DEPARTMENT OF SOCIAL WELFARE

SURVEY OF THE MATERIAL CIRCUMSTANCES OF AGED POPULATION:

POLICY WORKING PAPER REPORTING RESULTS OF ANALYSIS OF PRELIMINARY DATA SET OF 1913 SURVEY RECORDS

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ABSTRACT

The report discusses an analysis of the relationship between income, circumstances and the level of material wellbeing of the aged. The report is divided into eight sections. A brief resumé of the contents of each section is provided below:

Section 1 provides introductory comment to the research

Section 2 outlines the logic and approach of the research design

Section 3 provides a description of the survey methods and procedures. The essential point to be noted is that the report is based on an interim set of data records which were not finally checked and edited at the time of the analysis. Because of this the results in this report must be treated as interim until a final data tape has been analysed. A second point that emerges is that a number of tests applied to the data suggest the possibility of some small biasses in the obtained sample which appears to contain a slight over representation of married persons, those on Age benefit, and males. It is concluded that these biasses are unlikely to do any violence to the general structure of the research findings.

Section 4 describes the methods and procedures used to derive measures of material wellbeing for the aged population. The results of the scaling analysis reveal the presence of three principal scale dimensions: one relating to the extent of deprivation and hardship reported by the person; another relating to the standard of his accommodation; and the third describing the quality and quantity of his material possessions. The three measures are shown to have a high degree of validity and reliability. Descriptions of the meaning and implications of the first scale measure are examined in detail in an appendix.

Section 5 proposes a definition of the notion of living in "dignity and comfort" to be used in the remainder of the report. It is asserted that those whose scores fall in the bottom 30% of the scale, relating to deprivation do not achieve this goal. While the definition is somewhat arbitrary it is necessary to fix upon some definition to be able to make an analysis of those factors associated with persons failing to meet the policy goal. Further it is anticipated that a change in the definition of the goal would not appreciably alter the structure of the results. The section then

goes on to examine in some detail the factors which are associated with those who tend to fall below the level set. The results from a number of analyses suggest that the following factors are most closely associated with failure to reach the level:

1. Assets: The incidence of hardship in the aged population varies strongly with the amount of assets held by the respondent. In particular those persons whose savings and investments have a total value of less than $1000 appear to be particularly prone to hardship.

2. Health: A finding that emerges consistently throughout the analysis is that those who were reported as being in poor or indifferent health are more prone to hardship than those in good or excellent health.

3. Home Ownership: Those paying rents or mortgages appear to be considerably worse off than those owning their own homes without mortgage or living in other types of accommodation.

4. Age: Somewhat unexpectedly the results show a general tendency for the incidence of hardship in the aged population to decline with age. Possible reasons for this tendency are discussed.

5. Income: There is a fairly clear tendency for the incidence of hardship in the aged population to decline with the amount of gross income (including benefits) that a person has.

6. Benefit type: The analysis shows quite clearly that hardship tends to be concentrated amongst those persons in receipt of Age benefit. The incidence of hardship for this group is nearly three times as great as for those on Superannuation benefit. Further, those persons in receipt of grants of Supplementary Assistance emerge quite clearly as being the most deprived group of beneficiaries.

Section 6 presents an analysis of the relationship between the incidence of deprivation, circumstantial factors, and gross income for the aged population. This analysis reveals quite clearly that any attempt to reduce the incidence of hardship in the aged population by

means of an "across the board" increase in the benefit rate would be extremely expensive and very inefficient. (To make any substantial inroads on the incidence of hardship in the aged population in this way would involve an approximate doubling of the current benefit levels. Only 30% of this increase would go to those people in need.) The analysis then proceeds to examine the implications of giving differing amounts of benefits to various subgroups. It is concluded that the particular approach discussed would be impracticable owing to the large differentials that would have to be provided.

Section 7 outlines the policy implications of the research. A three tiered benefit system is proposed by which those on Superannuation benefit would receive a basic benefit and would not be eligible for various supplements; those on Age benefits who would be eligible for additional supplements; and those on Age benefits who meet certain criteria would be eligible for further additional assistance. The concrete proposals made are:

1. That there should be a modest flat-rate increase in the basic benefit rate. It is suggested that this increase be of the order of $5 per week for single beneficiaries and $4.15 for married beneficiaries and that this figure be applied to the benefit rates as at July 1973 and updated for costs of living increases to give the figure for the January budget. (Such an increase would reduce the incidence of hardship within the aged population from 30% to 25%. This small reduction follows from the conclusions that it is extremely inefficient to try to improve the state of the aged population through flat rate increase).

2. That the basic benefit rate be updated every six months to compensate for changes in living costs.

3. That an examination be made of the eligibility criteria for Age benefit so that the flat rate increase recommended above will ensure that nearly all those on Superannuation benefit are able to achieve a level consistent with the goal of living in "dignity and comfort".

4. That persons on Age benefit be provided with free medical, dental and optical care and be eligible (when certain criteria are met) for supplements for rent or mortgage repayment.

5. That those on age benefit who meet certain criteria (based on the characteristics shown by the research to be most strongly related to the likelihood of hardship) be eligible for additional income provided through the benefit. This provision is similar to the present supplementary assistance scheme but with modification of the criteria for the assistance and the amount of assistance provided.

Section 8 provides concluding comment on the research. It emphasises the need for any policies that are implemented to be evaluated so that they can be refined to improve their effectiveness.

Section 1.1. Introduction

In response to a promise contained in its 1972 Election Manifesto, Government has undertaken a nationwide survey of the financial and material circumstances of the population of persons aged 65 years or over. The primary purpose of this survey was to ascertain the extent to which current Social Security cash benefits are providing the members of this population with a level of living consistent with the goal of a "reasonable and dignified standard of living" that has been adopted by Government.

This report presents a summary of the results from the survey which are relevant to: a) assessing the extent to which this policy goal has been achieved, b) indicating what changes in the current benefit structure and levels will best further the achievement of the goal. The report covers five major topics:

1. The section immediately following this introduction provides a concise non-technical description of the rationale and method of the analysis used in the report.

2. The next section presents a summary account of the methods of data collection and preparation used in the survey.

3. This is followed by a description of the methods and procedures used to derive scale measures of material well-being for members of the population.

4. The subsequent two sections examine the relationship between these measures and income levels conditional on various living circumstances.

5. In the final section the results are drawn together and their usage and implications for benefit policy critically examined.

Three qualifications must be placed on the contents of this report:

1. The results are based on interim data provided by the

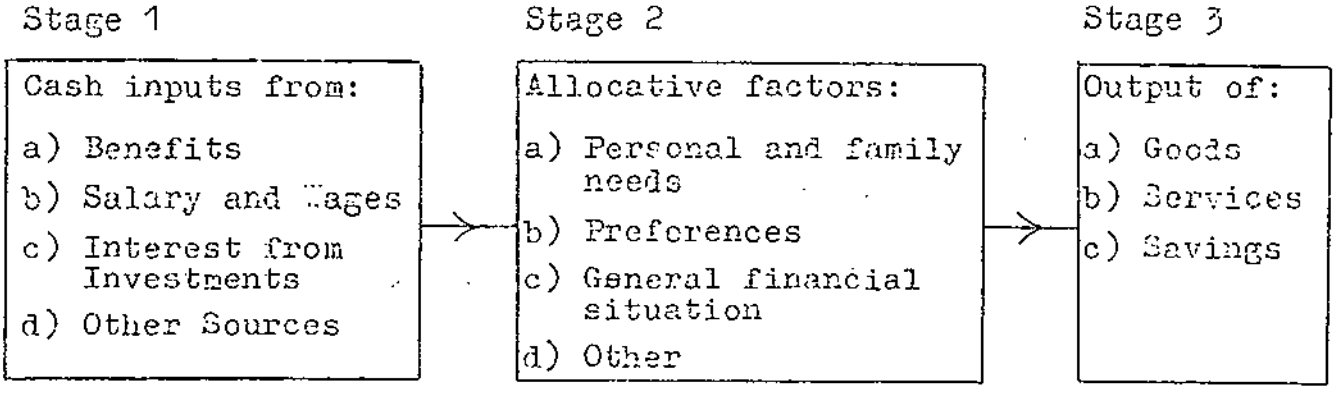
Department of Statistics and should therefore be treated as being provisional until such time as the data are confirmed by a further analysis of the final data collected in the survey. At the time of writing this analysis has not been completed, although it is anticipated that there should be little change in the overall structural properties of the data.

2. The report is not intended to provide a full technical description of the data analysis. The analytic procedures used are highly complex and it was considered inappropriate to present a wealth of technical detail in a report primarily intended for policy purposes. It is envisaged, however, that a full report on the survey analysis will be presented as part of the Department of Social Welfare's Research Monograph Series as soon as possible. Any enquiries of a technical nature should for the present be directed to the authors, who are in a position to provide a complete and comprehensive exposition of the methods and rationale of the analysis technique used in the report.

3. The results presented are not final in the sense that if the findings presented in this report raise subsidiary queries it will be possible to return to the original data and conduct further analysis.

Section 2.1 Background to the Analysis and General Principles

At its most general level any system of cash benefits, or for that matter any income distribution system, may be thought of as a three stage process in which a person receives some level of cash input which is then transformed by a series of allocative decisions into a mix of goods, commodities and services. The diagram below depicts this process and elaborates on the nature of its various stages.



The policy maker's concern in dealing with this process, at the most simple level, is to ascertain the level of cash input, in the form of benefits, that should be supplied to ensure that all or most beneficiaries receive a mix of goods, services and commodities which is acceptable in terms of the policy maker's criteria. The research problem associated with this policy issue may be described as: determining the way in which the output of the system varies with variations in income and circumstances. If it is possible to ascertain this relationship, then the policy maker will be in a position to estimate the amounts of income change, if any, that are required to achieve his goal.

In undertaking the type of input/output analysis implied by this approach the appropriate measure of input is self-evident: it is simply the aggregate net income of the person. However, the problem of obtaining a quantified measure of output suitable for such an analysis is more complex, as the primary data about output (i.e. about goods and services received by the person) comes in the form of a welter of separate items of information about various types of consumer behaviour. Before an analysis can be made of the input/output properties of the system it is necessary to reduce these data to some coherent and interpretable measure or set of

measures. A promising approach to this problem is suggested in Appendix 19 of Social Security in New Zealand[1] which advocates the development of a scale of living standards, which would reduce a plethora of data about individual consumption and usage patterns to a single scale index. While the authors would not agree with Appendix 19 in its entirety the approach to the problem of measuring and quantifying the system output adopted in the present report largely follows the basic suggestions made in that Appendix.

The approach may be described as follows: first, consider a group of individuals about whom information is obtained on a series of items or measures, each of which is deemed to reflect, to some extent, how well off the person is. Examples of such items could be "Does the person own a car?", "Is his financial situation such that he can afford to go to a private hospital?", and so on. It is fairly clear that with items of the type cited it would not be possible to gain any precise measure of "how well off" the person was by looking at a single item. On the other hand, by taking account of all the information contained in a large number of items it should be possible to produce a composite index which would indicate fairly faithfully the degree of material well-being experienced by the person. In essence, therefore, the problem of quantifying the mix of goods and services received by a person may be considered to be a scaling problem: that of reducing a large mass of diverse information to one or a small number of scale measures which summarise the overall properties of the individual pieces of information.

The obvious question to be asked at this juncture is:"Is such reduction possible and how is it to be done?" The answer is that given certain initial assumptions about the data properties and the relationship of individual measures to the scale indices which are to be produced it is possible to devise statistical models which reduce a large number of measures to a smaller number of composite indices. It is not appropriate to present here the theory of how this is done.

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1. Social Security in New Zealand, Report of the Royal Commission of Inquiry, March 1972.

For the moment then, it will be assumed that it is possible to derive one or a series of scale measures which indicate how well off the person is. The remaining problem of analysis is to establish the way in which this measure will vary as income and other circumstances vary. To state the matter more formally, the problem is one of devising a mathematical function or a series of functions which relate derived scale scores on the one hand to income and circumstances on the other hand.

If such a system of functions can be established, and plausibly can be regarded as being causal, then the policy maker is placed in a strong position to assess the efficacy and likely alterations needed to his benefit policy. To put the matter in concrete terms it provides the answer to such questions as, "If the current benefit rate was increased by $5.00 a week what would be the likely changes in the overall living patterns of (say) married and single beneficiaries?" This would seem to be the kind of information that is required to evaluate the type of changes in benefit level and structure which will most closely realise the goals of the policy maker.

However, it must be appreciated that the data on which the research is based relate to social phenomena, and that the degree of prediction which can be achieved concerning such phenomena is usually limited.

Section 3.1 Specification of the Sample

The sample frame used in the survey was defined as all those persons aged 65 years or over who were in receipt of an Age or Superannuation benefit or a War Veterans allowance but were not residing in an institution. An institution was defined as:

> "...any hospital, rest home or old people's hostel, etc. where 3 or more unrelated old people reside and can be cared for by the staff of that hospital, rest home or old people's hospital, etc. should they become ill."

This sampling frame was chosen for the following reasons:

1. Nearly all members of the population aged 65 or over (about 97%) are in receipt of a benefit or veterans allowance and, therefore, the Department of Social Welfare's records provided an up-to-date computer record of practically the whole of this population. The alternative sampling frame was the 1971 census records, but this was already out of date and the sample would have to have been extracted manually, which would have been cumbersome and time-consuming.

2. Initially consideration was given to including Age beneficiaries under the age of 65 years in the sample frame. This idea was rejected, however, because Age beneficiaries aged 60-64 years comprise less than a third of all persons in that age range, and their inclusion would have produced a sample which did not relate to any coherently specifiable section of the population. It was considered unlikely that the absence of these beneficiaries would result in any loss of information because it seemed plausible that the factors which affect the level of well-being of people aged 60-64 years would be essentially the same as those affecting persons aged 65 and older.

The sample used in the study was obtained by extracting from the Department of Social Welfare's computer records the names and addresses of every 75th beneficiary aged 65 or over who was in receipt of either Age or Superannuation benefit or a War Veterans allowance. (Throughout the remainder of this report the term "beneficiary" is used loosely to relate to these three categories.) It was not possible to include War pensioners aged 65 or over because the age of these pensioners is not routinely included in

the computer records. The exclusion of the War pensioners from the sample is unlikely to have any marked effect on the results of the survey as they represent only about 2% of the population aged 65 or over.

The sample was drawn early in November 1973 for all Social Welfare Districts except Auckland, Wellington and Christchurch. For these Districts only half the required names (i.e. every 150th record) were selected. The balance of the sample for Auckland, Wellington and Christchurch was drawn late in January 1974. The two stage sampling procedure was used for these areas to ensure that the sample was as up to date as possible in the areas where, due to the larger numbers, interviewing would take the longest.

The sample drawn from the computer records totalled 3395 beneficiaries, which is 1.3% of the population aged 65 years or over.

Section 3.2 The Survey Documents

The questionnaire and other survey documents (other than the purely administrative ones) were designed by a joint working party comprising members of the Department of Statistics and the Department of Social Welfare. The following documents were used to record data supplied by respondents:

1. The Interview Questionnaire (Form SR/SA/03): This form was an interview administered questionnaire which was designed to elicit information on various aspects of the respondent's living situation, financial circumstances, level of living etc. In particular, it covered the following areas:

   Section A - Demographic and Employment Information
   Section B - Housing and Housing Conditions
   Section C - Food
   Section D - Mobility and Transport
   Section E - Work Activities
   Section F - Social and Leisure Activities
   Section G - Financial and Other Needs
   Section H - Health
   (No Section I)
   Section J - Expenditure
   Section K - Income and Assets
   Section L - Respondent's Evaluation of Financial Circumstances

The questionnaire was a fairly complex document of 46 pages and took about 2 hours interviewing time to administer. This was usually done in more than one interviewing session, depending on the respondent's wishes. A copy of the questionnaire is shown in Appendix 5.

2. Assessment Schedule (Form SR/SA/04): This schedule was completed by the interviewer on the basis of her observations of the respondent. The schedule had two parts:

   Section M - Interviewer Assessment of Respondent
   Section N - Quality of Housing and Surroundings

The interviewer was required to describe the respondent's reaction to the interview and to assess the respondent's level of living and quality of housing. The schedule's main function was to flesh out the information collected in the interview and to provide a crude check on the veracity of the information provided by the respondent in the questionnaire. A copy of the Assessment Schedule is shown in Appendix 5.

3. Daily Record of Expenditure (Form SR/SA/01): This was a respondent-completed document showing details of purchases and payments made in a week. Its purpose was to obtain a record of all expenditure of the "aged unit" (respondent plus, where married, spouse). This document is not described further here because the expenditure data derived from it was not included on the computer tape which provides the basis of the present analysis; thus it has not been possible to report any results relating to such information.

4. In addition to the three main field documents described above, there were a number of ancillary documents used mainly for the purpose of controlling and accounting for the main field documents.

Section 3.3 Field Organisation and Procedures

Once the survey documents had been designed by the joint working party, the Household Sample Survey Section of the Department of Statistics took responsibility for conducting the field operations. Any queries or problems relating to the design of the survey documents were referred to the Survey Supervisor in the Social and Demographic Unit of the Department of Statistics.

The procedures used are set out in an Interviewer's Handbook with which all interviewers were provided. A copy is held in the research section of the Department of Social Welfare and it may be borrowed from that section.

The first interviews were conducted in the week ending 1 December 1973 in Christchurch and Wellington and in the week ending 15 December in Auckland. Interviewing was halted over the Christmas/New Year period from 23 December 1973 to 6 January 1974. (In Christchurch there was an additional halt from 13 January 1974 to 9 February 1974, the period when the Commonwealth Games were being held in that city.) The field work was completed by 19 May 1974 including call-backs to certain of those respondents who initially had refused to take part. (This was done in an effort to improve the response rate.)

Section 3.4 The Characteristics of the Sample and the Response Rate

Of the total of 3,395 addresses which defined the sample, action had been completed with respect to 2,741 at the time the interim tape was prepared.

Table 3.4.1 shows the position at the time of tape preparation.

Table 3.4.1 ACCOUNT OF SAMPLE ADDRESSES AT TIME OF TAPE PREPARATION

	Number	Percent
Total number of addresses comprising sample	3,395	
Action not completed at time of tape preparation	654	
Addresses for which action completed	2,741	
Invalid addresses (dead or in an institution)	266	
Valid addresses	2,475	100%
Outcome of approaches to valid addresses:		
Respondent interviewed	1,913	77%
Not interviewed because		
- could not be contacted	158	6%
- physically or mentally incapacitated	190	8%
- refused	214	9%
	2,475	100%

From the total of 2,475 valid addresses approached by the time the interim tape had been prepared, 1913 completed interviews were obtained. This gives a response rate of 77%. By overseas standards this rate is of the same order as (if not slightly better than) that typically achieved for surveys which require a diary of expenditure to be kept.

Section 3.5 Coding and Checking the Survey Data

The survey documents were coded by staff of the Department of Statistics and the data were transcribed onto magnetic tape. This had to be done in extreme haste to meet a deadline in May for a preliminary report to Government, and only a minimum of checking and editing of the tape were possible at that time. To bring the quality of the data up to an appropriate standard the Department of Statistics and Social Welfare subsequently pooled their resources to re-check and re-edit the data tape. This clean-up operation turned out to involve extensive checking of all schedules. The size of the clean-up operation was such that it was not possible to obtain completely edited data before the end of September, and as a consequence the present report is based on the interim data prepared for the May report.

The clean-up operation revealed that the data on which this report is based contain the following weaknesses and liabilities:

1. In the initial coding operation no provision had been made for "not specified" codes, with the result that in some cases the coders had had to make judgements about what code was appropriate when a response was not recorded. While the incidence of non-responses to the questions was not high it was felt that more correct data preparation would be based on acknowledging those cases in which data was not specified rather than making arbitrary coding decisions. Thus the data reported here may be biassed to some extent by the coding decisions used to assign the non-respondents to various response categories. However, it is felt that the extent of this bias will be small and should not substantially affect the general structure of the data.

2. Inspection of the income data revealed that for a number of respondents who gave only partial information on income, the data had been coded as though it represented full income. The effect of this omission is to depress the range of incomes for the sample. It was found also that quite frequently respondents had given old or out of date benefit values which again tended to depress the range of income for the sample. Finally, a check revealed that in about three percent of cases there were inaccuracies in the calculation and coding of annual

incomes. Again these inaccuracies tended to underestimate rather than overestimate the annual incomes of the respondents. The results of the check on the income suggested that the data provided on tape tend to provide an underestimate of the incomes of the respondents. Because of this tendency, all income figures given in this report should be treated cautiously and should not be taken too literally until the findings have been confirmed by an analysis of the up-dated tape.

3. A check with Social Welfare District Offices revealed that in some cases those who reported receiving supplementary assistance were not in fact in receipt of this benefit. It is likely therefore that the proportion of respondents shown as being in receipt of supplementary assistance in this report is an overestimate of the proportion for the sample.

4. While the clean-up operation resulted in a substantial number of modifications to the data, most of the errors detected were fairly randomly distributed throughout the questionnaire (with the exception of the problems associated with the income and "not specified" codes). Thus it is not anticipated that the modifications in the data will substantially affect the overall structure of the findings or the conclusions that flow from this structure.

Section 3.6 The Demographic Characteristics of the Sample and its Goodness of Fit to the Population

This section of the report is designed to accomplish two functions: first to provide a basic description of the main characteristics of the sample, and second, to determine the extent to which the sample may have been biased with respect to a number of demographic variables.

1. The Age Distribution of the Sample

Table 3.6.1 shows the age distribution of the sample. This table provides two statistics. The first under the caption "observed" shows the actual number of people in each age category in the sample; the second shows the expected number of people estimated under the assumption the sample was a random sample of those aged 65 years plus. At the foot of the table there is the result of a statistical test of "goodness of fit" designed to determine the likelihood that the sample could have been drawn randomly from the population. (The non-technical reader would probably do best to ignore the results of the significance test, which is interpreted in the text anyway.)

