¹²	11.6	11.0	2 213

¹ Source: United Nations: *Yearbook of national accounts statistics, 1973*, Vol. III, op. cit. ² 1970. ³ Financial year ending in the calendar year. ⁴ Financial year 1966/67. ⁵ 1961 and expressed as percentage of gross domestic product at factor cost. ⁶ 1967. ⁷ Financial year 1967/68. ⁸ 1968. ⁹ Financial year 1961/62. ¹⁰ 1961. ¹¹ Financial year 1960/61. ¹² Expressed as percentage of gross national product at market prices. ¹³ Percentages are based on net material product at current market prices. (For some countries included in the ILO inquiry, data on this aggregate were not available.) ¹⁴ Including Byelorussian SSR and Ukrainian SSR, which are considered separately in the ILO inquiry. ¹⁵ Expressed as percentage of gross material product at current market prices.

Appendix B. Cost of social security, 1960-71: selected series relating to benefit expenditure

Region and country	Total benefit expenditure as % of consumption expenditure ¹			Medical care as % of total benefit expenditure, 1971	Development of average benefit expenditure per head, adjusted by consumer price index		Benefit expenditure per head of total population in 1971 (US \$)	
	1960	1965	1971		1960-65 (1960=100)	1965-71 (1965=100)	Total	Medical care
<i>Africa</i>								
Benin	.	.	3.2 ²	67	.	.	2.6	1.7
Cameroon ³	.	1.6	1.9	.	233 ⁴	163	3.0	.
Egypt	1.4	2.9 ⁵	3.6 ³	63	.	128 ⁶	7.1	4.5
Kenya	.	2.1 ⁷	2.4	64	96 ⁸	138 ⁶	3.0	1.9
Libyan Arab Rep. ³	.	3.2 ⁹	4.0	72	.	119 ⁶	35.5	25.6
Mauritania	.	.	.	48	.	.	3.7	1.8
Mauritius ³	.	8.0 ⁵	7.4	38	.	87 ⁶	15.5	5.9
Morocco	.	3.1 ⁷	2.7	50	.	100 ⁶	5.6	2.8
Niger	.	1.0 ⁶	.	67	.	111 ⁶	.	.
Nigeria ³	0.7 ¹⁰	1.3 ⁵	0.8	71	187 ¹¹	63 ⁶	1.0	0.7
Senegal ³	.	.	.	50	.	113 ⁶	7.1	3.5
Tunisia	.	3.3	4.8	56	.	163	12.1	6.8
Zambia	.	3.6	4.7 ³	71	.	142	9.7	6.9
<i>America</i>								
Brazil	.	5.1	.	.	.	128	23.3	.
Canada ³	11.4	11.9	18.9	49	101	158	559.0	273.9
Colombia	1.8 ¹²	1.3	3.1	70	.	289	11.2	7.9
Costa Rica	1.9 ¹²	2.3	4.5	83	124 ⁴	245	21.3	17.7
Dominican Rep.	.	2.3 ⁷	1.9	52	.	109 ⁶	6.6	3.4
El Salvador	2.2	2.4	2.8	68	129	123	7.2	4.9
Guatemala	2.0 ³	2.0	2.3	71	109	132	7.8	5.5
Honduras	.	1.1	2.0	49	.	200	4.7	2.3
Jamaica ³	.	3.0	3.1	72	.	118	16.7	12.0
Mexico	1.6 ¹²	2.8	3.3	64	197 ⁴	148	19.3	12.3
Nicaragua	2.1 ¹³	2.2	2.7	82	.	.	11.0	9.0
Trinidad and Tobago	.	3.5	.	72	.	140	32.2	23.2
United States ³	7.6	8.0	11.8	24	120	174	512.3	123.0
Venezuela	3.0 ³	4.3	3.3	90	.	.	25.5	23.0
<i>Asia</i>								
Burma ³	.	0.9	.	56	.	220	1.4	0.8
Cyprus	2.5	2.6	3.5	33	121	198	28.9	9.5
India ³	.	1.5	2.4	46	.	130	1.9	0.9
Israel ³	6.6	6.0	8.2	45	124	202	145.3	65.4
Japan ³	6.6	7.3	8.4	59	183	177	93.5	55.2
Malaysia	3.9	3.7	4.0	59	.	119	10.0	5.9
Philippines ³	1.1	0.9 ⁵	1.1	46	84 ¹⁴	155 ⁶	2.4	1.1
Singapore	.	3.8	3.8	54	.	130	28.6	15.4
Sri Lanka ³	3.8	3.6	3.8	61	95	113	5.5	3.3
Syrian Arab Rep.	.	0.8	1.1	74	.	153	3.0	2.2
Viet Nam (Rep.)	0.9	0.6 ⁷	2.0	.	87	292	3.5	.