Table 3.6.1 DISTRIBUTION OF RESPONDENTS BY AGE

Age	Observed	Expected
65 - 69	39% (740)	38% (723)
70 - 74	29% (559)	28% (531)
75 - 79	17% (319)	17% (334)
80 and over	15% (295)	17% (325)
Total	100% (1913)	100% (1913)

X^2 = 5.3191 3 d.f. not significant

Source for expected numbers: Department of Statistics: Estimates of N.Z. Population for 31 December 1973

Table 3.6.1 shows that the bulk of the sample was under the age of 75 years (68% were 75 years or under). Examination of the

observed and expected values shown in the table reveals that the sample proportion and population proportions show a good correspondence. This conclusion is also supported by the results of the goodness of fit test which reveals that there is no reason to suppose that the sample is biased with respect to age.

2. Type of Beneficiary

Table 3.6.2 shows the observed and expected proportions of respondents by type of benefit. The figures given in this table are to be interpreted in the same way as those shown in table 3.6.1.

Table 3.6.2 DISTRIBUTION OF RESPONDENTS BY BENEFIT TYPE

Benefit Type	Observed	Expected
Superannuation benefit	45% (819)	49% (887)
Age benefit	55% (985)	51% (917)
Total	100% (1804)	100% (1804)
War veterans allowance	(109)	—
Grand Total	(1913)	

$X^2 = 10.2556$ 1 d.f. $p < .005$

Source for expected numbers: benefit distribution as at 31 March 1974, given in Department of Social Welfare annual report. 1974. (Note that the precise number of War veterans in the population is not available.)

For the purpose of presenting the comparisons between the observed and expected figures those on War veterans allowances are shown separately from those on Age and Superannuation benefit as population figures for those on War veterans allowances are not available. The comparisons in the table reveal that the obtained sample was slightly biased toward the inclusion of Age beneficiaries: the population estimate showed that 51% of the sample should have been Age beneficiaries whereas in fact 55% were Age beneficiaries. While the difference between the observed and expected proportions is small, in statistical terms it is highly significant. The

result of the significance test shows that the differences could have arisen only 5 times in 1000 had the obtained sample been a random sample of the population. This suggests the presence of some degree of bias in the sample. However, this conclusion must be qualified: the population estimates used to derive the expected values for table 3.6.2 were based on the entire population of Age and Superannuation beneficiaries whereas the sampling frame definition exludes those in institutions. This difference could possibly explain the apparent lack of fit of the sample to the population estimates.

3. The Sex Distribution of the Sample

Table 3.6.3 shows the sex of the 1913 sample members:-

Table 3.6.3 DISTRIBUTION OF RESPONDENTS BY SEX

Sex	Observed	Expected
Male	46% (888)	43% (815)
Female	54% (1025)	57% (1098)
Total	100% (1913)	100% (1913)

$X^2 = 11.3921$ 1 d.f. $p < .001$

Source for expected numbers: Department of Statistics: Estimates of N.Z. Population for 31 December 1973

The above table shows that 54% of respondents were female and 46% were male. Inspection of the observed and expected figures indicates a slight tendency for the sample to contain an over representation of males: the population estimates showed that 43% of the sample were expected to be male in contrast to the observed proportion of 46%. Again, though the observed differences are small they are highly statistically significant: the test of goodness of fit reveals that the observed proportion of males could have occurred only 1 in a 1000 times by chance had the sample been a random sample of those aged 65 years and over. As with previous estimates, the population estimates used to obtain the expected figures were based on the entire 65 year old plus population not excluding those in institutions. It is

possible that the differences between observed and expected proportions could be due to the difference between the population and sample definitions, rather that to any intrinsic source of bias within the sample.

4. The Distribution of Respondents by Marital Status

Table 3.6.4 shows the observed and expected proportions of the sample by marital status.

Table 3.6.4 DISTRIBUTION OF RESPONDENTS BY MARITAL STATUS

Marital Status	Observed	Expected
Never married	7% (143)	9% (178)
Married	56% (1083)	52% (1003)
Legally Separated	1% (16)	1% (17)
Widowed	34% (641)	36% (679)
Divorced	2% (29)	2% (35)
Total	100% (1912)	100% (1912)
Not specified	(1)	—
Grand Total	(1913)	—

$X^2 = 16.4769$ 4 d.f. $p < .005$

Source for expected numbers: marital status distribution as at 31 March 1971, given in Department of Statistics Bulletin No.1 of the 1971 Census.

The above table shows that the majority of respondents were either married (56%) or widowed (34%): those never married, separated or divorced comprised about 10% of the sample. The table reveals that there would appear to be an over representation of those persons who are married. The population estimates reveal that one would expect those married to comprise 52% of the sample whereas in fact 56% of the sample fell into this catergory. Again, while the difference between the observed and expected proprotions is small, the differences are highly statistically significant. The goodness of fit test reveals that the observed differences could have occurred only 5 times in a 1000 by chance had the sample been a true random sample of the

population of persons aged 65 years or over. It must be remembered, however, that the differences reported could be due to differences between the population and sample definitions.

5. Location

Table 3.6.5 shows the location of respondents by Statistical Area. (Definitions of Statistical Areas are given in the New Zealand Summary of the 1971 Census.)

Table 3.6.5 DISTRIBUTION OF RESPONDENTS BY STATISTICAL AREA

Statistical Area	Observed	Expected
Northland	3% (61)	3% (57)
Central Auckland	25% (473)	26% (486)
Sth Auckland/Bay of Plenty	11% (205)	11% (218)
East Coast/Hawkes Bay	7% (137)	6% (122)
Taranaki	3% (56)	3% (67)
Wellington	18% (349)	19% (362)
Westland/Nelson/Marlborough	5% (94)	5% (92)
Canterbury	16% (317)	16% (298)
Otago	8% (148)	8% (144)
Southland	4% (68)	3% (62)
Total	100% (1908)	100% (1908)
Not specified	(5)	—
Grand Total	(1913)	—

X^2 = 7.4674 9 d.f. not significant

Source for expected numbers: Distribution of population by Statistical Area as at 31 March 1971, given in Department of Statistics New Zealand Summary of the 1971 Census.

Inspection of the table 3.6.5 reveals that the fit of the sample data to the population estimates is extremely good: in no case does the sample proportion deviate by more than 1% from the expected proportion. The goodness of fit test applied to the data confirms this conclusion: the deviations between the observed and expected values are within statistically acceptable limits.

While the goodness of fit tests given above imply some biases of the sample with respect to sex, marital status and benefit type the extent of these biases is extremely small. Further, the differences reported could reflect the fact that the population data used to estimate the expected sample proportions do not exactly coincide with the definition of the sampling frame and thus tests of fit must be regarded as being only approximate. In view of these conditions, it would seem reasonable to conclude that any biases that are present in the sample are likely to be small and should not substantially affect the structure of the results reported in this study.

Section 4.1 Construction of Measures of Material Well-being

In Section 2.1it was indicated that the research design which had been adopted would require that a large amount of information about material circumstances and patterns of consumption be reduced to a scale reflecting material well-being, or to a small number of scales. The construction of such a scale or scales involves the following steps:

1. Construction of a pool of items deemed to reflect, to some extent, the degree of material well-being experienced by the person.

2. Refinement of this pool of items to produce items suitable for scale construction.

3. Development of scale measures using scaling procedures to reflect variations in the degree of material well-being.

4. Interpretation of the meaning and content of the scale measures.

5. Evaluation of the extent to which the scales measures give valid and reliable measures of the concepts or properties they are alleged to measure.

Each of these issues is discussed in detail in the subsequent subsections of this section.

Section 4.2 Construction of the Item Pool

From the survey data a total of 138 measures were extracted as possible indicators of material well-being. Appendix 1 gives a comprehensive description of these items. By way of illustration, it is convenient to group the contents of the item pool into the following classes:

1. Objective items relating to the nature and type of consumer durables owned by the respondent (or to which the respondent had access). Typical items in this class relate to the ownership of (or access to) such things as refrigerators, washing machines, televisions, cars, etc.

2. Items relating to the respondent's description of the degree of difficulty experienced in obtaining goods and services in the critical areas of food, housing, home heating, clothing and medical care. A typical item from this class would be, "In the last 12 months have you postponed a visit to the doctor because of the cost of such a visit?"

3. Items relating to the general state of repair of the respondent's accommodation. Most of these items were based on interviewer assessment of the accommodation.

4. Items relating to the respondent's savings and investments.

5. Items relating to the respondent's expenditure pattern (i.e. amount of expenditure on food, accommodation, etc.).

It is clear that the items provide a wide coverage of those factors relating to what in common sense terms would be considered "material well-being". An inspection of the item pool indicates that most items used in the analysis tend to concentrate on the "low" end of the scale, as it were. That is, a large number of questions relate to the basic necessities of life, there being comparatively few about luxuries. The reason for this balance is that it was felt necessary that the scale give a more sensitive measure of deprivation than of affluence, as this is the area of primary concern to the social policy maker. Another feature of the item pool is that the emphasis is almost entirely upon material possessions and material restrictions to the near exclusion of issues like loneliness, physical and intellectual handicaps, etc.

The reason for this is that it was found to be impossible, within the scope of a single survey, to cover all the problems of the aged and it was felt that as the research was concerned primarily with ascertaining the effects of cash income on the living conditions of the aged the primary emphasis should be placed on material living conditions.

Section 4.3 Refinement of the Item Pool

The item pool described in the preceding section was based on intuitive judgements about the types of measures most likely to reflect variations in material well-being. In order to check on these judgements, and at the same time reduce the pool of items to a more manageable number, the relationship of each item to various assessments of the respondent's overall living situation was examined. This procedure involved correlating each item with three external "criterion variables". The variables used were:

1. The interviewer's overall assessment of the respondent's standard of living. The assessment (M2.1 of the assessment schedule) was made on a five point scale from "very high" to "very low".

2. The respondent's assessment of the extent to which he or she considered present income satisfied everyday needs (such as food, accommodation, transport, medical treatment, social life). The assessment (L1.1 in the questionaire) was made on a five point scale from "very well" to "very badly".

3. The interviewer's assessment of the extent to which the respondent was facing financial difficulties. This was recorded on a four point scale (M3.1 in the assessment schedule), from "respondent experiencing considerable difficulties" to "respondent obviously well off and affluent".

It is clear that for an item to be regarded as having some claim to being a measure of material well-being it would need to show some degree of agreement with each of these assessments.

From the table of 138 x 3 correlations the 80 items which showed the best association with the three criteria were selected. (The selection was limited to 80 items because the computer programmes available for doing the subsequent part of the analysis could not cope with more than that number.) The correlations of the 80 selected items with the three criterion variables are shown in Appendix 2; each of the items have a correlation of not less than 0.20 with at least one of the criterion variables.

Section 4.4 Defining the Scale Dimensions

The next stage of the analysis was to seek to reduce the 80 items which had been selected to a small number of scale measures of material well-being. This task was approached through the application of a technique known as principal components analysis. (Appendix 3 provides a summary description of principal components analysis as applied to the survey data.) In brief, the method provides a means of evaluating the minimum number of "dimensions" required to account satisfactorily for the pattern of inter-correlations between the items. It also provides a means of obtaining a scale value for each respondent with respect to each dimension. This is obtained by adding up the items weighted in accordance to their contribution to the dimension.

The analysis revealed that it was reasonable to assume that the information in the 80 selected items could be represented by three basic dimensions:

1. The first dimension centred around a group of 35 items relating to the degree of deprivation suffered by the subject. These items are described in table 4.4.1. It can be seen from inspection of this table that the scale dimension defined by the items reflects the extent of financial hardship and difficulty experienced by the subject.

2. The second scale dimension centred around the group of items related to the nature of the respondent's accommodation. Table 4.4.2 shows the items which define this dimension. Again the interpretation of the scale dimension is readily apparent: it is a measure of accommodation standard.

3. The third scale dimension related to the nature and number of the consumer durables owned by the respondent and to financial assets. The items which define this dimension are shown in table 4.4.3. Again the scale content is readily interpretable: it is a measure of assets and material possessions.

Table 4.4.1 THE 35 ITEMS OF SCALE 1

Variable description[1]	Reference[2]
Whether the respondent considered total cost of present accommodation was causing him financial difficulties.	(12 / B 6.1)
Whether the respondent felt that, over the previous 12 months, the standard of his accommodation had run down because he could not afford the upkeep.	(14 / B 6.3)
Whether during previous winter the respondent had stayed in bed longer or had gone to bed early to reduce heating costs.	(25 / B 13.7)
Whether during previous winter the respondent had often had to put up with feeling cold because of trying to keep the heating bill down.	(28 / B 13.7)
Whether during previous 12 months the respondent had had to buy the cheaper grades of meat, in order to make ends meet, three or more times a week.	(29 / C 1.6)
Whether during previous 12 months the respondent had had to do without meat entirely, in order to make ends meet, on three or more days a week.	(30 / C 1.6)
Whether during previous 12 months the respondent had had to buy the cheaper kinds of fruit and vegetables, in order to make ends meet, three or more times a week.	(31 / C 1. 6)
Whether during previous 12 months the respondent had failed to buy items of clothing when he needed them, because of lack of money.	(37 / G 1.2)
Whether during previous 12 months the respondent had bought cheaper quality clothing because he could not afford better.	(38 / G 1.2)
Whether during previous 12 months the respondent had put off buying small items of clothing for as long as possible because of lack of money.	(39 / G 1.2)

1. The coding specification of the variables described here is given in Appendix 1.

2. The first of the numbers given as a reference is the variable number, following the numbering given in Appendix 1. The second number is the question number of the questionnaire item from which the variable was derived.

(Table 4.4.1 continued)

Variable description	Reference
Whether during previous 12 months the respondent had failed to buy a pair of shoes when needed, because of lack of money.	(40/G 1.2)
Whether during previous 12 months the respondent had repaired worn-out clothing because he could not afford its replacement cost.	(41/G 1.2)
Whether during previous 12 months, because of lack of money, the respondent had had to wear old or worn-out clothing when going out or visiting.	(42/G 1.2)
Whether during previous 12 months, because of lack of money, the respondent had relied on gifts from relatives or others for replacement clothing.	(43/G 1.2)
Whether during previous 12 months the respondent had bought second-hand clothing, because of lack of money.	(44/G 1.2)
Whether during previous 12 months the respondent had bought second-hand shoes, because of lack of money.	(45/G 1.2)
Whether the respondent had a pair of good watertight shoes suitable for winter.	(47/G 2.1)
Whether, because of the costs involved, the respondent had to do without or economise on hobby, knitting or sewing materials.	(48/G 3.1)
Whether, because of the costs involved, the respondent had to do without or economise on tobacco or cigarettes.	(49/G 3.1)
Whether, because of the costs involved, the respondent had to do without or economise on going to the hairdresser/barber.	(51/G 3.1)
Whether, because of the costs involved, the respondent had to do without or economise on visits to friends or relatives.	(52/G 3.1)
Whether, because of the costs involved, the respondent had to do without or economise on entertaining friends or relatives.	(53/G 3.1)
Whether, because of the costs involved, the respondent had to do without or economise on books and magazines.	(54/G 3.1)
Whether, because of the costs involved, the respondent had to do without or economise on holidays away from home.	(55/G 3.1)
Whether, because of the costs involved, the respondent had to do without or economise on running or owning a car.	(56/G 3.1)
Whether, because of the costs involved, the respondent had to do without or economise on the use of taxis.	(57/G.3.1)

(Table 4.4.1 continued)

Variable description	Reference
Whether, because of the costs involved, the respondent had to do without or economise on paid help in the garden.	(59/G 3.1)
Whether the respondent had to budget very carefully to make ends meet.	(61/G 4.1)
Whether, because of the expense, the respondent had to cut down on luxuries he used to enjoy and would still like to have.	(62/G 5.1)
Whether, if the respondent required a minor operation including a week of hospital treatment, he could afford to go to a private hospital. (It would have cost about $250.00.)	(63/H 1.2)
Whether during previous 12 months the respondent had postponed visits to a specialist because of lack of money.	(64/H 2.2)
Whether during previous 12 months the respondent had worn unsuitable glasses or no glasses because he could not afford replacements.	(67/H 2.2)
Whether during previous 12 months the respondent had worn ill-fitting or no dentures because he could not afford replacements.	(68/H 2.2)
Whether during previous 12 months the respondent had postponed visits to the dentist because of lack of money.	(69/H 2.2)
Whether during previous 12 months the respondent (or spouse) had often had to draw on savings to meet weekly living expenses such as food, clothing and other everyday expenses.	(77/K 3.2)

Table 4.4.2 THE 14 ITEMS OF SCALE 2

Variable description[1]	Reference[2]
Number of items needing repairs from the following list: windows; roof; walls; flooring; ceilings; doors; electrical wiring; plumbing; repiling; other; plus number of items needing painting from the following list: roof; outside walls; other.	(82/B 5.7)
Lounge, dining or living room - Walls: paint or wallpaper in new condition.	(134/N 1.2)
Lounge, dining or living room - Ceiling: paint or wallpaper in new condition.	(137/N 1.3)
Lounge, dining or living room - Woodwork on doors, window ledges, etc., chipped, old or dirty.	(138/N 1.4)
Lounge, dining or living room - Drapes or blinds shabby, torn or dirty.	(141/N 1.4)
Lounge, dining or living room - Floor covering in new condition.	(146/N 1.5)
Lounge, dining or living room - Floors bare and in shabby or old condition.	(147/N 1.5)
Lounge, dining or living room - Furniture shabby or dirty.	(148/N 1.6)
Lounge, dining or living room bright and airy.	(155/N 1.7)
Outside paint old, peeling.	(159/N 2.1)
Outside boards, walls or guttering in need of repair.	(161/N 2.1)
Roof in need of painting or repair.	(163/N 2.1)
Paths, outside stairways old, crumbling, rotten or broken.	(164/N 3.1)
Letterbox in good condition.	(168/N 3.1)

1. The coding specification of the variables described here is given in Appendix 1.

2. The first of the numbers given as a reference is the variable number, following the numbering given in Appendix 1. The second number is the question number of the questionnaire item from which the variable was derived.

Table 4.4.3 THE 18 ITEMS OF SCALE 3

Variable description[1]	Reference[2]
Toilet (inside the house) was a separate room.	(4 /B 5.4)
Respondent had access to both bath and shower.	(5 /B 5.5)
Respondent had the use of an automatic gas or electric stove or range.	(15 /B 7.1)
Respondent or spouse owned a car.	(34 /D 2.1A)
Number of different weekly or monthly magazines or periodicals respondent bought regularly, that is, at least three issues out of four.	(36 /F 4.3)
Total value of respondent's and spouse's savings and investments, coded into 26 groups;	(72 / K 1.4)
Total value of respondent's and spouse's life and endowment insurances	(73 /K 2.2)
Number of the following rooms which had hot and cold running water: bathroom; kitchen; laundry.	(81 /B 5.6)
Number of kitchen items from the following list the respondent had the use of: separate deep-freeze; electric food mixer; electric kettle or jug; electric toaster; stainless steel, formica or marble sink bench; stainless steel sink; dishwasher; disposal unit or wastemaster.	(83 /B 7.2)
Number of laundry items from the following list the respondent had the use of: ironing board; rotary clothes line; stainless steel tub; semi-automatic washing machine; fully automatic washing machine; tumble clothes drier.	(84 /B 8.1)
Number of items from the following list the respondent had the use of: arm chair; occasional or coffee table; sofa; china cabinet or sideboard; wall-to-wall carpet in louge or living room; matching dining table and chairs; complete matching dinner set; complete matching cutlery set.	(85 / B 9.1)
Number of bedroom items from the following list the respondent had the use of: Mirror (other than hand mirror); bedside rug; wall, table or bedside lighting; wardrobe; dressing table or chest of drawers; rubber or innersprung mattress; electric blanket or electric mattress; matching bedroom suite; wall-to-wall carpet.	(86 /B 10.1)

1. The coding specification of the variables described here is given in Appendix 1.

2. The first of the numbers given as a reference is the variable number, following the numbering given in Appendix 1. The second number is the question number of the questionnaire item from which the variable was derived.

(Table 4.4.3 continued)

Variable description	Reference
Number of items from the following list the respondent had the use of: vacuum cleaner; bookcase (or shelves) with books; telephone; more than one telephone or jackpoint; airing cupboard; clock; television set; radio; record playing equipment.	(87 /B 11.1)
Total number of heaters (other than central heating) in working order.	(88 /B 13.2)
Number of items from the following list which the respondent had in the cupboard or refrigerator at the time of interview: tea or coffee; sugar; milk; butter/margarine; eggs; cheese; flour; bread; breakfast cereals; jam, honey or other spread; cake; biscuits; meat; potatoes; onions; fresh or processed green vegetables; fresh fruit; processed fruit.	(90 /C 2.1)
Number of the following institutions in which the respondent had money invested: building societies; investment clubs or societies; Post Office Savings Bank; other trading or savings banks; property syndicates; Post Office Bonus Bonds; National Development Bonds; shares or debentures; interest in a business or financial venture of any kind; a loan to any person; any other investments.	(111 /X 1.3)
Interviewer described house as suggesting a well-to-do resident.	(157/N 2.1)
Interviewer described the street where the respondent's house was situated as a street of high quality housing.	(172/ N 4.1)

Somewhat surprisingly the scale analysis revealed that the three dimensions were not strongly related to each other. The deprivation dimension appeared to be very largely independent of the housing and goods dimensions although these latter two dimensions were somewhat related.

The apparent lack of relationship between the extent of deprivation reported by the respondent and the measures relating to goods and housing was unexpected and is rather puzzling. The reasons for the lack of relationship are not known with any certainty, but two possible explanations are as follows:

1. A person's accumulation of goods and assets is likely to be largely a reflection of circumstances and income over a substantial part of his life and in particular over a period prior to retirement. It is possible that the factors which determine accumulation of goods and assets before retirement are not strongly related to factors which determine the likelihood of deprivation being experienced subsequent to retirement. The same sort of explanation could be postulated concerning the lack of relationship between degree of deprivation and standard of housing.

2. A second possibility is that the scales reflect three non-overlapping segments of a more general scale, with the deprivation measure being a good measure for the low end of this scale and the housing and goods measures of the high ends of this scale. If this were the case one would expect relatively little association between the scale measures.

To verify the results of the principal components, the data were subjected to another form of analysis known as cluster analysis. The main difference between the principal components analysis and cluster analysis is that the former locates a series of scale dimensions whereas the latter locates groups of inter-related variables. In general, however, a group of related variables implies the presence of a scale dimension, and vice versa. Thus the cluster analysis provided a check on the extent to which the principal components results had given a reasonable data representation. The two results showed a very good agreement,

indicating that the scaling solution obtained was to some extent independent of the method used to derive it.

After the basic scale dimensions had been defined the next stage was to devise a method of producing numerical scale scores which would reflect the status of each individual on each of the three dimensions. After preliminary work comparing the results obtained by several different scoring methods the one adopted was that of adding the items defining the scale in such a way that all items had equal weight. Although this is one of the simplest methods of deriving scale scores it proved to be virtually as effective as more complicated methods.

Section 4.5 Testing the Reliability and Validity of the Scale Dimensions

The preceding section described briefly the method by which scale scores were defined. It examines the extent to which the scales are valid and reliable measures. A measure can be regarded as valid to the extent the properties of that measure meet the conditions that one would reasonably expect them to meet. It is convenient to identify three types of validity:

1. Face validity: the extent to which the measure contains the type of items that one would expect it to contain.

2. Construct validity: the extent to which the measure is related to other seemingly similar measures.

3. Predictive validity: the extent to which the measure predicts the type of outcome that one would expect it to predict.

The notion of reliability concerns the extent to which the scale scores give reproducible results.

The validity of the derived scales was tested in the following ways:

1. Face validity:
   Inspection of tables 4.4.1, 4.4.2, 4.4.3 reveals that the three derived scales contain items which are consistently of the same type. The first scale contains all items relating to the degree of budgeting and restriction reported by the respondent; the second scale contains all items relating to housing; and the third scale contains all items relating to the person's accumulated financial assets, goods, and chattels. The extent to which the types of items within each scale dimension are consistent in this way provides strong evidence for the face validity of the scales.

2. Construct Validity:
   To test the agreement of the derived scales with other measures relating to material well-being, the scales were correlated with the following criterion variables:

1. The interviewer's assessment of the respondent's overall standard of living rated on a five point scale from "very high" to "very low". (Reference M2.1 in the Assessment Schedule).

2. The interviewer's assessment of the extent of financial difficulty being experienced by the respondent, rated on a four point scale from "obviously well off" to "considerable difficulties." (Reference M3.1 in the Assessment Schedule).

3. The respondent's assessment of the extent to which his income satisfied "everyday needs", rated on a five point scale from "very well" to "badly". (Reference L1.1 in the questionnaire).

4. The interviewer's assessment of the standard of the interior of the respondent's house, rated on a five point scale from "very high" to "very low". (Reference N1.8 in the Assessment Schedule).

5. The interviewer's assessment of the exterior of the respondent's house, rated on a five point scale from "very high" to "very low". (Reference N5.1 in the Assessment Schedule).

Each of these items was correlated with each other and with the three derived scales. The intercorrelations are shown in table 4.5.1[1].

In general, these intercorrelations provide good evidence to suggest the scales were valid measures. Scale 1, the deprivation scale, shows the highest correlations with the interviewer's assessment of the financial difficulties experienced by the subject and the respondent's assessment of the extent to which his income satisfied his everyday needs. This result is consistent

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1. The values given in the table are Pearson product moment correlation coefficients, which can range from -1 to +1. All ratings have been scored to give measures operating in the same direction (a high value indicating a satisfactory situation); as a consequence all the correlations are positive. The values can be interpreted as follows: a value of zero would indicate no association between the measures; values in the range 0.4-0.6 indicate a modest to good degree of association; a value of 1 would indicate perfect association.

Table 4.5.1: Validation matrix: intercorrelations between the three scale measures and the five criterion variables

	Scale 1	Scale 2	Scale 3	Rating 1: Standard of living	Rating 2: Financial difficulties	Rating 3: Adequacy of income	Rating 4: Interior of house	Rating 5: Exterior of house
Scale 1	X	0.299	0.367	0.350	0.593	0.519	0.233	0.216
Scale 2		X	0.468	0.570	0.367	0.146	0.521	0.547
Scale 3			X	0.650	0.510	0.300	0.516	0.518
Rating 1: Interviewer's rating of respondent's standard of living				X	0.565	0.315	0.692	0.660
Rating 2: Interviewer's rating of extent of respondent's financial difficulties					X	0.543	0.432	0.381
Rating 3: Respondent's rating of adequacy of income to satisfy everyday needs						X	0.242	0.201
Rating 4: Interviewer's rating of standard of interior of respondent's house							X	0.587
Rating 5: Interviewer's rating of standard of exterior of respondent's house								X

with the view that the scale measures financial hardship. Similarly, Scale 2 correlates substantially with the two interviewer's assessments relating to the standard of the respondent's accommodation. This supports the notion that Scale 2 is a measure of accommodation standard. Finally, Scale 3 is most strongly associated with the interviewer's overall rating of the respondent's standard of living and shows quite high correlations with the housing ratings. This is consistent with the previous interpretation of Scale 3 as a measure of the standard of the material possessions owned by the respondent.

The reliabilities of the scales were assessed using a technique known as the Kuder Richardson (KR21) coefficient. It is not appropriate to report the rationale of this procedure in this paper. The KR21 coefficients are presented in table 4.5.2. They indicate a high degree of reliability for all three scales.

Table 4.5.2: Reliabilities of the scale measures

	Reliability of scale: Kuder Richardson 21 coefficient
Scale 1	0.917
Scale 2	0.859
Scale 3	0.835

The evidence presented in table 4.5.1 and table 4.5.2 indicates that the derived scales display a high degree of validity and reliability as measures of different aspects of material well-being.

Section 4.6 Interpretation of the scale scores

Results given in the previous section indicate some of the characteristics of the scales in statistical terms. However, if he is to make use of a scale measure the policy maker requires more than this: he needs to have explicit knowledge of the set of circumstances implied by any particular value of the scale so that he can form judgements about whether an individual or the members of a group are subject to a degree of deprivation which is not tolerable within the context of the policies which are being pursued.

The problem, therefore, is to find some means to convey what a scale score means in concrete terms. For reasons explained in the next section, attention has been confined in the subsequent analysis to Scale 1. In providing an exposition of the meaning of that scale the following strategy has been adopted. The scale scores have been grouped into 10% groups ranging from the 10% of respondents with the lowest scores to the 10% with the highest scores. For each such 10% group, a description of the conditions prevailing in that group is given. These descriptions involve reporting the proportion of persons displaying each of the characteristics which contribute to the scale.

Thus for each group defined by Scale 1 there is a statistical profile showing the problems and conditions that are experienced by members of that group. These profiles are set out in Appendix 4. The interpretation of much of the remainder of this report requires a thorough knowledge of the appendix; without such knowledge many of the results presented in subsequent sections are without concrete meaning.

Section 5.1. Identifying those Groups Experiencing Hardship

The scales described previously have an immediate policy application in that they permit the identification of those persons falling below the stated goal of a "reasonable and dignified" standard of living. Such diagnosis is fundamental in the development of benefit policies in that it permits identification of those persons who are in need of further assistance.

The first stage of the process of identifying such persons involves setting up a working definition of what scale levels can be considered to constitute a reasonable and dignified standard of living. Such a definition ultimately involves a value judgement about those levels of living which are to be considered as acceptable. For the purposes of proceeding with the analysis the following working decisions were made:

1. After inspection of the content of the three scales it was decided that the definition of a reasonable and dignified standard of living should be set in terms of the contents of the scale relating to the degree of deprivation experienced by the respondent. This decision was made on the grounds that this scale reflected the day to day living conditions experienced by the respondent and dictated by his current income. The contents of the other scales by and large would seem to reflect the effects of previous pre-retirement history. In so far as the concern of benefit policy is with providing a person with income to meet his current needs, Scale 1 seems the most appropriate measure to use in examining the implications of possible changes in benefit levels. The aspects of a person's situation which determine his scores on Scales 2 and 3, while undoubtedly important to any overall evaluation of material wellbeing, are unlikely to be susceptible to effective modification through compsratively small injections of additional income.

2. After inspection of the 10 scale categories presented in Appendix 4 it was decided that for the purposes of the research any person who fell into the bottom three scale groups could be described as not meeting the goal of a reasonable and dignified standard of living. The implication of this decision is that approximately 30% of the aged population may be considered as falling below the desired goal. It should be stressed that this decision is arbitrary and based on the authors' judgement. If other levels are chosen by policy makers then the analysis can be re-run fairly easily to produce a new set of results. However, while setting different levels will tend to change the proportions of persons who are described as deprived, such changes are unlikely to influence the general structure of the research findings: i.e the same characteristics will tend to emerge as being associated with deprivation irrespective of the particular definition which is used.

Having opted for a particular operational specification of deprivation, it will be possible to make an examination of the general characteristics of those persons who tend to fall below the stipulated goal. This will involve a variable by variable examination of the features of these persons in contrast to the features of those who are above the goal. A composite method of description will then be applied to the data to identify sets of conditions which simultaneously are associated with falling below the specified level.

Section 5.2 The Relationship of Various Factors to Hardship

A) Benefit Type:

A variable which is likely to be associated with falling below the desired level is the type of benefit being received by the respondent. In general one would expect that those persons in receipt of the superannuation benefit would be considerably better off than those persons in receipt of other types of benefit. Table 5.2.1. shows the proportions of persons falling below the specified goal by the type of benefit received by the respondent.

Table 5.2.1. Proportion falling below specified level x Benefit type[1]

	Below Level	Above Level	Total
Age benefit	42% (417)	58% (568)	100% (985)
Superannuation benefit	17% (120)	82% (698)	100% (818)
War veterans allowance	35% (38)	65% (71)	100% (109)
Total	30% (576)	70% (1337)	100% (1912)

It can be seen from the table that there is a strong tendency for persons falling below the specified level to be in receipt of age benefit: of the 576 persons described as being below the level, 418 (72%) were on Age benefit. The proportion of those receiving War Veterans allowance who are below the specified level (i.e. 35%) is between the values for those receiving Superannuation benefit and those receiving Age benefit (those proportions being, respectively, 17% and 41%). However, those receiving War Veterans comprise only a small proportion (6%) of beneficiaries.

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1. On the data tape used for the analysis type of benefit was not specified for one respondent. This respondent has been omitted from the table, and accordingly the total for the table is 1912 rather than 1913, the total number of respondents to which the tape relates.

Age beneficiaries can be further subdivided according to whether supplementary assistance has been received.

Table 5.2.2. Age beneficiaries: proportion falling below specified level x Supplementary assistance[1]

	Below Level	Above Level	Total
Age beneficiaries receiving supplementary assistance	63% (54)	36% (31)	100% (85)
Age beneficiaries not receiving supplementary assistance	40% (363)	60% (537)	100% (900)
Total	42% (417)	58% (568)	100% (985)

The results of Table 5.2.2. are dramatic: it reveals quite clearly that in terms of the incidence of hardship as defined here those receiving supplementary assistance tend to be falling far behind the remainder of Age beneficiaries: 64% of those receiving supplementary assistance fell below the level deemed acceptable, in contrast with 40% of Age beneficiaries not in receipt of such assistance.

The main policy implications of these findings are as follows:

1. The major thrust at attempting to reduce the overall incidence of hardship amongst the aged population of New Zealand must be directed at increasing the level of wellbeing of the Age beneficiaries. The incidence of hardship in this group is three times greater than in the Superannuation group.

2. The analysis reveals quite clearly that the most deprived segment of the aged population is made up of those Age beneficiaries who are in receipt of

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1. Supplementary assistance here relates to any form of supplementary assistance received over the preceding twelve months.

supplementary assistance. It is quite clear from the results that the current levels of supplementary assistance are inadequate to raise the standard of the living of the recipient to a level comparable with the bulk of the population.

B) Gross Income and Degree of Deprivation:

A variable which has an obvious direct relevance to the amount of hardship faced by the respondent is the amount of income that he receives from various sources. It would be expected that as income increases the chance of the respondent falling below a level deemed to be reasonable and dignified would tend to decrease.

The relationship between gross income and attainment of the goal is shown in table 5.2.3. In this table the proportion of persons falling below the goal is presented for each of ten income groups. The measure used is gross per capita income, which is defined as follows:

1) For unmarried beneficiaries gross income was taken to be the sum of all income sources recorded in the questionnaire. (Ref K1.1 of questionnaire).

2) For married beneficiaries gross per capita income was taken to be the total sum of both the husband's and wife's incomes divided by two.

The reasons for using gross income, as opposed to net income, were largely pragmatic. It was felt that it would place an undue burden on elderly respondents with several income sources to ask them to estimate their net income.

Table 5.2.3 excludes 17 observations. These were of respondents who showed an anomalous relationship between income and scale score in that high levels of deprivation were reported in conjunction with high incomes. It was known that the income data were subject to some degree of error, and it seemed desirable

to err on the side of caution and remove cases displaying the markedly incongruous combinations of deprivation and income values.

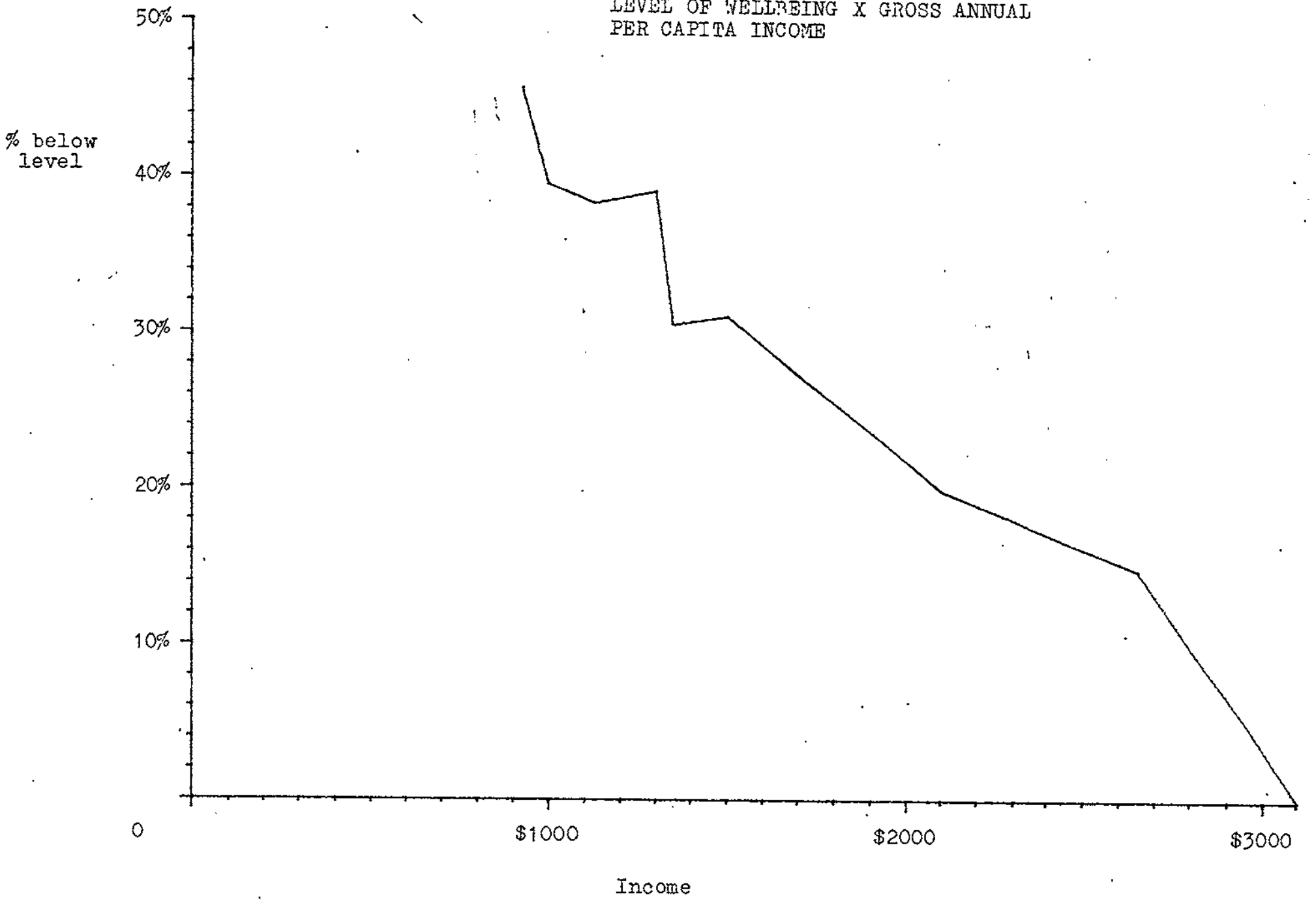
Table 5.2.3 Proportion falling below specified level x Gross per capita income

Income	Below Level	Above Level	Total	Median Income for Income Group
Less than $950	45.7%(64)	54.3%(76)	100%(140)	$925
$951 - $1050	39.5%(81)	60.5%(124)	100%(205)	$1000
$1051 - $1150	38.3%(90)	61.7%(145)	100%(235)	$1125
$1151 - $1300	39.1%(141)	60.9%(220)	100%(361)	$1300
$1301 - $1400	30.5%(25)	69.5%(57)	100%(82)	$1350
$1401 - $1500	31.0%(45)	69.0%(100)	100%(145)	$1500
$1501 - $1850	27.3%(48)	72.7%(128)	100%(176)	$1700
$1851 - $2300	19.9%(38)	80.1%(153)	100%(191)	$2100
$2301 - $3100	14.8%(26)	85.2%(150)	100%(176)	$2650
$3100+	0.0% (0)	100.0%(185)	100%(185)	$3750
Total	29.4%(558)	70.6%(1338)	100%(1896)	
Number of excluded observations	17	0	17	

Table 5.2.3 shows that as income increases there is a strong tendency for the proportion of persons falling below the stipulated level to decline. This tendency can be seen clearly from the graphical presentation of the data in figure 5.2.1, which shows a plot of the proportions of subjects falling below the level for each of the income groups. The plot of points shows a strong downwards trend. The figures used to plot the data are based on income group medians for the income groups shown in table 5.2.3, save for the last value which is taken as the lower limit of the class interval.

A striking feature of these results is that even at the lowest income level considerable proportions of persons avoid deprivation. This implies that income is not the sole determinant of material wellbeing and that to provide an adequate description of the impact of income on material wellbeing it will be necessary to

FIGURE 5.2.1 : PROPORTION FALLING BELOW SPECIFIED LEVEL OF WELLBEING X GROSS ANNUAL PER CAPITA INCOME



take account of various intervening and circumstantial factors which influence the allocation of income.

An implication of this finding is that additional monies expended on benefits will have their maximum impact in reducing the number of people suffering from deprivation when they are distributed in a selective way which provides differential amounts of additional income to beneficiaries according to their circumstances. This issue will not be discussed further here, but is the subject of an extensive analysis presented in section 6.

C) Assets and Deprivation

It is natural to follow the consideration of the relationship between income incidence and deprivation with an analysis of the way in which a person's accumulated savings and assets[1] tend to bear on the extent to which he is subject to deprivation. Table 5.2.4 shows the relationship between the proportions of persons falling below the stipulated level and the value of investments that are held. (A specification of the types of savings and investments which make up this total is provided by questionK1.3 in the main questionaire.)

Table 5.2.4 Proportion falling below specified level x ~~Gross per capita income~~ Assets

Assets	Below Level	Above Level	Total	Estimated median assets value
No assets	45.6%(93)	54.4%(111)	100%(204)	
Up to 399	53.3%(113)	46.7%(99)	100%(212)	$200
400 - 799	42.2%(79)	57.8%(108)	100%(187)	$600
800 - 1499	32.1%(79)	67.9%(167)	100%(246)	$1100
1500 - 2499	30.4%(73)	69.6%(167)	100%(240)	$2000
2500 - 3999	19.6%(38)	80.4%(156)	100%(194)	$3200
4000 - 5999	25.0%(41)	75.0%(123)	100%(164)	$4800
6000 - 9999	19.7%(30)	80.3%(122)	100%(152)	$7800
10000 - 17999	12.1%(17)	87.9%(124)	100%(141)	$13500
18000+	0.0% (0)	100.0%(161)	100%(161)	
Total	29.6%(563)	70.9%(1338)	100%(1901)	
Missing observations	12	0	12.	

1. The figure used for savings and assets includes: savings held

(footnote continued on next page)

Inspection of table 5.2.4 reveals that the proportions of persons falling below the level is strongly related to assets: of those persons with assets under $400, approximately 50% are living at a level below that consistent with the notion of dignity and comfort, whereas only 12% of those with assets between $10,000 and $17,999 are living below the level.