The cost of social security

Region and country	Total benefit expenditure as % of consumption expenditure ¹			Medical care as % of total benefit expenditure, 1971	Development of average benefit expenditure per head, adjusted by consumer price index		Benefit expenditure per head of total population in 1971 (US \$)	
	1960	1965	1971		1960-65 (1960=100)	1965-71 (1965=100)	Total	Medical care

<i>Europe</i>								
<i>Market economies :</i>								
Austria	20.2	22.8	25.8	13	140	145	402.4	52.3
Belgium	16.7	18.8	22.7	23	137	154	509.4	117.2
Denmark ³	13.6	15.0	22.6	28	141	185	575.2	161.1
Finland	12.0	14.0	19.9	27	151	179	339.4	91.6
France	16.8	20.1	19.5	29	155	126	445.8	129.3
Germany (Fed. Rep.)	20.8	22.0	22.9	27	131	141	581.2	156.9
Greece	.	10.6	13.4	19	.	182	130.5	24.8
Iceland	8.9	10.0	13.3	48	146	164	283.9	136.3
Ireland ³	10.2	11.2	14.3	32	132	159	162.5	52.0
Italy	14.4	17.8	21.4	26	163	163	318.2	82.7
Luxembourg	20.4	21.4	24.7	15	129	142	544.9	81.7
Malta ³	7.4 ¹³	9.6	9.6	33	131	178	65.8	21.7
Netherlands	14.7	20.0	27.4	22	182	176	574.4	126.4
Norway	12.5 ³	15.0	22.1	31	140	193	526.3	163.2
Portugal	5.1	5.4	6.1	33	132	147	42.3	14.0
Sweden	14.0	17.9	26.2	32	162	171	892.0	285.4
Switzerland	9.7	11.6	14.4	32	145	151	389.8	124.7
Turkey	1.5	1.8	3.8	18	146	266	11.1	2.0
United Kingdom ³	12.4	13.5	16.5	29	122	134	284.6	82.5
<i>Centrally planned economies : ¹⁵</i>								
Bulgaria	13.5 ¹²	13.7	18.5	20	131 ⁴	204	.	.
Czechoslovakia	19.1	20.5	25.5	28	119	167	.	.
German Dem. Rep.	.	.	.	30	.	129 ⁶	.	.
Hungary	11.5 ¹²	13.0	14.9	27	.	140 ⁶	.	.
Poland	11.7	12.6	14.9	31	133	159	.	.
Romania	.	.	.	29	.	171	.	.
USSR ¹⁶	14.1	15.9	17.5	33	142	157	.	.
Byelorussian SSR	.	.	.	34	.	169	.	.
Ukrainian SSR	.	.	.	33	150	162	.	.
Yugoslavia	16.6	19.6	18.9	36	146	133	.	.
<i>Oceania</i>								
Australia ³	10.7	11.6	12.2	40	121	130	257.2	102.9
New Zealand ³	17.2	15.1	13.9	35	103	102	230.2	80.6

¹ Total of government and private final consumption expenditure. Source: United Nations: *Yearbook of national accounts statistics, 1973*, Vol. III, op. cit. ² 1970. ³ Financial year ending in the calendar year. ⁴ 1961-65. ⁵ Financial year 1966/67. ⁶ 1967-71. ⁷ 1967. ⁸ 1961-67. ⁹ Financial year 1967/68. ¹⁰ Financial year 1961/62. ¹¹ 1962-67. ¹² 1961. ¹³ Financial year 1960/61. ¹⁴ 1960-67. ¹⁵ Percentages are based on personal consumption and consumption of "material" services excluding "non-material" services (since certain elements of social security benefits may not be included in this concept of consumption, used for calculation of the percentages, there may be some degree of inconsistency). ¹⁶ Including Byelorussian SSR and Ukrainian SSR, which are considered separately in the ILO inquiry.