In spite of a clear tendency for deprivation to decline as assets increase a surprisingly high incidence of deprivation is reported amongst people with quite substantial assets. This might suggest that the scale score is misrepresenting these peoples' situation. To check on the likelihood of such bias being present, examination was made of respondents assessments of their financial situation and the interviewers assessments of the extent of financial hardship. Both these measures showed a similar pattern of results to that obtained using the scale score. It appears then that there is a small proportion of people who have high assets but who allege they suffer from the type of privations measured by the scale. There are several ways of explaining such an anomalous result:

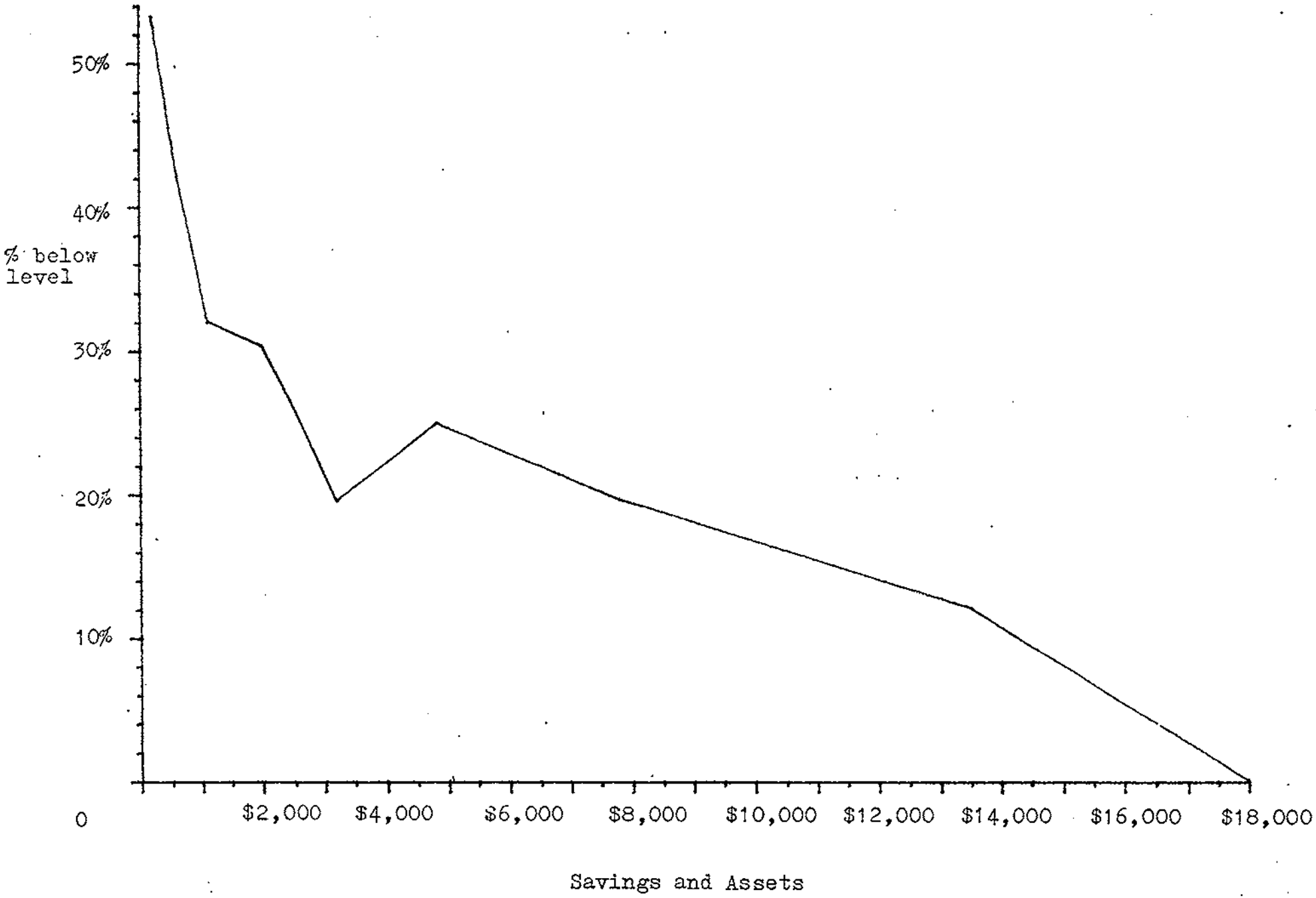
1. First, it could reflect the type of behaviour for which "rich eccentrics" are notorious: scrimping and saving when there is no objective reason for such behaviour.
2. A second possibility that remains to be examined is that there is some degree of error in the measurement of assets. This possibility will be explored when the clean data tape is available.
3. A third possibility is that some respondents who were in fact quite wellcff deliberately misrepresented their living circumstances.

The relationship between assets and the probability of falling below the goal is shown graphically in figure 5.2.2. Those people who reported no assets have been excluded, as it is suspected that many of these are persons who refused to provide information on assets rather than who failed to have assets. Again, this possibility can be checked upon once the clean data

in bank accounts, as Post Office Bonus Bonds, as National Development Bonds, etc.; shares and debentures; any interest the respondent might have in a business or other financial venture; any loan to another person; and any money put into Building Societies,, investment societies, property syndicates, etc. The figure does not include the value of the respondent's house (if he owns it) nor of personal possessions.

(continuation of footnote from previous page)

FIGURE 5.2.2 : PROPORTION FALLING BELOW SPECIFIED LEVEL OF WELLBEING X TOTAL SAVINGS AND ASSETS



tape is available.

Discounting the somewhat anomalous results at the high end of the asset range, it is clear that the value of assets possessed by a person is an important determinant of the level of his material wellbeing.

D) Marital Status and Deprivation

Table 5.2.5 shows for various groups defined by marital status the proportions of persons falling below the specified goal.

Table 5.2.5 Proportion falling below specified level x Marital status

Marital Status	Below Level	Above Level	Total
Never married	32.9%(47)	67.1%(96)	100%(143)
Married	28.7%(311)	71.3%(772)	100%(1083)
Legally separated	31.3%(5)	68.8%(11)	100%(16)
Divorced	44.8%(13)	55.2%(16)	100%(29)
Widowed	31.0%(199)	69.0%(442)	100%(641)
Total	30.1%(575)	69.9%(1337)	100%(1912)
Missing observations	0	1	1

The table reveals that overall there is very little difference in the degree of hardship experienced by married and single beneficiaries: in general married beneficiaries appear to be slightly better off than non-married beneficiaries. However the differences in the table are not statistically signficant and could have been arisen by chance. The main implication of this finding is that the current relativity for married and single benefits is such as to ensure both populations with an approximately equivalent level of material well being. (The issue of the relativity for married and single beneficiaries is examined in greater detail in section 6 of this report.)

E) Age and Deprivation

One might expect that with increasing age the level of material wellbeing might tend to decline because of a progressive depletion of assets to meet living costs. However, the survey data indicated that this is not the case; in fact the trend was the reverse with older persons tending to report less deprivation than younger respondents. The extent of this trend can be seen from inspection of table 5.2.6:

Table 5.2.6 Proportion falling below specified level x Age

Age Group	Below Level	Above Level	Total
Up to 69	33.9%(251)	66.1%(489)	100%(740)
70 - 74	32.0%(179)	68.0%(380)	100%(559)
75 - 79	28.8%(92)	71.2%(227)	100%(319)
80 - 84	18.6%(37)	81.4%(162)	100%(199)
85+	16.7%(16)	87.0%(80)	100%(96)
Total	30.1%(575)	69.9%(1338)	1913
Missing observations	—	—	—

The reasons for the trend remains to be examined in detail. However the authors would suggest the following possible explanations:

1. It might be suggested that older persons would be less prone to report hardship than younger persons owing to a stronger adherence to traditional values emphasising frugality and acceptance of necessary restrictions. However, some doubt is cast on this explanation by the fact that the interviewer's assessment of the respondent's financial difficulties also show a similar but smaller trend for less deprivation to occur amongst older respondents.

2. Another explanation is that as persons become older they tend to receive a greater amount of help and support from friends and relatives and thus to some extent are protected from the privations they might otherwise suffer.

F) Home Ownership and Deprivation

Table 5.2.7 shows the relationship between type of accommodation and the extent of deprivation.

Table 5.2.7 Proportion falling below specified level x Type of accommodation

Accommodation	Below Level	Above Level	Total
Rental accommodation	50.9%(141)	49.1%(136)	100%(277)
Own house and paying mortgage	37.3%(75)	62.7%(126)	100%(201)
Own house with no mortgage	25.4%(314)	74.6%(920)	100%(1234)
Other	22.5%(45)	77.5%(155)	100%(200)
Total	30.1%(575)	69.9%(1337)	100%(1912)
Missing observations	0	1	1

The table reveals that there are marked differences in the incidence of hardship between the accommodation groups. Those renting appear to have the highest incidence of hardship with over 50% of the people in this category falling below the specified level. The next worst off group comprises those persons paying mortgages, followed by those living in their own homes and finally those living in other circumstances. Some comment on the interpretation of the "other" category is in order. This group contains all those persons who do not fall into the first three categories of the table and probably covers a diverse range of living circumstances, from living with relatives to living in private hotels and boarding houses. It would seem plausible that the reason that this residual group has a relatively low incidence of deprivation is that it contains a substantial number of persons residing in the homes of relatives. The general standard of living experienced by such people will be contingent on the nature of the home in which they are residing.

G State of Health

Another factor which might be expected to have quite an important influence on a person's general level of material

wellbeing is their state of health. Table 5.2.8 shows the relationship between the respondent's description of his general state of health and the incidence of deprivation.

Table 5.2.8 Proportions falling below specified level x Respondent's rating of state of health

Respondent's Rating of State of Health	Below Level	Above Level	Total
Perfect health	20.4%(44)	79.6%(172)	100%(216)
Good health	23.0%(210)	77.0%(702)	100%(912)
Indifferent health	39.7%(249)	60.3%(378)	100%(627)
Poor health	45.9%(72)	54.1%(85)	100%(157)
Total	30.1%(575)	69.9%(1337)	100%(1912)
Missing observations	0	1	1

Again the trends in the data are quite marked. Of those describing themselves as in poor health or indifferent health, 41% fell below the minimum level, whereas of those in good health or better only 23% fell below the minimum level. The trends in the table are highly significant in statistical terms.

Another indicator of state of health also was available, namely the longest single period the respondent had spent in bed over the previous year because of sickness or injury. To simplify presentation this data has been reduced to two categories: in bed for less than a week, and for a week or longer. The data is shown in table 5.2.9, broken down according to incidence of deprivation.

Table 5.2.9 Proportion falling below specified level x Time in bed because of sickness or injury

Longest single period spent in bed over the last 12 months because of sickness or injury	Below Level	Above Level	Total
Less than 1 week	26.0%(368)	74.0%(1048)	100%(1416)
1 week or more	41.6%(207)	58.4%(290)	100%(497)
Total	30.1%(575)	69.9%(1338)	100%(1913)
Missing observations	—	—	—

The results support those obtained using the previous health measure, namely that those with health difficulties show a higher incidence of deprivation. In particular, of those who had spent one week or longer in bed 42% fell below the specified level, while of those who had spent less than a week in bed only 26% fell below the level. In statistical terms the difference is highly significant.

The reasons for the relationship between the respondents' state of health and the extent of deprivation reported have not been fully examined. However, the following tentative explanations may be suggested:

1. Sickness would tend to place a number of additional expenses on a person and as a consequence his standard of living might be reduced to meet these necessary expenses. If this explanation is accepted then the most obvious policy alternative is to explore ways and means of easing the expense of sickness for the aged.

2. Another implication of poor health is that it may reduce the person's ability to earn additional income thereby depressing his overall level of material wellbeing.

H) Location and Deprivation

Another factor which could possibly influence the incidence of deprivation is the region of New Zealand in which respondents live. Tables 5.2.10, 5.2.11, 5.2.12 show the incidence of deprivation for various geographic subdivisions of New Zealand. In particular table 5.2.10 gives a comparison between the North and South Islands with respect to incidence of deprivation; table 5.2.11 gives comparisons between the four main centres (Auckland, Wellington, Christchurch and Dunedin); and table 5.2.12 shows the the relationship between the size of population centre and the incidence of deprivation reported.

Table 5.2.10 Proportion falling below specified level x Whether living in North or South Island

Island	Below Level	Above Level	Total
North Island	30.7%(395)	69.3%(890)	100%(1285)
South Island	28.7%(180)	71.3%(448)	100%(628)
Total	30.1%(575)	69.9%(1338)	100%(1913)
Missing observations	——	——	——

Table 5.2.11 Proportion falling below specified level x Whether living in one of four main centres

Centre	Below Level	Above level	Total
Auckland, Wellington, Christchurch or Dunedin	31.4%(292)	68.6%(639)	100%(931)
Other	28.8%(283)	71.2%(699)	100%(982)
Total	30.1%(575)	69.9%(1338)	100%(1913)
Missing observations	——	——	——

Table 5.2.12 Proportion falling below specified level x Size of population centre in which respondent is living

Population of Respondent's area	Below Level	Above Level	Total
5,000	28.2%(97)	71.8%(247)	100%(344)
5,000 - 9,999	27.5%(28)	72.5%(74)	100%(102)
10,000 - 19,999	25.7%(19)	74.3%(55)	100%(74)
20,000 - 99,999	29.9%(172)	70.1%(404)	100%(576)
100,000	31.8%(259)	68.2%(555)	100%(814)
Total	30.1%(575)	69.9%(1335)	100%(1910)
Missing observations	0	3	3

It can be seen from the above three tables that there is no evidence to suggest the presence of any substantial regional variations in rates of deprivation. It is possible that finer geographic breakdowns might produce evidence for some such

differences, but limitations of time have prevented such analysis from being conducted for this report.

I) Summary of Results

This section has reported results concerning relationship between incidence of deprivation and a number of variables postulated a priori as likely to have some bearing on deprivation. A substantial degree of association was found between deprivation and the following variables.

1. Benefit type: those on Age benefit are worse off than those on Superannuation benefit or on War Veterans allowances. Those in receipt of grants of supplementary assistance are the worst off group.

2. Income: the probability of falling below the level set is strongly related to income: at income levels below $1,000 gross per annum per capita about 45% of people fall below the level while of those with income above $1,850 less than 20% fall below the level.

3. Assets: the probability of falling below the specified level is closely related to the value of assets held by the respondent.

4. Accommodation type: the extent of deprivation shows strong variation with the type of accommodation. Those renting their accommodation are in the worst position, followed in order by those paying mortgages, those owning their own homes without mortgage, and finally those living in other situations.

5. Age: there is a consistent tendency for the amount of deprivation reported to reduce with age. It has been suggested that this tendency might arise because as people become older their friends and relatives might make greater effort to prevent them suffering undue hardships.

6. Health: there is quite a marked tendency for the degree of reported deprivation to vary with the health of the respondent: respondents in poor health report greater deprivation than respondents in good health.

Contrary to expectations, no association could be discerned between deprivation and the following two variables:

1. Marital Status: there is no evidence to suggest that there are any statistically significant differences in the amount of deprivation experienced by married and unmarried beneficiaries.

2. Location: as yet the analysis has produced no results to indicate any significant between-region variations in the incidence of deprivation.

Section 5.3 The Effects of Combinations of Factors on the Incidence of Hardship

The preceding analysis, while useful in identifying individual variables which are related to the incidence of hardship, has the limitations that it considers the effects of the variables only "one at a time". To examine the influence of various combinations of circumstantial factors on the degree of hardship which is experienced, it is necessary to undertake a multivariate analysis. The procedure used in the present instance is a computer technique known as AID (Automatic Detection of Interaction Effects; Sonquist and Morgan 1965). The procedure works by successively splitting the sample into groups with each sub-division producing a pair of groups such that one of them contains a higher incidence of hardship than the "parent" group and the other contains a lower incidence of hardship. For purposes of presentation the results of an AID analysis conventionally are presented as a tree of two-way splits which successively sub-divide the sample. The preceding summary description of AID will be more tangible when related to the tree diagrams presented later in this section.

The results of the analysis are presented in the tree diagrams shown in figures 5.3.1A, 5.3.1B, 5.3.1C. These diagrams show the tree results for the sample when it is divided up into three groups based on the value of the savings and assets[1] reported by the respondents. The three groups are:

1. Those respondents with assets less than $1,000;
2. Those respondents with assets greater than $1,000 but less than $10,000;
3. Those respondents whose assets were in excess of $10,000.

In fact these three groups were defined by the initial two partitions of the AID procedure but in presenting the results it has been convenient to break the main tree up into three sub-trees defined by these asset groups. For each of the sub-groups shown

1. The definition of savings and assets used in this analysis is given in footnote 1 in Section 5.2. Note that savings and assets do not include the value of the respondent's house (if he owns it) nor of personal possessions.

FIGURE 5.3.1.A. AID TREE FOR RESPONDENTS WITH LESS THAN $1,000 SAVINGS AND ASSETS

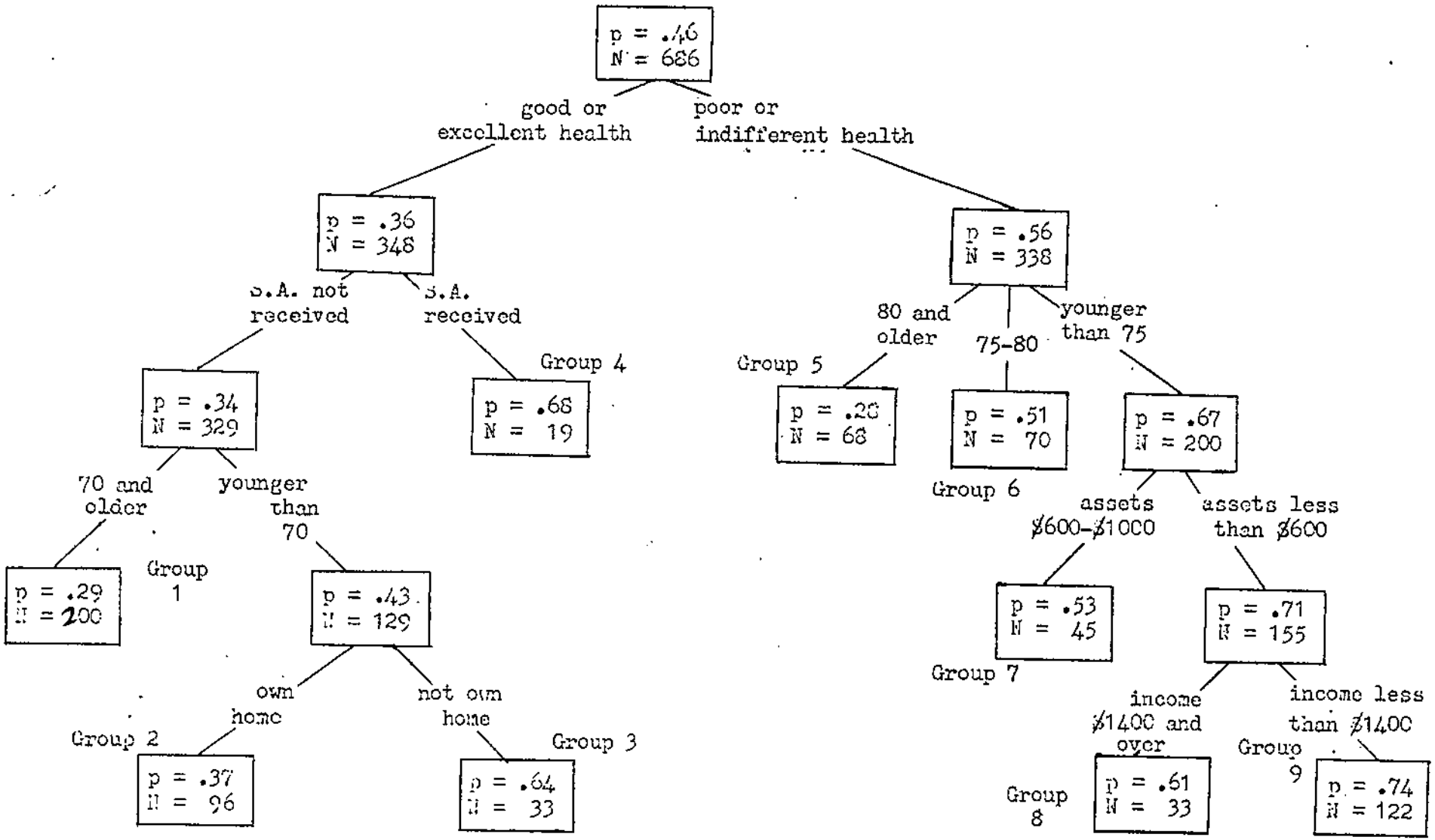


FIGURE 5.3.1.B. AID TREE FOR THOSE WITH SAVINGS AND ASSETS IN THE RANGE $1,000–$10,000 INCLUSIVE

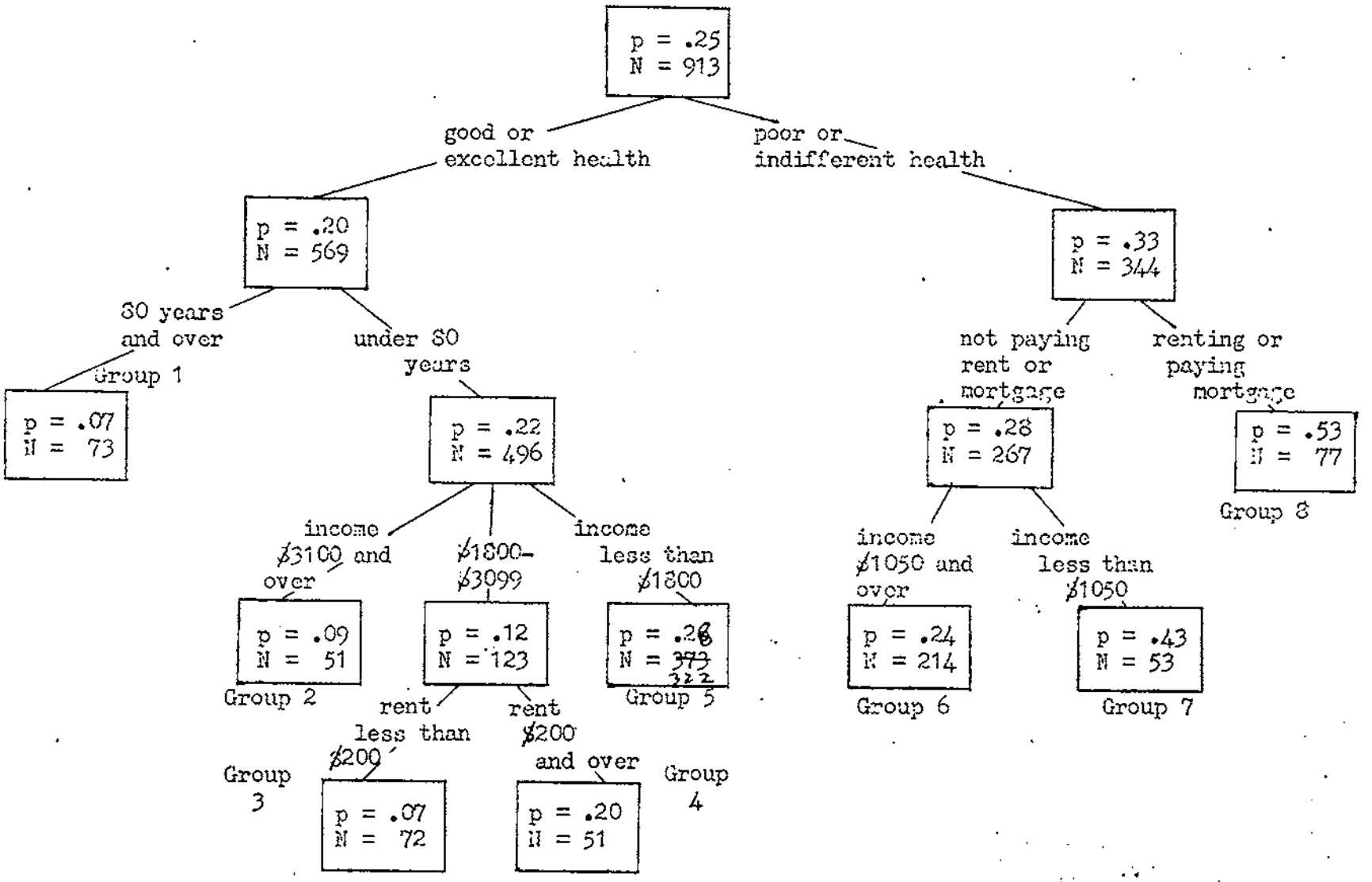
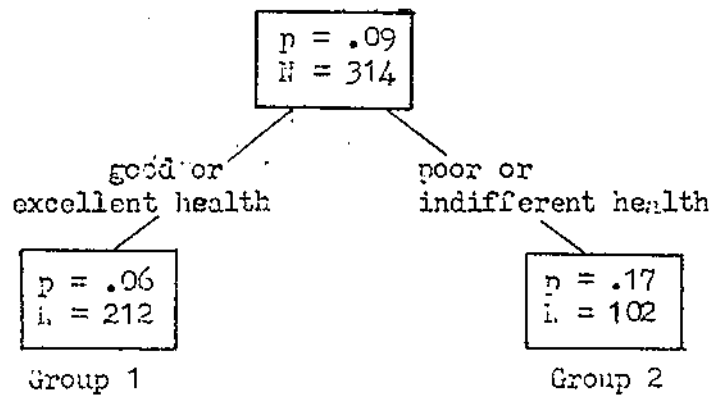


FIGURE 5.3.1.C. AID TREE FOR THOSE WITH ASSETS OF MORE THAN $10,000



in the tree diagrams the value labelled "p" is the proportion of members of the group who display a degree of hardship below the level which has been specified as being tolerable. The value labelled "N" is the number of sample members in that particular sub-group.

The following interpretation of the results is provided.

Within the group of respondents whose investments and savings were less than $1,000 it was found best to distinguish 9 separate groups of persons in terms of the degree of hardship experienced. These groups are described as follows:

Group 1: This group comprised those who reported being in good or excellent health, were not in receipt of a grant of supplementary assistance during the year prior to interview; and were 70 years old or over. The incidence for this group was relatively low: only 29% fell below the specified level.

Group 2: This group comprised those who reported being in good or excellent health; were not in receipt of a grant of supplementary assistance during the year prior to interview; were under 70 years old; and who owned their own homes (with or without a mortgage). The incidence of hardship for this group was somewhat higher than for group 1: 37% fell below the specified level.

Group 3: This group comprised those who reported being in good or excellent health; were not in receipt of supplementary assistance during the year prior to the survey interview; were under 70 years old; and who did not own their own homes. The incidence of deprivation in this group was high: 64% of persons in this category fell below the specified level of wellbeing.

Group 4: This group comprised those who reported being in good or excellent health; and who were in receipt of a grant of supplementary assistance during the year prior to interview. The incidence of hardship amongst this group was high: 68% fell below the specified level. This result is in agreement with the finding reported earlier that persons in receipt of supplementary assistance tend to have a higher incidence of hardship than the rest of the aged population.

Group 5: This group comprised those who reported being in poor or indifferent health and were aged 80 years and over. The incidence of hardship for this group was lower than for the other groups described above: only 28% of respondents fell below the specified level. It would seem likely that this group contains sick and very elderly people who are probably protected from hardship by the intervention of relatives or other sources of assistance not examined in the present analysis.

Group 6: This group comprised those who reported being in poor or indifferent health and were aged 75 - 80 years. The incidence of hardship in this group was moderately high: 51% of respondents fell below the stipulated level of wellbeing.

Group 7: This group comprised those who reported that they were in poor or indifferent health; were under 75 years old and had assets between $600 - $1,000. The incidence of hardship within this group was again above average: 53% of respondents fell below the specified level.

Group 8: This group comprised those who reported that they were in poor or indifferent health; were under 75 years old; had assets less than $600; and had incomes in excess of $1,400 per capita per annum. This group also had a high incidence of hardship: 61% of respondents fell below the specified level.

Group 9: This group comprised those who reported being in poor or indifferent health; were under 75 years old; had total assets of less than $600 and had an income of less than $1,400 per capita per annum. As would be expected from the description, the incidence of hardship in this group was extremely high: 74% of persons in this category fell below the specified level.

It is clear that for those reporting assets of less than $1,000 the overall incidence of hardship is extremely high. Furthermore, the incidence also is high for all but two or three of the sub-groups generated by the AID analysis of these respondents indicating that the degree of hardship is affected to only a limited extent by the intervention of the factors which have been examined. This result has the obvious implication that benefit policy needs to strengthen provisions for those with little or nothing in the way of savings and assets.

The tree structure for those with assets greater than

$1,000 but less than $10,000 presents a more optimistic picture. The analysis revealed that it was best to represent these respondents as a series of 8 sub-groups, which are described as follows:

Group 1: This comprised those persons who reported being in good or excellent health and were aged 80 years or over. The incidence of hardship for this group was low: only 7% fell below the specified level.

Group 2: This comprised those persons who reported being in good or excellent health; were under 80 years; and had an income of $3,100 or greater per capita per annum. The incidence of hardship in this group was low: only 9% of respondents fell below the specified level.

Group 3: This comprised those who reported good or excellent health; were under 80 years old; had a gross per capita annual income in the range $1,800 - $3,099; and who paid less than $200 per annum for accommodation. The incidence of hardship in this group was low: only 7% fell below the specified level.

Group 4: This comprised those persons who reported being in good or excellent health; were under 80 years; had a gross per capita annual income in the range $1,800 - $3,099; and who paid more than $200 per annum for accommodation. The incidence of hardship for this group was 20%.

Group 5: This comprised those who reported good or excellent health; were under 80 years old; and had an income less than $1,800 per annum per capita. The incidence of hardship for this group was 28%.

Group 6: This group comprised all those who reported poor or indifferent health; were not paying rent or paying off a mortgage and who had gross per capita per annum incomes of $1,050 or greater. The incidence of hardship in this group was 24%.

Group 7: This comprised those who reported being in poor or indifferent health; were not paying rent or paying off a mortgage; and who had a gross per capita annual income of less than $1,050. Of this group 43% fell below the specified level.

Group 8: This comprised those who reported poor or indifferent health and who were either paying rent, or paying off a mortgage.

Of this group 53% fell below the specified level.

In summary, for those with assets in the range $1,000 - $10,000 the AID analysis generated sub-groups which showed considerable variation in the incidence of hardship, the proportion below the specified level varying from 7% to 53%. The immediate policy implication of this finding is that if a beneficiary has a modest level of savings and assets his degree of wellbeing will be fairly sensitively affected by such factors as state of health, income and cost of accommodation.

The tree structure for those with assets over $10,000 is extremely simple and as one would expect all groups report a low incidence of hardship. This group was subdivided into two groups:

Group 1. This comprised those who reported good or excellent health. The incidence of hardship for this group was 6%.

Group 2. This comprised those who reported poor or indifferent health. The incidence of hardship for this group was 17%.

The AID analysis presents a rather complex description of the way in which hardship is distributed over the aged population. Some of the main implications of the analysis for the benefit policy are as follows:

(1) The most important single determinant of the extent of hardship experienced by the respondent is the amount of assets he has. People with assets of less than $1,000 run a high risk of falling below the specified level. People with assets in the range $1,000 - $10,000 appear to be moderately well off and have a lower overall incidence of hardship. Finally those persons with assets in excess of $10,000 are in a good position and have a negligible incidence of hardship.

(2) Within these divisions the most important determinant of wellbeing would appear to be the health of the respondent; respondents in poor or indifferent health consistently have a higher incidence of hardship than respondents in good or excellent health.

(3) A further variable which appears to have a consistent effect is the age of respondent. Younger beneficiaries report a higher incidence of hardship than do older beneficiaries. This result could reflect a tendency for older beneficiaries to be better protected from hardship through the intervention of family, relatives and perhaps other sources of assistance.

(4) A fourth variable which emerges at several points in the analysis as being related to hardship is whether the respondent is paying rent or is paying off a mortgage. Respondents making such payments are consistently worse off than those who do not pay rent or are not paying off a mortgage.

It is not intended to examine further the implications of the findings at this point. Such examination is deferred until section 7.

Section 6.1 The Relationship Between the Incidence of Hardship and Gross Income for the Aged Population

In section 5.2 it was shown that the likelihood that a person would fall below the level defined as being consistent with a "reasonable and dignified" level of wellbeing was closely related to his gross per capita income. (It will be recalled that gross per capita income was defined as total gross income for single beneficiaries and half of total gross income for married beneficiaries.) To examine the implications of this relationship for benefit policy it is convenient to fit a smooth curve to represent, over a continuous range, the effect of income on the level of hardship. Inspection of the plot given in figure 5.2.1 suggests that a satisfactory approximation to the data would be achieved by fitting a straight line. Figure 6.1 shows the line which was fitted[1].

It is possible to use this curve to explore the cost benefit properties of modifying benefit levels, across the board, in two different ways.

The first system of modification is that which has been used in New Zealand so far: benefits are increased by giving a constant increment to all single beneficiaries and a constant increment to all married beneficiaries. Table 6.1.1a shows the effects of applying flat rate increases in steps of $1 per week for all beneficiaries. The table presents the following statistics:

(i) The estimated proportion of persons removed from hardship by the increase;

(ii) The estimated cost cost (in millions of dollars) of the increase.

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1. Formally, it was assumed that P(F), the probability of a person falling below the specified level of wellbeing, would be given by the following function:

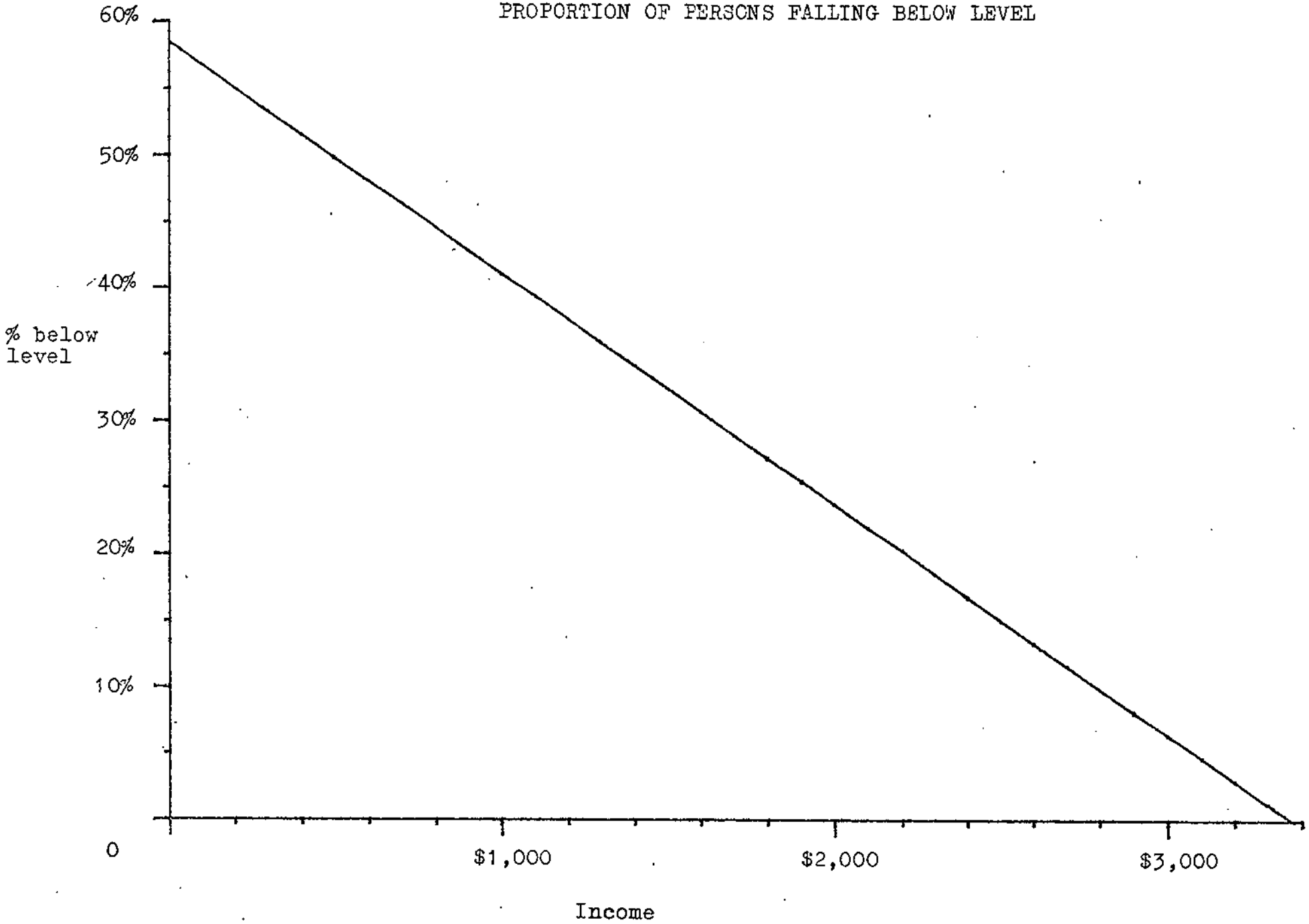
$$P(F) = (aI + b)\,\delta$$

where I is gross per capita income, a and b are constants, and δ is the Kronecker delta (which has the property that: $\delta = 1$ for $P(F) \geq 0$, and $\delta = 0$ for $P(F) < 0$)

The method of estimating the a and b parameters is not described here. The function plotted in figure 6.1 is as follows:

$$P(F) = (-0.00017371 + 0.5850)\,\delta$$

FIGURE 6.1 : ESTIMATED RELATICNSHIP BETWEEN INCOME AND PROPORTION OF PERSCNS FALLING BELOW LEVEL



The table should be interpreted as indicating the effects of increasing the unmarried rate of benefit in steps of $1 per week. (The table assumes that an increase of $1 for single beneficiaries is equivalent to an increase of $2 given to a married couple. In fact the current benefit relativity assumes that a single beneficiary should receive 60% as much as a married couple. However, the effects of this adjustment, if applied to the data in table 6.1.1a, would have little impact on the overall trends shown in the table).

Table 6.1.1a CONSEQUENCES OF A FLAT RATE BENEFIT INCREASE FOR THE WHOLE SAMPLE

Increase ($ per week)	Proportion in Hardship(%)	Estimated Cost Of Increase ($M)
$0	29.2	
$1	28.3	13
$2	27.5	27
$3	26.7	40
$4	25.9	53
$5	25.1	67
$6	24.3	80
$7	23.5	93
$8	22.7	107
$9	21.9	120
$10	21.1	133
$11	20.3	147
$12	19.6	160
$13	18.8	173
$14	18.0	187
$15	17.3	200

Table 6.1.1a reveals the cost benefit structure of a scheme based on flat rate increases. For example a benefit increase of $10 per week per beneficiary would result in an estimated reduction in the incidence of hardship from 30% to 21%. The cost of this benefit increase for the population aged 65 and over would be

$133 million dollars. Given that this procedure would only reduce the incidence of hardship in the aged population by about one third it is clear that flat rate increases are an extremely expensive way of handling the problems of the aged. The reason for this is fairly clear: as the scheme is non-selective it disburses money without regard to who is or is not in need. The effect of this is that only 30% of the increase goes to assisting those persons in manifest need while 70% is distributed to persons who are not in need. The scheme thus represents an inefficient usage of available funds.

An alternative approach is through what might be described as a minimum guaranteed income scheme. Under such a scheme all persons would receive a basic benefit at some level below the minimum guaranteed income, with those persons whose gross income (including the basic benefit) fell below the minimum guaranteed income receiving an income supplement to bring their income up to the minimum level. Those with incomes in excess of the minimum would not receive such supplements but would still retain the basic benefit. This scheme would be expected to be more efficient in that it provides the largest increments to those who are likely to be in the greatest need (i.e. those with the lowest incomes).

Table 6.1.1b shows the effects of applying a minimum guaranteed income in steps of $100 per annum from a $1,100 gross per capita income, to $2,500 gross per capita income, leaving the present benefit levels unchanged. (Again the assumption has been made that the single minimum guaranteed income is equivalent to half that received by a married couple).

Table 6.1.1b CONSEQUENCES OF A GUARANTEED MINIMUM INCOME FOR THE WHOLE SAMPLE

Guaranteed Minimum Income ($ p.a.)	Proportion in Hardship (%)	Estimated Cost Of Increase ($M)
$1,000	29.2	-
$1,100	28.7	7
$1,200	28.3	14
$1,300	27.9	22
$1,400	26.8	35
$1,500	25.9	49
$1,600	24.8	65
$1,700	23.7	81
$1,800	22.5	99
$1,900	21.3	117
$2,000	20.0	136
$2,100	18.7	154
$2,200	17.4	174
$2,300	16.0	195
$2,400	14.6	215
$2,500	13.2	236

The results given in table 6.1.1b show that, as expected, the minimum guaranteed income approach is more efficient in its usage of funds. For example, to reduce the incidence of hardship down to 20% would cost $153 million using a flat rate increase and only $136 million using a minimum guaranteed income scheme. However, the gain in efficiency is not large; in the example given the saving is only of the order of 10%. Further, any gain in efficiency would be partly offset by the fact that a minimum guaranteed income approach would be complex and expensive to administer; it would amount to vetting the gross incomes of all aged persons every year.

The minimum guaranteed income scheme probably represents the simplest approach towards the disbursement of income to beneficiaries on a selective basis. As the preceding analysis suggests it is not a very promising means of pursuing this strategy, an examination will now be made of some of the less straightforward alternatives.

Section 6.2 The Relationship Between the Incidence of Hardship and Income for Selected Subgroups of the Population

One means of generating a system based on selective criteria is to subdivide the population into a series of subgroups with benefits in each subgroup being dispensed according to the degree of hardship within the subgroup.

To examine this approach the sample was divided into a total of 6 groups based on two criteria: the value of assets held by the respondent and whether or not he was paying rent or mortgage for his accommodation. The six subgroups were as follows:

1. Those with assets less than $1,000 who were either paying rent or mortgages.
2. Those with assets less than $1,000 who were not paying rent or mortgages.
3. Those with assets in the range $1,000 - $3,999 who were paying rent or mortgages.
4. Those with assets in the range $1,000 - $3,999 not paying rents or mortgages.
5. Those with assets in excess of $3,999 who were paying rents or mortgages.
6. Those with assets in excess of $3,999 who were not paying rents or mortgages.

These subgroups were defined using a procedure which is analogous in logic to the procedure used in the AID analysis. For each of these subgroups the relationship was estimated between income and the probability that a person will fall below a specified level of wellbeing. Again these relationships are taken to be given by a straight line. The theoretical curves are shown in figure 6.2[1].

The main conclusions to emerge from figure 6.2 can be summarised as follows:

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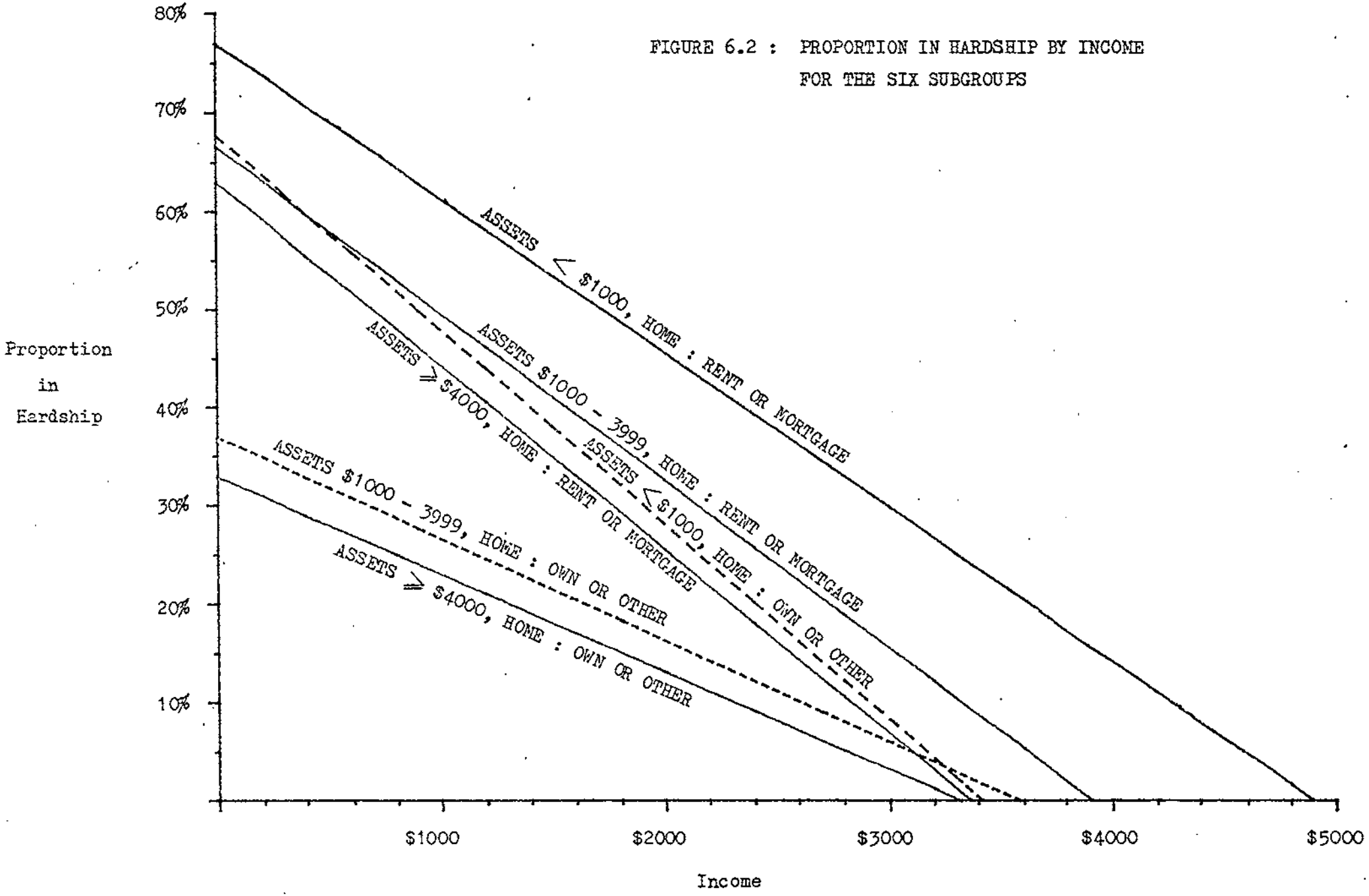
1. The functions plotted in figure 6.2 are as follows:

   Group 1: Less than $1,000 and paying rent or mortgage

   $$P(F) = (-0.000\ 157I + 0.770)6$$

(footnote contd on next

FIGURE 6.2 : PROPORTION IN HARDSHIP BY INCOME FOR THE SIX SUBGROUPS



1. The group in the worst position is clearly those persons with assets less than $1,000 who are either paying rent or mortgages. The curve shows that for those with gross per capita incomes of $1,000 the estimated incidence of hardship is approximately 62%. This figure only reduces to 30% when gross per capita income is raised to $3,000 per annum.

2. The next worst off group are those with assets in the region of $1,000 - $3,999 who are either paying rent or mortgage. The graph shows that people in this group having incomes of $1,000 per capita have a chance of about 50% of falling below the specified level; this reduces to about 14% for those with gross per capita incomes of $3,000.

3. Those persons with assets of less than $1,000 who are not paying rent, and those persons who have assets in excess of $4,000 who are paying rent and mortgage appear to be in a very similar position. For both groups those with $1,000 gross per capita income have a chance of about 45% of being in hardship; this reduces to about 8% for those with gross per capita incomes of $3,000.

4. Those with assets in the range $1,000 - $3,999 who own their own homes appear to be in a reasonably sound position. For those in this group with incomes of $1,000 gross per capita the estimated incidence of hardship is 26%; this reduces to 6% for those with gross incomes of $3,000.

(footnote cont'd from previous page)

Group 2: Less than $1,000 not paying rent or mortgages
$P(F) = (-0.000198I + 0.677)\delta$

Group 3: Assets $1,000 - $3,999 paying rent or mortgages
$P(F) = (-0.000170I + 0.369)\delta$

Group 4: Assets $1,000 - $3,999 not paying rent or mortgage
$P(F) = (-0.000103I + 0.369)\delta$

Group 5: Assets greater than $3,999 paying rent or mortgage
$P(F) = (-0.000187I + 0.630)\delta$

Group 6: Assets greater than $3,999 not paying rent or mortgage
$P(F) = (-0.000099I + 0.329)\delta$

5. Finally, as one would expect those with assets in excess of $4,000 and who own their own homes are in a fairly comfortable position. For this group only 22% of those with a gross per capita income of $1,000 were in hardship and this figure falls to about 2% for those with incomes of $3,000.

It is clear that there are very marked differences between the groups in the level of income required to sustain the same approximate level of living.

Having thus established the utility of distinguishing between the groups which have been defined, the next stage in this line of analysis is to examine, separately, for each group the cost benefit implications of providing a flat rate increase and of providing a minimum guaranteed income. The following tables (i.e. 6.2.1a and 6.2.1b to 6.2.6a and 6.2.6b) provide for each group the same information as was provided about the whole sample in tables 6.1.1a and 6.1.1b. If it was wished to determine - for example-the reduction in hardship that would follow a flat rate increase of, say, $1 to those who have less than $1,000 and who do not own their own home, the row on table 6.2.1a corresponding to an increase of $1 would be located and figures giving the expected incidence of hardship for that group and the estimated cost of the increase could be read off. In this way the tables provide a "ready reckoner" for assessing the effects of various possible changes in income levels for the various groups.

While such a ready reckoner provides a useful way of expressing the relationship between income and hardship given certain combinations of circumstances, it is doubtful that these relationships could be directly applied to benefit determination. The reason is that such disparate amounts of money would be needed to be given to different groups that the approach would be impracticable. For example, to reduce the incidence of hardship to 20% for the group comprising those with assets greater than $4,000 who pay rent or mortgage would require only about $1 additional income per week, whereas to achieve the same goal for those with assets of less than $1,000 who pay rent or mortgage would require an increase of the order of $45 per week. It is doubtful that such differential amounts of income for beneficiaries would be acceptable either to the public or to policy makers.

There is a further reason why the relationships should not be taken too literally. They derive from idealised curves which can be substantially affected by a fairly small number of deviant observations. Although the greatest care was taken to obtain unbiassed estimates of the lines the fact remains that, because of the comparatively small numbers of observations in each group, the theoretical lines could be unstable, and some of the results would be misleading. In short, the curves and tables should be treated as being illustrative of the types of differential that exist between various groups rather than as precise estimates of the effects of income on the incidence of hardship. To produce curves which would have sufficient stability to give reliable estimates would probably require a sample of observations substantially larger than that of the present sample.

Table 6.2.1a CONSEQUENCES OF A FLAT RATE BENEFIT INCREASE FOR SUBGROUP 1 (THOSE WITH ASSETS LESS THAN $1,000 AND WHO ARE PAYING RENT OR MORTGAGES ON THEIR ACCOMMODATION)

Increase ($ per week)	Proportion in Hardship (%)	Estimated Cost Of Increase ($M)
0	53.1	-
1	52.3	1.8
2	51.5	3.6
3	50.7	5.3
4	49.9	7.1
5	49.1	8.9
6	48.2	10.7
7	47.4	12.5
8	46.6	14.2
9	45.8	16.0
10	45.0	17.8
11	44.2	19.6
12	43.4	21.3
13	42.6	23.1
14	41.8	24.9
15	41.0	26.7

Table 6.2.1b CONSEQUENCES OF A GUARANTEED MINIMUM INCOME FOR SUBGROUP 1 (THOSE WITH ASSETS $1,000 AND WHO ARE PAYING RENT OR MORTGAGES ON THEIR ACCOMMODATION)

Guaranteed Minimum Income ($p.a.)	Proportion in Hardship (%)	Estimated Cost Of Increase ($M)
1,000	53.1	—
1,100	52.6	1.1
1,200	52.1	2.1
1,300	51.6	3.2
1,400	50.7	5.3
1,500	49.6	7.5
1,600	48.5	10.0
1,700	47.3	12.6
1,800	46.1	15.3
1,900	44.8	18.1
2,000	43.5	20.9
2,100	42.2	23.8
2,200	40.8	26.7
2,300	39.5	29.7
2,400	38.1	32.8
2,500	36.6	35.9

Table 6.2.2a CONSEQUENCES OF A FLAT RATE BENEFIT INCREASE FOR SUBGROUP 2 (THOSE WITH ASSETS LESS THAN $1,000 AND WHO ARE NOT PAYING RENT OR MORTGAGES ON THEIR ACCOMMODATION)

Increase ($ per week)	Proportion in hardship (%)	Estimated cost of Increase ($M)
0	40.2	-
1	39.2	3.0
2	38.2	6.0
3	37.2	9.0
4	36.2	12.0
5	35.2	15.0
6	34.2.	18.0
7	33.2	21.0
8	32.2	24.0
9	31.2	27.0
10	30.2	30.0
11	29.2	33.0
12	28.3	36.0
13	27.3	39.0
14	26.3	42.0
15	25.3	45.0

Table 6.2.2b CONSEQUENCES OF A GUARANTEED MINIMUM INCOME FOR SUBGROUP 2 (THOSE WITH ASSETS LESS THAN $1,000 AND WHO ARE NOT PAYING RENT OR MORTGAGES ON THEIR ACCOMMODATION)

Guaranteed minimum income ($ p.a.)	Proportion in hardship	Estimated Cost Of Increase ($M)
1000	40.2	-
1100	39.4	2.3
1200	38.6	4.6
1300	37.8	7.2
1400	36.3	11.4
1500	34.8	15.7
1600	33.3	20.3
1700	31.7	24.9
1800	30.0	29.8
1900	28.3	34.7
2000	26.6	39.8
2100	24.8	45.0
2200	23.0	50.2
2300	21.2	55.5
2400	19.4	60.8
2500	17.5	66.1

Table 6.2.3a CONSEQUENCES OF A FLAT RATE BENEFIT INCREASE FOR SUBGROUP 3 (THOSE WITH ASSETS $1,000 - $4,000 AND WHO ARE PAYING RENT OR MORTGAGES ON THEIR ACCOMMODATION)

Increase ($ per week)	Proportion in Hardship (%)	Estimated Cost of Increase ($M)
0	38.1	–
1	37.3	1.0
2	36.4	1.9
3	35.6	2.9
4	34.8	3.8
5	34.0	4.7
6	33.2	5.7
7	32.4	6.6
8	31.6	7.6
9	30.7	8.5
10	30.0	9.5
11	29.1	10.4
12	28.3	11.4
13	27.5	12.3
14	26.7	13.3
15	25.9	14.2

Table 6.2.3b CONSEQUENCES OF A GUARANTEED MINIMUM INCOME FOR SUBGROUP 3 (THOSE WITH ASSETS $1,000 - $4,000 AND WHO ARE PAYING RENT OR MORTGAGES ON THEIR ACCOMMODATION).

Guaranteed Minimum Income ($p.a.)	Proportion in Hardship (%)	Estimated Cost Of Increase ($M)
1,000	38.1	-
1,100	37.7	0.5
1,200	37.2	1.0
1,300	36.6	1.6
1,400	35.8	2.5
1,500	34.8	3.5
1,600	33.7	4.7
1,700	32.6	5.9
1,800	31.4	7.2
1,900	30.1	8.6
2,000	28.8	9.9
2,100	27.6	11.3
2,200	26.2	12.8
2,300	24.8	14.3
2,400	23.4	15.8
2,500	21.9	17.4

Table 6.2.4a CONSEQUENCES OF A FLAT RATE BENEFIT INCREASE FOR SUBGROUP 4 (THOSE WITH ASSETS $1,000 - $4,000 AND WHO ARE NOT PAYING RENT OR MORTGAGES ON THEIR ACCOMMODATION)

Increase ($per week)	Proportion in hardship (%)	Estimated Cost Of Increase ($M)
0	21.0	-
1	20.5	3.2
2	20.0	6.4
3	19.4	9.6
4	18.9	12.9
5	18.4	16.1
6	17.9	19.3
7	17.4	22.5
8	16.9	25.7
9	16.4	28.9
10	15.9	32.2
11	15.4	35.4
12	14.9	38.6
13	14.4	41.8
14	13.9	45.0
15	13.4	48.2

Table 6.2.4b CONSEQUENCES OF A GUARANTEED MINIMUM INCOME FOR SUBGROUP 4 (THOSE WITH ASSETS $1,000 - $4,000 AND WHO ARE NOT PAYING RENT OR MORTGAGES ON THEIR ACCOMMODATION)

Guaranteed Minimum Income ($p.a.)	Proportion in hardship (%)	Estimated Cost of Increase ($M)
1000	21.0	-
1100	20.7	1.6
1200	20.4	3.6
1300	20.0	5.9
1400	19.4	9.7
1500	18.7	13.6
1600	18.0	18.0
1700	17.2	22.6
1800	16.4	27.3
1900	15.6	32.2
2000	14.8	37.2
2100	14.0	42.2
2200	13.1	47.5
2300	12.2	52.8
2400	11.3	58.1
2500	10.4	63.5

Table 6.2.5a CONSEQUENCES OF A FLAT RATE BENEFIT INCREASE FOR SUBGROUP 5 (THOSE WITH ASSETS GREATER THAN $4,000 AND WHO ARE PAYING RENT OR MORTGAGES ON THEIR ACCOMMODATION)

Increase ($per week)	Proportion in hardship (%)	Estimated Cost Of Increase ($M)
0	21.1	
1	20.3	0.6
2	19.6	1.2
3	18.8	1.8
4	18.1	2.4
5	17.4	3.0
6	16.7	3.6
7	16.0	4.2
8	15.3	4.9
9	14.7	5.5
10	14.1	6.1
11	13.5	6.7
12	12.9	7.3
13	12.3	7.9
14	11.8	8.5
15	11.2	9.1

Table 6.2.5b CONSEQUENCES OF A GUARANTEED MINIMUM INCOME FOR SUBGROUP 5 (THOSE WITH ASSETS GREATER THAN $4,000 AND WHO ARE PAYING RENT OR MORTGAGES ON THEIR ACCOMMODATION)

Guaranteed Minimum Income ($ p.a.)	Proportion in Hardship (%)	Estimated Cost Of Increase ($M)
1,000	21.1	
1,100	20.9	0.1
1,200	20.6	0.3
1,300	20.2	0.5
1,400	19.8	0.8
1,500	19.4	1.0
1,600	18.8	1.4
1,700	18.1	1.8
1,800	17.3	2.3
1,900	16.5	2.8
2,000	15.7	3.4
2,100	14.8	3.9
2,200	13.9	4.5
2,300	12.9	5.1
2,400	11.9	5.7
2,500	10.9	6.4

Table 6.2.6a CONSEQUENCES OF A FLAT RATE BENEFIT INCREASE FOR SUBGROUP 6 (THOSE WITH ASSETS GREATER THAN $4,000 AND WHO ARE NOT PAYING RENT OR MORTGAGES ON THEIR ACCOMMODATION)

Increase ($ per week)	Proportion in Hardship (%)	Estimated Cost Of Increase ($M)
0	12.5	-
1	12.1	3.8
2	11.6	7.6
3	11.2	11.4
4	10.8	15.2
5	10.4	18.9
6	10.0	22.7
7	9.6	26.5
8	9.2	30.3
9	8.9	34.1
10	8.5	37.9
11	8.1	41.7
12	7.7	45.5
13	7.4	49.2
14	7.0	53.0
15	6.6	56.8

Table 6.2.6b CONSEQUENCES OF A GURANTEED MINIMUM INCOME FOR SUBGROUP 6 (THOSE WITH ASSETS GREATER THAN $4,000 AND WHO ARE NOT PAYING RENT OR MORTGAGES ON THEIR ACCOMMODATION)

Guaranteed Minimum Income ($p.a.)	Proportion in Hardship (%)	Estimated Cost Of Increase ($M)
1,000	12.5	-
1,100	12.3	1.0
1,200	12.2	1.9
1,300	12.0	3.3
1,400	11.7	5.3
1,500	11.4	7.6
1,600	11.0	10.4
1,700	10.6	13.5
1,800	10.2	16.8
1,900	9.7	20.3
2,000	9.2	24.1
2,100	8.6	28.1
2,200	8.1	32.5
2,300	7.4	37.0
2,400	6.8	41.8
2,500	6.1	46.7

Section 6.3 Differential Between Married and Single Benefit Rates

At present the ratio of married to single rates of benefit is 5 to 6. Thus, for example, if both a husband and wife were on benefit each would receive five sixths the value of the single rate, and the combined amount would be one and two thirds times the amount represented by double the single rate. It is reasonable to suppose a priori that there will be some economies of scale that will be achieved by two people living together rather than separately, so that it would seem appropriate that there should be some differential between the married and single benefit rates: the question which arises is whether the present magnitude of the differential is appropriate.

The most satisfactory way to approach this question would be through separate analysis of the relationships between the incidence of hardship and income for those receiving each of the two rates; however, this has not been possible in the time available.

Information presented in section 5 indicated that there was virtually no association between incidence of hardship and martial status. If those who were married are used to make an estimate of the incidence hardship of those on the married rate, the following table can be constructed:

Table 6 PROPORTION FALLING BELOW SPECIFIED LEVEL WHETHER MARRIED OR SINGLE RATE

Rate	Below Level	Above Level	Total
Married rate	28.7% (311)	71.3% (722)	100% (1083)
Single rate	31.8% (264)	68.2% (565)	100% (829)
Total	30.1% (575)	69.9% (1337)	100% (1912)
Missing observations	0	1	1

The proportions of those on the married and single rates who are below the specified level of wellbeing are very similar being 28.7% and 31.8%. The difference is not statistically significant. This result suggests that the present differential is of the correct order of magnitude. A further consideration is that, because deprivation is not very sensitively related to income, the magnitude of the income change which would result from a comparatively small change in the differential would be capable of having only a very small effect on the comparative levels of hardship for the married and single groups. Thus the data which have been examined do not suggest any reason for a major alteration in the present differential between the married and single rates.

Section 7.1 The Policy Implications of the Findings

The preceding account has provided a complex mass of detail about the inter-relationships between income, circumstantial factors and material wellbeing for the aged population. The policy maker's ultimate concern must be with utilising this information to develop practicable policies which will be effective in reducing the incidence of hardship and deprivation within the aged population. The findings from the research provide the following guidelines with respect to this goal:

1. The Efficiency of Flat Rate Increases

   It is clear from the results that any policy which relied soley on a flat rate increase to reduce the incidence of hardship amongst the aged would require an enormous increase in expenditure if its impact was to be at all significant. To make large inroads on the amount of hardship within the aged population would involve an approximate doubling of current benefit rates. Not only would this approach be inordinately expensive but also it would result in an extremely inefficient usage of funds in that only 30% of the money spent on the increase would go to those who were suffering manifest financial difficulties. The analysis also shows that a minimum guaranteed income approach applied across the board would produce only a modest improvement in efficiency in terms of the cost benefit structure of the scheme.

   The main implication of these findings is that any additional funds which are made available for benefits will have their greatest impact if they are distributed in a selective way which ensures that the beneficiaries who receive additional income or assistance are those most likely to be in need. Unless the amount of additional funds is extremely large no other approach is likely to achieve a substantial impact on

the amount of hardship being suffered by the aged population.

2. Identification of factors associated with hardship

The survey findings permit identification of a number of factors which are related to the likelihood that an aged person will be experiencing hardship. The following are those with greatest relevance to the development of benefit policy.

(i) Assets: A fact which has emerged repeatedly throughout the analysis is that the value of an aged person's savings and investments determine, to quite a large extent, the probability that he will fall below a level consistent with the notion of dignity and comfort which has been adopted. The strength of the relationship is such as to imply that any selective approach to disposing benefit funds, if it is to be efficient, must take explicit account of the impact of savings and investments on the incidence of hardship. A tentative scheme for dispensing benefits which takes account of this consideration is outlined in the next section.

(ii) Health: Another factor which emerged as being consistently associated with the likelihood of hardship is the aged person's state of health. Those persons who fell below the specified level of wellbeing tend to describe themselves as being in poor or indifferent health. This result has two interpretations. First, it might be suggested that ill-health tends to reduce a person's power to acquire additional income; or, second that ill-health tends to place special additional costs on these people. However the result is interpreted, the findings suggest that those with poor health are more likely to be in need of a greater degree of assistance than those with good health. As with assets, the proposal outlined in the next section gives explicit

recognition to the importance of this factor.

(iii) Accommodation type: A third important factor which appears to influence a person's level of wellbeing is the basis on which he occupies his accommodation: those persons who either rent their accommodation or who pay mortgages tend to be worse off than those who own their own homes or who live in other types of accommodation.

(iv) Benefit type: The findings reveal quite clearly that the type of benefit that a person is receiving shows a close relationship to his level of living: those on supplementary assistance tend to be worst off, followed by those receiving Age benefit and then those receiving Superannuation benefit. It is clear that the group with the strongest claim to additional assistance comprises those Age beneficiaries who qualify for supplementary assistance, and that Age beneficiaries generally comprise the next most hard up group. Superannuation beneficiaries relatively are the best off group, although even amongst these is a small proportion experiencing substantial hardship. This ranking of priorities underlies the approach to developing policy which is sketched in the next section.

Section 7.2 A Skeleton Policy for the 1975 Budget

The following is the skeleton outline of a benefit policy which would take account of the main factors revealed by the preceding analysis as affecting the likelihood that beneficiaries will be experiencing hardship. The outline involves proposals for revisions to the current benefit structure without precise amounts always being provided; to arrive at the amounts will requires some supplementary analysis. It is suggested that if policy makers wish to pursue the basic approach described here the amounts of various allowances, the detailed criteria for eligibility for allowances and supplements, and so on, be decided through policy makers working in close conjunction with research staff to evaluate the likely consequences for the aged and to arrive at costings.

A. The Basic Structure of the System

The system envisaged is a three tiered system of benefits as follows:

1. Superannuation benefits: As at present, this would be a flat rate benefit subject to periodic cost of living adjustments. Recipients would not be entitled to other forms of assistance.

2. Age benefit: This would be a flat rate income tested benefit as at present, but in addition recipients would be elegible for a series of supplements to bring the level of living of this group up to an acceptable standard.

3. Special Allowances: For those on Age benefit who met certain conditions, additional supplements for various expenses would be available.

In its basic structure this system does not represent any radical departure from the system of benefits that is currently in operation. The main differences from the present system would be in the nature and types of allowances for which beneficiaries

would be eligible. These are described below.

B. Specific features defining the proposed system

1. Flat rate increase in the basic benefit rate: The measures implemented as a result of the survey almost certainly will involve some flat rate increase. Within the constraints of the scheme which has been proposed additional assistance to those on the Superannuation benefit can be provided only by means of an increase in the basic benefit rate and through the consequent increase in the income level which defines eligibility for the Age benefit. (The latter aspect is of considerable importance, because under the policy outlined here those on Superannuation benefit who become eligible for Age benefit in many cases would derive very substantial advantages from transferring to the latter benefit). Thus it is proposed that the effect of any proposed flat rate increase should be evaluated mainly through its impact on the Superannuation beneficiaries. For example, an increase in the basic rate of $5 per week for single beneficiaries (which would correspond to an increase of $4.15 in the married rate if the present relativity between married and single rates is maintained) by itself would result in the proportion of Superannuation beneficiaries who are below the specified level of hardship being reduced from 17% to about 10%. However, it also would result in a number of those who are experiencing hardship becoming eligible to transfer to Age benefit, and in addition there are undoubtedly a number of Superannuation beneficiaries who at present are eligible to transfer and who would be more likely to do so if the advantages became more substantial. (Any increase in benefit rate should be applied to the rate as at July 1973 and updated for inflation up to January 1974). Thus although the figure of $5 per week was used only for illustrative purposes, it would seem likely that an increase of this order of magnitude in the basic

benefit rate would place Superannuation beneficaries in a fairly satisfactory situation, with the incidence of hardship in this group being reduced to no more than a few per cent.

Such an increase is not conceived as being the primary means of assisting the more deprived sections of the Age beneficiary group, and in fact would have only a small impact on the overall level of hardship within the aged community. It is estimated that such an increase would reduce the incidence of hardship from the present level of 30% to 25%. This would remove approximately 1/6 of those who are at present suffering hardship, leaving the remaining 5/6 to be assisted by the various supplements suggested below.

2. Flat rate to be increased by cost of living adjustments: It is proposed that to keep the value of the benefit base stable over time it should be subject to periodic 6 monthly increases to compensate for increases in the cost of living. The most appropriate specific method of determining the level of adjustment will require further examination.

3. Supplements for those on Age benefit: In addition to the basic concessions already available to those on Age benefit it is proposed that the following supplements be provided for those receiving this benefit:

   (i) Rent Supplement: it is envisaged that for all beneficiaries in receipt of Age benefit who have additional income of less than some specified amount (e.g. $200 per capita per annum) and whose cost of renting accommodation exceeds (say) $5 for a single beneficiary or (say) $10 for married beneficiaries, rent would be subsidised dollar for dollar up to a value of (say) $10; for

married beneficiaries rent would be subsidised dollar for dollar up to a value of (say) $18. (The figures given in this section are arbitrary and are provided only for illustrative purposes. Further investigation of the data will be required to establish whether the figures quoted would be appropriate). The figures given here would ensure no more than 20% of an Age beneficiary's income was spent on accommodation.

(ii) Mortgage Loan: it is suggested that for all beneficiaries in receipt of Age benefit whose additional income does not exceed some specified amount (e.g. $200 per capita per annum) that the following allowances be made: for unmarried beneficiaries paying mortgages in excess of (say) $5 per week, a dollar for dollar subsidy on those mortgage payments be made up to a value of (say) $10 per week; for married beneficiaries paying mortgages in excess of (say) $10 per week, a dollar for dollar subsidy of up to (say) $18 per week. It might be desirable to impose the condition that such subsidies would be given on the understanding they would be counted as a debt against the beneficiary's final estate. (The rationale for this is that otherwise it might be objected that it is not the Government's function to buy houses for people, although it is the Government's responsibility to ensure that those persons who are buying their houses do not suffer undue hardship. By providing the mortgage supplement in the form of a loan recoverable on the death of the beneficiary both conditions could be satisfied).

(iii) Free Health Services for those on Age benefit: it is proposed that all those on Age benefit be eligible for free medical care (other than that

provided by private hospitals), for free dental care, and for free optical care. This policy is proposed in view of the fact that many of those who fall below the level of wellbeing which has been taken as acceptable have poor or indifferent health. Subsidised medical care should assist this group quite considerably. Further, the data deriving from the medical items in Scale 1 indicate that substantial proportions were postponing or foregoing medical care because of the costs involved.

4. Special Allowances for those with low incomes and low assets: The results reveal that persons with low income and low assets tend to be the worst off group. The extent of hardship amongst such persons is such as to suggest that further provisions need to be made for their assistance. In effect this would involve a liberalisation of the existing supplementary assistance scheme so that those who had (say) less than $1,000 in savings and investments and who were receiving only the basic benefit would be entitled to further assistance The actual nature of the adjustments to be made for this group has been left until the effects of the increases proposed above can be examined.

The above discussion is intended as only a rough outline of the type of policy which might be regarded as being implied by the survey results. It will require the close working together of policy makers and research workers to turn this rough outline into a viable and working policy.

Section 8.1 Concluding Comment: The Importance of Monitoring the Effects of Policy Changes

As the authors have been working through the data, it has become increasingly more apparent that the relationship between how well off a person is and his circumstances and income is extremely complex and can only be imprecisely estimated from our current knowledge. The up-shot is that the best benefit policy which can be formulated still will dispense only rough justice to the population: there will always be some people who fail to meet policy criteria but who are hard up, and there will always be others who meet the policy criteria for various supplements when in fact they are quite well off. It would seem to us that policies necessarily will have to be developed in a piecemeal way, with new procedures being changed or refined when sufficient experience of the consequences has been obtained to enable their evaluation. If this view is correct there can be no benefit policy which "once and for all" will solve all the problems of the aged. Rather, it will be necessary to work by refining and testing benefit policies so that they become progressively more effective. The present research represents only the first stage of this process: it has revealed which groups are prone to hardship and approximately why this is so. However, as yet it is possible only to make informed guesses about the efficacy of the policies and it will be necessary for the effects of the policies to be evaluated. The present research project sets base line data for future evaluations.

Another reason for the constant monitoring of social policy is that it is well known that such policies can have unintended and undesirable consequences; to avoid these consequences it is necessary to carry out a constant monitoring procedure to make visible these undesirable effects.

In the light of these considerations it is recommended that the Department of Social Welfare be empowered to conduct a further survey within the next three years with the aims of evaluating the extent of change that follows and the implementation of new policies. Approval for this survey should be provided within the next twelve months so that the necessary planning work can be initiated.

APPENDIX 1

SPECIFICATION OF 138 INITIAL VARIABLES

The following table gives the variable number (1 - 173), the question number (from the survey field documents: questionnaire and assessment schedule), the coding convention of the variable, and a brief verbal description of the variable. A number of the items are binary, and in these cases the response indicating a score 0 or 1 is described, and all other responses are scored the opposite value (i.e. 1 or 0 respectively). The convention was adopted that a high score (i.e. 1 for the binary variables) indicates a response that one would intuitively expect to be related to a higher standard of living, except for variable 82 where the scoring was reversed for ease of coding.

Variable number	Question number	Coding	Variable description
1	B1.2	0	Respondent had moved house since age 60, and the main reason for moving was that previous accommodation was too expensive.
		1	Otherwise
2	B2.1	1	Respondent owned dwelling and did not pay mortgage.
		0	Otherwise
3	B5.3	1	Respondent had a toilet inside the house.
		0	Otherwise
4	B5.4	1	Toilet (inside the house) was a separate room.
		0	Otherwise
5	B5.5	1	Respondent had access to bath and shower.
		0	Otherwise
6	B5.5	1	Respondent had access to bath and/or shower.
		0	Otherwise
7	B5.2	0	Respondent had the use of a toilet which was shared.
		1	Otherwise
8	B5.2	0	Respondent had the use of laundry facilities which were shared.
		1	Otherwise
9	B5.6	1	Hot and cold running water in the bathroom.
		0	Otherwise

Variable number	Question number	Coding	Variable description
10	B5.6	1	Hot and cold running water in the kitchen.
		0	Otherwise
11	B5.6	1	Hot and cold running water in the laundry.
		0	Otherwise
12	B6.1	0	Respondent considered total cost of present accommodation was causing financial difficulties.
		1	Otherwise
13	B6.2	0	Respondent was seriously considering moving to cheaper accommodation.
		1	Otherwise.
14	B6.3	0	Respondent felt that, in the previous 12 months, the standard of his accommodation had run down because he could not afford the upkeep.
		1	Otherwise
15	B7.1	1	Respondent or spouse had the use of an automatic gas or electric stove or range.
		0	Otherwise
16	B10.3	0	Respondent did not have sufficient bedclothes to keep warm last winter.
		1	Otherwise
17	B11.2	0	Lack of finance given as reason for no telephone.
		1	Otherwise
18	B11.3	0	Lack of finance given as reason for no television set.
		1	Otherwise
19	B12.1	0	Need to buy, repair or replace stove.
		1	Otherwise
20	B12.1	0	Need to buy, repair or replace refrigerator.
		1	Otherwise
21	B12.1	0	Need to buy, repair or replace vacuum cleaner.
		1	Otherwise
22	B12.1	0	Need to buy, repair or replace iron.
		1	Otherwise

Variable number	Question number	Coding	Variable description
23	B12.1	0	Need to buy, repair or replace washing machine.
		1	Otherwise
24	B13.1	1	Respondent had central heating.
		0	Otherwise
25	B13.4	0	Previous winter respondent stayed in bed longer or went to bed early to reduce heating costs.
		1	Otherwise
26	B13.5	0	Previous winter respondent or spouse turned off the water heating in order to save on heating costs.
		1	Otherwise
27	B13.6	0	Previous winter respondent or spouse turned off the house electricity supply at least once in order to save on electricity costs.
		1	Otherwise
28	B13.7	0	Previous winter respondent often or sometimes put up with feeling cold because trying to keep the heating bill down.
		1	Otherwise
29	C1.6	0	In the previous 12 months, the respondent had to buy the cheaper grades of meat in order to make ends meet, three or more times per week.
		1	Otherwise
30	C1.6	0	In the previous 12 months, the respondent had to do without meat entirely in order to make ends meet, three or more times per week.
		1	Otherwise
31	C1.6	0	In the previous 12 months, the respondent had to buy the cheaper kinds of fruit and vegetables in order to make ends meet, three or more times per week.
		1	Otherwise
32	C1.7	0	In the previous 12 months, the respondent had missed a proper meal in order to save money at least once a week.
		1	Otherwise

Variable number	Question number	Coding	Variable description
33	C1.7	0	In the previous 12 months, the respondent had been in a situation where he had no food in the house and no money to purchase it, at least once a week.
		1	Otherwise
34	D2.1A	1	Respondent (or spouse) owned a car.
		0	Otherwise
35	F4.2	0-7	Number of days in the previous week when respondent had access to a newspaper for that day.
36	F4.3	0-9	Number of different weekly or monthly magazines or periodicals respondent bought regularly, i.e. at least 3 issues out of 4.
37	G1.2	0	Respondent failed to buy items of clothing when needed.
		1	Otherwise
38	G1.2	0	Respondent bought cheaper quality clothing because could not afford better.
		1	Otherwise
39	G1.2	0	Respondent put off buying small items of clothing for as long as possible.
		1	Otherwise
40	G1.2	0	Respondent failed to buy a pair of shoes when needed.
		1	Otherwise
41	G1.2	0	Respondent repaired worn-out clothing because could not afford its replacement cost.
		1	Otherwise
42	G1.2	0	Respondent had to wear old or worn clothing when going out or visiting.
		1	Otherwise
43	G1.2	0	Respondent relied on gifts from friends or others for replacement clothing.
		1	Otherwise

Variable number	Question number	Coding	Variable description
44	G1.2	0	Respondent bought second-hand clothing.
		1	Otherwise
45	G1.2	0	Respondent bought second-hand shoes.
		1	Otherwise
46	G1.2	0	Respondent applied or considered applying to a welfare agency for help in obtaining clothing.
		1	Otherwise
47	G2.1	0	Respondent did not have a pair of good watertight shoes suitable for winter.
		1	Otherwise
48	G3.1	0	Because of the costs involved, the respondent had to do without or economise on hobby, knitting or sewing materials.
		1	Otherwise
49	G3.1	0	Because of the costs involved, the respondent had to do without or economise on tobacco or cigarettes.
		1	Otherwise
50	G3.1	0	Because of the costs involved, the respondent had to do without or economise on alcoholic beverages.
		1	Otherwise
51	G3.1	0	Because of the costs involved, the respondent had to do without or economise on going to the hairdresser/barber.
		1	Otherwise
52	G3.1	0	Because of the costs involved, the respondent had to do without or economise on visits to friends or relatives.
		1	Otherwise
53	G3.1	0	Because of the costs involved, the respondent had to do without or economise on entertaining friends or relatives.
		1	Otherwise
54	G3.1	0	Because of the costs involved, the respondent had to do without or economise on books and magazines.
		1	Otherwise

Variable number	Question number	Coding	Variable description
55	G3.1	0	Because of the costs involved, the respondent had to do without or economise on holidays away from home.
		1	Otherwise
56	G3.1	0	Because of the costs involved, the respondent had to do without or economise on running or owning a car.
		1	Otherwise
57	G3.1	0	Because of the costs involved, the respondent had to do without or economise on use of taxis.
		1	Otherwise
58	G3.1	0	Because of the costs involved, the respondent had to do without or economise on sending washing to the laundry.
		1	Otherwise
59	G3.1	0	Because of the costs involved, the respondent had to do without or economise on paid help in the garden.
		1	Otherwise
60	G3.1	0	Because of the costs involved, the respondent had to do without or economise on paid home help.
		1	Otherwise
61	G4.1	0	Respondent had to budget very carefully to make ends meet.
		1	Otherwise
62	G5.1	0	Respondent had to cut down, because of the expense, on luxuries he used to enjoy and would still like to have.
		1	Respondent does not have to cut down at all, because of the expense, on luxuries he used to enjoy and would still like to have.
63	H1.2	1	If respondent required a minor operation including a week of hospital treatment, he could afford to go to a private hospital (could cost about $250).
		0	Otherwise

Variable number	Question number	Coding	Variable description
64	H2.2	0	Over the previous 12 months, the respondent had postponed visits to a medical specialist because of lack of money.
		1	Otherwise
65	H2.2	0	Over the previous 12 months, the respondent had postponed visits to or from the doctor because of lack of money.
		1	Otherwise
66	H2.2	0	Over the previous 12 months, the respondent had limited expenditure on non-prescription medicines such as aspirins, cough medicine, etc. because of lack of money.
		1	Otherwise
67	H2.2	0	Over the previous 12 months, the respondent had worn unsuitable glasses because he could not afford replacements.
		1	Otherwise
68	H2.2	0	Over the previous 12 months, the respondent had worn ill-fitting dentures because he could not afford replacements.
		1	Otherwise
69	H2.2	0	Over the previous 12 months, the respondent had postponed visits to the dentist because of lack of money.
		1	Otherwise
70	H2.2	0	Over the previous 12 months, the respondent had postponed any other medical treatment because of lack of money.
		1	Otherwise
71	K1.2	0	In the previous 12 months, the respondent had received some form of Supplementary Assistance from the Department of Social Welfare.
		1	Otherwise
72	K1.4	0-26	Total value of saving and investments (coded as per Show Card E).
73	K2.2	0-26	Total value of life or endowment insurance (coded as per Show Card E).
74	K2.3	1	Respondent or spouse had private medical insurance.
		0	Otherwise

Variable number	Question number	Coding	Variable description
75	K3.1	0	Over the previous 12 months savings of respondent and spouse had decreased.
		1	Otherwise
76	K3.1	1	Over the previous 12 months savings of respondent and spouse had increased.
		0	Otherwise
77	K3.2	0	In the previous 12 months respondent or spouse had often or sometimes had to draw on savings to meet weekly living expenses such as food, clothing and other everyday expenses.
		1	Otherwise
78	K3.3	0	In the previous 12 months respondent or spouse had to sell off assets, such as shares or property, in order to meet weekly living expenses.
		1	Otherwise
79	B5.1	0-4	Number of the following rooms the respondent had use of: lounge or living room; kitchen; bathroom; separate laundry.
80	B5.1 B5.2	0-3	Number of the following rooms the respondent had use of and which are not shared with any other household: lounge or living room; kitchen; bathroom.
81	B5.6	0-3	Number of the following rooms which had hot and cold running water: bathroom; kitchen; laundry.
82	B5.7	0-13	Number of items which needed repairs from the following list: windows; roof; walls; flooring; ceilings; doors; electrical wiring; plumbing; repiling; other; plus number of items which needed painting from the following list: roof; outside walls; other.
83	B7.2	0-8	Number of kitchen items from the following list the respondent had the use of: separate deep freeze; electric food mixer; electric kettle or jug; electric toaster; stainless steel, formica or marble sink bench; stainless steel sink; dishwasher; disposal unit or wastemaster.

Variable number	Question number	Coding	Variable description
84	B8.1	0-6	Number of laundry items from the following list the respondent had the use of: ironing board; rotary clothes line; stainless steel tub; semi-automatic washing machine; fully automatic washing machine; tumble clothes drier.
85	B9.1	0-8	Number of items from the following list the respondent had the use of: arm chair; occasional or coffee table; sofa; china cabinet or sideboard; wall-to-wall carpet in lounge or living room; matching dining table and chairs; complete matching dinner set; complete matching cutlery set.
86	B10.1	0-9	Number of bedroom items from the following list the respondent had the use of: mirror (other than hand mirror); bedside rug; wall, table or bedside lighting; wardrobe; dressing table or chest of drawers; rubber or innerspring mattress; electric blanket or electric mattress; matching bedroom suite; wall-to-wall carpet.
87	B11.1	0-9	Number of items from the following list the respondent had the use of: vacuum cleaner; bookcase (or shelves) with books; telephone; more than one telephone or jackpoint; airing cupboard; clock; television set; radio; record playing equipment.
88	B13.2	0-99	Total number of heaters in working order.
89	C1.1 C1.3	0-3	Number of meals had (breakfast, midday meal, and evening meal) over the last day.
90	C2.1	0-18	Number of items from the following list which the respondent had in the cupboard or refrigerator at the time of interview: tea or coffee; sugar; milk; butter/margarine; eggs; cheese; flour; bread; breakfast cereals; jam, honey or other spread; cake; biscuits; meat; potatoes; onions; fresh or processed green vegetables; fresh fruit; processed fruit.

Variable number	Question number	Coding	Variable description
91	G1.2	0-minus 10	Zero minus total number of "yes" responses to the following questions: In the last 12 months have you ever, because of lack of money - failed to buy items of clothing when you needed them; bought cheaper quality clothing because you could not afford better; put off buying small items of clothing for as long as possible; failed to buy a pair of shoes when you needed them; repaired worn-out clothing because you could not afford its replacement cost; had to wear old or worn clothing when going out or visiting; relied on gifts from relatives or others for replacement clothing; bought second-hand clothing; bought second-hand shoes; applied or considered applying to a welfare agency for help in obtaining clothing.
92	G3.1	0-minus 13	Zero minus number of the following items which the respondent reported having to do without or economise on because of the costs involved: hobby, knitting or sewing materials; tobacco or cigarettes; alcoholic beverages; going to the hairdresser/barber; visits to friends or relatives; entertaining friends or relatives; books and magazines; holidays away from home; running or owning a car; use of taxis; sending washing to the laundry; paid help in the garden; paid home help.
93	H2.2	0-minus 7	Zero minus number of the following measures taken by the respondent over the last 12 months because of lack of money: postponed visits to a specialist; postponed visits to or from the doctor; limited expenditure on non-prescription medicines such as aspirins, cough medicine etc; worn unsuitable glasses or no glasses because could not afford replacements; worn ill-fitting or no dentures because could not afford replacements; postponed visits to the dentist; postponed any other medical treatment.
94-103	These variable numbers were reserved for expenditure information which was not available at the time the tape was created.		
104	K1.1 K1.1B	0+	Total annual income. For respondents who completed question K1.1, this is defined as the sum of the annual amounts given for each income source in question K1.1, i.e. K1.1(a) - K1.1(k) inclusive. For respondents who did not complete question K1.1 but did indicate their income group on the Income Form, total annual income is defined as the midpoint of the income group, with those in income group 26 assigned the value $10,000.

Variable number	Question number	Coding	Variable description
105	K1.1 K1.1B	0+	Total annual income as defined in variable 104 divided by n, where n is defined as in variable 95
106-110	These variable numbers were reserved for expenditure information which was not available at the time the tape was created.		
111	K1.3	0-11	Number of the following institutions in which respondent has money invested: building societies; investment clubs or societies; Post Office Savings bank; other trading or savings bank; property syndicates; Post Office Bonus Bonds; National Development Bonds; shares or debentures; interest in a business or financial venture of any kind; a loan to any person, or other money not in a bank or invested; any other investment.
112-131	These variable numbers were reserved for expenditure information which was not available at the time the tape was created.		
132	N1.2	0 1	Walls: paint or wallpaper stained, discoloured or peeling. Otherwise
133	N1.2	0 1	Walls: paint or wallpaper old but in reasonable or good condition. Otherwise
134	N1.2	1 0	Walls: paint or wallpaper in new condition. Otherwise
135	N1.3	0 1	Ceiling: paint or wallpaper sagging, stained, discoloured or peeling. Otherwise
136	N1.3	0 1	Ceiling: paint or wallpaper old but in reasonable or good condition. Otherwise
137	N1.3	1 0	Ceiling: paint or wallpaper in new condition. Otherwise
138	N1.4	0 1	Woodwork on doors, window ledges etc., chipped, old or dirty. Otherwise
139	N1.4	1 0	Woodwork on doors, window ledges, etc., in reasonable or good condition Otherwise

Variable number	Question number	Coding	Variable description
140	N1.4	0	No drapes or venetian blinds.
		1	Otherwise
141	N1.4	0	Drapes or blinds shabby, torn or dirty.
		1	Otherwise
142	N1.4	1	Drapes or blinds in reasonable or good condition.
		0	Otherwise
143	N1.4	0	Windows cracked or broken.
		1	Otherwise
144	N1.5	0	Floor covering worn, shabby or stained.
		1	Otherwise
145	N1.5	0	Floor covering old but in reasonable or good condition.
		1	Otherwise
146	N1.5	1	Floor covering in new condition.
		0	Otherwise
147	N1.5	0	Floors bare and in shabby or old condition.
		1	Otherwise
148	N1.6	0	Furniture shabby or dirty.
		1	Otherwise
149	N1.6	1	Furniture in good condition.
		0	Otherwise
150	N1.6	1	Furniture in new condition.
		0	Otherwise
151	N1.6	1	Lounge suite matched.
		0	Otherwise
152	N1.6	0	Furniture rickety or damaged.
		1	Otherwise
153	N1.7	0	Room dark, airless, dingy or depressing.
		1	Otherwise

Variable number	Question number	Coding	Variable description
154	N1.7	0	Room had a musty and unpleasant odour.
		1	Otherwise
155	N1.7	1	Room bright and airy.
		0	Otherwise
156	N1.7	0	Living space was small, confined or cramped.
		1	Otherwise
157	N2.1	1	House suggested a well-to-do resident.
		0	Otherwise
158	N2.1	0	House had dilapidated and tumbledown air.
		1	Otherwise
159	N2.1	0	Outside paint old, peeling.
		1	Otherwise
160	N2.1	0	Windows in need of repair.
		1	Otherwise
161	N2.1	0	Boards, walls or guttering in need of repair.
		1	Otherwise
162	N2.1	1	House looked recently painted, in good condition, generally attractive.
		0	Otherwise
163	N2.1	0	Roof in need of painting or repair.
		1	Otherwise
164	N3.1	0	Paths, outside stairways old, crumbling, rotten or broken.
		1	Otherwise
165	N3.1	0	Grounds generally littered with rubbish and junk.
		1	Otherwise
166	N3.1	1	Grounds well maintained.
		0	Otherwise

Variable number	Question number	Coding	Variable description
167	N3.1	1	Garden attractively laid out and planted.
		0	Otherwise
168	N3.1	1	Letterbox in good condition.
		0	Otherwise
169	N3.1	1	Front fence in need of repair.
		0	Otherwise
170	N3.1	0	Accommodation had no grounds.
		1	Otherwise
171	N3.1	0	Accommodation had no front yard.
		1	Otherwise
172	N4.1	1	House situated in street of high quality housing.
		0	Otherwise
173	N4.1	0	House situated in street of old or decaying housing.
		1	Otherwise

CORRELATIONS OF THE 30 VARIABLES INCLUDED FOR FACTOR ANALYSIS WITH THE THREE CRITERION VARIABLES

For an explanation of how to interpret correlation coefficients, the reader is referred to Table 4.5.1 of the text.

	Variable number and Description	Interviewer's rating of standard of living	Interviewer's rating of financial difficulty	Respondent's rating of how well income satisfies needs
3	Whether respondent had an inside toilet	.27	.13	.04
4	Whether toilet a separate room	.22	.16	.10
5	Whether respondent had both bath and shower	.30	.23	.09
9	Whether house had hot and cold running water in the bathroom	.21	.13	.04
10	Whether house had hot and cold running water in the kitchen	.22	.12	.05
12	Whether respondent felt that cost of accommodation was causing him financial difficulty	.16	.34	.28
14	Whether respondent's accommodation had run down because he could not afford the upkeep	.21	.27	.22
15	Whether respondent had the use of an automatic stove	.31	.22	.11
17	Whether respondent could afford a telephone	.24	.21	.13
18	Whether respondent could afford a television	.18	.21	.14
25	Whether respondent stayed in bed longer last winter to reduce heating costs	.17	.28	.22
28	Whether respondent put up with feeling cold to keep the heating bill down last winter	.17	.26	.24
29	Whether respondent was forced to buy cheap grades of meat in order to make ends meet	.18	.31	.26
30	Whether respondent was forced to do without meat in order to make ends meet	.14	.23	.20

Variable number and Description	Interviewer's rating of standard of living	Interviewer's rating of financial difficulty	Respondent's rating of how well income satisfies needs
31 Whether respondent was forced to buy the cheaper kinds of fruit and vegetables in order to make ends meet	.18	.27	.24
34 Whether respondent or spouse owns a car	.31	.21	.08
36 Number of different magazines or periodicals respondent buys regularly	.20	.21	.16
37 Whether respondent failed, because of lack of money, to buy items of clothing when needed	.27	.43	.33
38 Whether respondent bought cheaper quality clothing because he could not afford better	.25	.40	.32
39 Whether respondent put off buying small items of clothing for as long as possible because of lack of money	.25	.45	.37
40 Whether respondent failed to buy a pair of shoes when needed because of lack of money	.25	.38	.30
41 Whether respondent repaired old or worn-out clothing because he could not afford its replacement cost	.23	.38	.32
42 Whether respondent had to wear old or worn-out clothing when going out visiting because of lack of money	.21	.28	.18
43 Whether respondent relied, because of lack of money, on gifts from relatives or others for replacement clothing	.22	.28	.18
44 Whether respondent bought second-hand clothing because of lack of money	.19	.24	.17
45 Whether respondent bought second-hand shoes because of lack of money	.16	.21	.13

...

Variable number and Description	Interviewer's rating of standard of living	Interviewer's rating of financial difficulty	Respondent's rating of how well income satisfies needs
47 Whether respondent had a pair of good waterright shoes suitable for winter	.23	.35	.32
48 Whether respondent had to do without or economise on hobby, knitting, or sewing materials because of the costs involved	.11	.23	.21
49 Whether respondent had to do without or economise on tobacco or cigarettes because of the costs involved	.12	.20	.20
51 Whether respondent had to do without or economise on going to the hairdresser/barber because of costs involved	.13	.24	.24
52 Whether respondent had to do without or economise on visits to friends or relatives because of the costs involved	.15	.26	.23
53 Whether respondent had to do without or economise on entertaining friends or relatives because of costs involved	.10	.23	.21
54 Whether respondent had to do without or economise on books and magazines because of the costs involved	.11	.28	.26
55 Whether respondent had to do without or economise on holidays away from home because of the costs involved	.21	.35	.35
56 Whether respondent had to do without or economise on owning or running a car because of the costs involved	.12	.25	.25
57 Whether respondent had to do without or economise on the use of taxis because of the costs involved	.22	.31	.24

Variable number and Description	Interviewer's rating of standard of living	Interviewer's rating of financial difficulty	Respondent's rating of how well income satisfies needs
59 Whether respondent had to do without or economise on paid help in the garden because of the costs involved	.12	.23	.16
61 Whether respondent had to budget very carefully to make ends meet	.26	.45	.50
62 Whether respondent had to cut down on luxuries he used to enjoy because of expense	.21	.43	.46
63 Whether respondent was of the opinion that, if he required a minor operation including a week of hospital treatment, he could afford to go to a private hospital	.32	.43	.43
64 Whether respondent postponed visits to a medical specialist because of lack of money	.10	.21	.18
67 Whether respondent wore unsuitable glasses or no glasses because he could not afford replacements	.21	.36	.28
68 Whether respondent wore ill-fitting or broken dentures because he could not afford replacements	.14	.27	.23
69 Whether respondent postponed visits to the dentist because of lack of money	.14	.28	.23
72 Total value of respondent's (and spouse's) investments and savings	.34	.43	.35
73 Total value of life and/or endowment insurances held by respondent and spouse	.26	.26	.20
75 Whether savings of respondent and spouse had decreased over the last 12 months	.03	.19	.30
76 Whether savings of respondent and spouse had increased over the last 12 months	.09	.18	.34

...

Variable number and Description	Interviewer's rating of standard of living	Interviewer's rating of financial difficulty	Respondent's rating of how well income satisfies needs
77 Whether respondent had to draw on savings to meet weekly living expenses over the last 12 months	.00	.21	.31
81 Number of rooms (bathroom, kitchen, laundry) having hot and cold running water	.25	.15	.08
82 Number of areas of house requiring repair (windows, roof, walls, flooring, ceilings, doors, wiring, plumbing, roofing, other) or repainting painting (roof, outside walls, other)	.35	.28	.17
83 Number of kitchen items the respondent had the use of: separate deep freeze, electric food mixer, electric kettle or jug, electric toaster, stainless steel, formica or marble sink bench, double or single sink, dishwasher, disposal unit or waste-master	.43	.28	.12
84 Number of laundry items respondent had the use of: ironing board, rotary clothes line, stainless steel tub, semi-automatic washing machine, fully automatic washing machine, tumble clothes drier	.35	.22	.07
85 Number of lounge items the respondent had the use of: arm chair, occasional or coffee table, sofa, china cabinet or sideboard, wall-to-wall carpet in lounge or living room, matching dining table and chairs, complete (or nearly complete) matching dinner set, complete (or nearly complete) matching cutlery set	.48	.30	.14
86 Number of bedroom items the respondent had the use of: mirror, bedside rug, wall or table or bedside lighting, wardrobe, dressing table or chest of drawers, rubber or innerspring mattress, electric blanket or electric mattress, matching bedroom suite, wall-to-wall carpet.	.41	.26	.12

Variable number and Description	Interviewer's rating of standard of living	Interviewer's rating of financial difficulty	Respondent's rating of how well income satisfies needs
87 Number of items from the following list respondent had the use of: vacuum cleaner, bookcase (or shelves) with books, telephone, more than one telephone or jackpoint, airing cupboard, clock, television set, radio, record playing equipment	.43	.33	.16
88 Total number of heaters in working order	.29	.27	.19
90 Number of food items respondent had in the cupboard at the time of interview: tea or coffee, sugar, milk, butter/margarine, eggs, cheese, flour, bread, breakfast cereals, jam or honey or other spread, cake, biscuits, meat, potatoes, onions, fresh or processed green vegetables, fresh fruit, processed fruit	.26	.19	.14
91 Number of clothing difficulty items endorsed by respondent (see question Q1.2)	.33	.50	.39
92 Number of items endorsed by respondent which relate to doing without or economising on non-essentials (see question C 3.1)	.23	.44	.40
93 Number of health difficulty items endorsed by respondent (see question H 2.2)	.21	.38	.31
111 Number of institutions in which respondent or spouse has money invested (see question K1.3)	.35	.36	.32
134 Whether interviewer described wall paper or paint on living room walls as being in new condition	.39	.25	.09
137 Whether interviewer described paint or wall paper on ceiling as being in new condition	.37	.25	.08
138 Whether interviewer described woodwork on doors, window ledges, etc., as chipped, old or dirty	.40	.24	.08

...

Variable number and Description	Interviewer's rating of standard of living	Interviewer's rating of financial difficulty	Respondent's rating of how well income satisfies needs
141 Whether interviewer described drapes or blinds as shabby, torn or dirty	.31	.17	.08
146 Whether interviewer described living room floor covering as being in new condition	.40	.24	.09
147 Whether interviewer described living room floors as bare and in shabby or old condition	.26	.15	.05
148 Whether interviewer described furniture as shabby or dirty	.43	.26	.11
151 Whether a living room suite matched	.26	.16	.06
155 Whether interviewer described living room as bright and airy	.43	.25	.07
156 Whether interviewer described living space as small, confined or cramped	.32	.20	.09
157 Whether interviewer described exterior of house as suggesting a well-to-do resident	.47	.35	.18
159 Whether interviewer described outside paint as old, peeling	.32	.22	.10
161 Whether interviewer observed outside boards, walls or pavement to be in need of repair	.29	.20	.08
165 Whether interviewer observed the roof to be in need of painting or repair	.27	.20	.08
164 Whether interviewer described paths, outside steps as old, crumbling, rotten or broken	.27	.18	.09
167 Whether interviewer described grounds as attractively laid out and planted	.34	.23	.12

Variable number and description	Interviewer's rating of standard of living	Interviewer's rating of financial difficulty	Respondent's rating of how well income satisfies needs
168 Whether interviewer described letterbox as in good condition	.25	.15	.03
173 Whether interviewer described house as being situated in a street of old or decaying housing	.34	.22	.14

APPENDIX 3

BRIEF DESCRIPTION OF PRINCIPAL COMPONENTS AND ROTATIONAL METHODS

The initial data set for the analysis comprised a matrix of 1913 subjects measured on 80 variables. The basic problem was to transform this data matrix to a reduced space of 1913 subjects measured on some comparatively small number (e.g. 6 or less) of hypothetical underlying dimensions such that certain fundamental properties of the data matrix were preserved.

The data model used to achieve this reduction was principal components analysis of the matrix R of intercorrelations of the 80 variates. Principal components analysis assumes that for each variate a subject's score can be represented by a linear composite of underlying dimensions or components. In this respect the model is similar to common factor analysis; the essential difference between the two models is that the principal components solution extracts all the variance in the matrix R whereas the factor analytic solution only extracts common factor variance. In operational terms this means that principal components analysis makes use of a matrix R with unities in the leading diagonal whereas factor analysis makes use of a matrix with estimated communality values in the diagonal. More formally, if m is the number of variables and p is the number of underlying dimensions, the model assumes that the correlation matrix R can be reproduced by the product of the m x p factor matrix, F, and its transpose, F'; i.e. the model is:

$$R = F F'$$

Computationally, the analysis consists of recovering the elements of F and thence establishing the dimensionality, p, of the data.

In practice the principal components solution normally extracts as many factors as there are variables and it is usual when working with the results to extract only as many factors as is necessary to give an acceptable approximation to the correlation matrix. The problem of determining how many factors to extract

cannot be solved by any exact method and it is left to the analyst using a number of rules of thumb to determine the dimensionality of the space. In the present instance the following procedure was used. Initially the Guttman-Kaiser (Guttman, 1954 and Kaiser, 1961) criterion of extracting all factors with eigenvalues greater than 1 was used to set the upper limit of the dimensionality of the space. It was found that by this criterion it was not reasonable to extract more than 19 factors from the space. This result reflects the fact that the Guttman-Kaiser criterion tends to be rather liberal with respect to the number of factors extracted. The dimensionality of the space was then further examined using Cattell's Scree Test. This test is based on an empirical observation made by Cattell (1966) that a plot of the amount of variance accounted for by each factor in general reveals a monotone descending curve which levels out at the point at which all important or significant factors have been extracted. On the basis of the scree test a three factor solution unequivocally was the most appropriate. A third criterion that is relevant to determining the dimensionality of the data is the interpretability of the solution. This was examined by considering the content of the factors resulting from 2, 3 and 6 factor solutions. The three factor solution appeared to give the most interpretable results.

The principal components method of factoring extracts factors whose axes are arbitrary in relation to their orientation to the variables. To produce a solution which overcomes this arbitrariness it is conventional to rotate the factor axes. In the present study two methods of rotation were used : Varimax (Kaiser, 1958) which produces an orthoganal factor structure, and Oblimin (Carroll, 1958) which produces an oblique factor solution. It was found that both methods produced similar results : for each factor the essential pattern of factor loadings of the variables was invariant over the two rotational methods. Further details of the method of factoring used in the study can be obtained on request from the authors.

REFERENCES

CARROLL, J.B. Oblimin Rotation Solution in Factor Analysis. Computing Program for the IBM 704. Mimeographed, 1958.

CATTELL R.B. The scree test for the number of factors. Multivariate Behavioural Research Monographs. 1(2), 1966.

GUTTMAN, L. Some necessary conditions for common factor analysis. Psychometrika, 19, 1954, 149 - 161.

HARMAN, H.H. Modern Factor Analysis. Chicago: University of Chicago Press, Revised Edition, 1967.

HORST, P. Factor Analysis of Data Matrices. U.S.A: Holt, Rinehart and Winston, 1965.

KAISER, H.F. The varimax criterion for analytic rotation in factor analysis. Psychometrika, 23, 1958, 187-200.

———— A note on Guttman's lower bound for the number of common factors. British Journal of Statistical Psychology, 14, 1961, 1-2.

NUNNALLY J.C. Psychometric Theory. U.S.A: McGraw-Hill, 1967.

RUMMEL, R.J. Applied Factor Analysis. U.S.A: North Western University Press, 1970.

APPENDIX 4

STATISTICAL PROFILES OF GROUPS DEFINED BY DECILES OF SCALE 1

This appendix gives for each decile group the proportion of respondents in the group reporting the behaviour described by each of the items. (A full specification of the items can be obtained from Appendix 1.) The purpose of the appendix is to provide a tangible indication of the circumstances experienced by the members of each group. Scale 1 did not enable the 9th and 10th deciles to be distinguished, so in fact there are only nine groups rather than ten, with the last one comprising approximately one fifth of the sample. It was possible to find values of Scale 1 such that each of the other groups were approximately one tenth of the sample.

Note: This decile comprised 189 respondents (i.e. 9.9% of the sample).

Accommodation

42% considered the cost of their present accommodation was causing financial difficulty. (Item 12)

26% stated that their accommodation had become run-down because of lack of finance. (Item 14)

Heating

55% stayed in bed longer or went to bed earlier during the previous winter because of the cost of heating. (Item 25)

53% often put up with feeling cold during the previous winter to keep down heating costs. (Item 28)

Food

56% boughtcheaper grades of meat over the previous twelve months to make ends meet. (Item 29)

30% did without meat on some day over the previous twelve months to make ends meet. (Item 30)

45% bought cheaper fruit and vegetables over the previous twelve months to make ends meet. (Item 31)

Clothing

72% failed to buy needed items of clothing over the previous twelve months because of the expense. (Item 37)

78% bought a cheaper quality of clothing over the previous twelve months because of the cost. (Item 38)

89% put off buying small items of clothing for as long as possible over the previous twelve months. (Item 39)

60% did not buy a pair of shoes when they were needed over the previous twelve months because of the cost. (Item 40)

68% repaired worn-out clothing over the previous twelve months because of the cost of replacement. (Item 41)

30% had had to wear old or worn out clothing when visiting friend over the previous twelve months. (Item 42)

32% relied on gifts from relatives and others for replacement clothing over the previous twelve months. (Item 43)

24% had had to buy second-hand clothes over the previous twelve months. (Item 44)

16% had had to buy second-hand shoes over the previous twelve months (Item 45)

66% did not have a pair of good waterproof shoes during the previous winter (Item 47)

(description of 1st decile continued)

Recreational and social

38% had to economise on, or do without, materials for a hobby, sewing or knitting, because of the cost. (Item 48)

32% had to economise on, or do without, tobacco or cigarettes, because of the cost. (Item 49)

57% had to economise on, or do without, visits to the hairdresser because of the cost. (Item 51)

41% had to economise on, or stop, visiting friends or relatives because of the costs involved. (Item 52)

38% had to economise on, or stop, entertaining friends and relatives because of the costs involved. (Item 53)

55% had to economise on, or do without, books or magazines because of the cost. (Item 54)

78% had to economise on, or do without, holidays away from home because of the cost. (Item 55)

45% had to economise on, or do without, running or owning a car because of the cost. (Item 56)

54% had to economise on, or do without, the use of taxis. (Item 57)

25% had to economise on, or do without, paid help in the garden because of the cost. (Item 59)

Need to budget generally

98% reported they had had to budget very carefully "to make ends meet". (Item 61)

Reduction of luxuries

96% reported they had had to cut down on luxuries they used to enjoy because of the expense. (Item 62)

Medical care

95% considered that they would not be able to afford a week in a private hospital if a minor operation was required. (Item 63)

25% had postponed visits to medical specialists over the previous twelve months because of lack of money. (Item 64)

47% had worn unsuitable glasses over the previous twelve months because of the cost of replacement. (Item 67)

37% had worn ill-fitting dentures because of the cost of replacement. (Item 68)

39% had postponed visits to the dentist over the previous twelve months because of the cost. (Item 69)

Drawing on saving

57% had had to draw on savings over the previous twelve months to meet every-day expenses. (Item 77)

Note: This decile comprised 190 respondents (i.e. 9.[illegible]% of the sample).

Accommodation

26% considered the cost of their present accommodation was causing financial difficulty. (Item 12)

13% stated that their accommodation had become run-down because of lack of finance. (Item 14)

Heating

37% stayed in bed longer or went to bed earlier during the previous winter because of the cost of heating. (Item 25)

36% often put up with feeling cold during the previous winter to keep down heating costs. (Item 28)

Food

40% bought cheaper grades of meat over the previous twelve months to make ends meet. (Item 29)

13% did without meat on some day over the previous twelve months to make ends meet. (Item 30)

19% bought cheaper fruit and vegetables over the previous twelve months to make ends meet. (Item 31)

Clothing

28% failed to buy needed items of clothing over the previous twelve months because of the expense. (Item 37)

40% bought a cheaper quality of clothing over the previous twelve months because of the cost. (Item 38)

48% put off buying small items of clothing for as long as possible over the previous twelve months. (Item 39)

18% did not buy a pair of shoes when they were needed over the previous twelve months because of the cost. (Item 40)

29% repaired worn-out clothing over the previous twelve months because of the cost of replacement. (Item 41)

4% had had to wear old or worn out clothing when visiting friend over the previous twelve months. (Item 42)

11% relied on gifts from relatives and others for replacement clothing over the previous twelve months. (Item 43)

7% had had to buy second-hand clothes over the previous twelve months. (Item 44)

2% had had to buy second-hand shoes over the previous twelve months (Item 45)

61% did not have a pair of good waterproof shoes during the previous winter (Item 47)

(description of 2nd decile continued)

Recreational and social

19% had to economise on, or do without, materials for a hobby, sewing or knitting, because of the cost. (Item 48)

17% had to economise on, or do without, tobacco or cigarettes, because of the cost. (Item 49)

35% had to economise on, or do without, visits to the hairdresser because of the cost. (Item 51)

23% had to economise on, or stop, visiting friends or relatives because of the costs involved. (Item 52)

18% had to economise on, or stop, entertaining friends and relatives because of the costs involved. (Item 53)

24% had to economise on, or do without, books or magazines because of the cost. (Item 54)

57% had to economise on, or do without, holidays away from home because of the cost. (Item 55)

30% had to economise on, or do without, running or owning a car because of the cost. (Item 56)

34% had to economise on, or do without, the use of taxis. (Item 57)

18% had to economise on, or do without, paid help in the garden because of the cost. (Item 59)

Need to budget generally

91% reported they had had to budget very carefully "to make ends meet". (Item 61)

Reduction of luxuries

85% reported they had had to cut down on luxuries they used to enjoy because of the expense. (Item 62)

Medical care

85% considered that they would not be able to afford a week in a private hospital if a minor operation was required. (Item 63)

9% had postponed visits to medical specialists over the previous twelve months because of lack of money. (Item 64)

23% had worn unsuitable glasses over the previous twelve months because of the cost of replacement. (Item 67)

16% had worn ill-fitting dentures because of the cost of replacement. (Item 68)

14% had postponed visits to the dentist over the previous twelve months because of the cost. (Item 69)

Drawing on saving

41% had had to draw on savings over the previous twelve months to meet every-day expenses. (Item 77)

Note: This decile comprised 196 respondents (i.e. 10.2% of the sample)

Accommodation

15% considered the cost of their present accommodation was causing financial difficulty. (Item 12)

7% stated that their accommodation had become run-down because of lack of finance. (Item 14)

Heating

32% stayed in bed longer or went to bed earlier during the previous winter because of the cost of heating. (Item 25)

25% often put up with feeling cold during the previous winter to keep down heating costs. (Item 28)

Food

24% bought cheaper grades of meat over the previous twelve months to make ends meet. (Item 29)

6% did without meat on some day over the previous twelve months to make ends meet. (Item 30)

9% bought cheaper fruit and vegetables over the previous twelve months to make ends meet. (Item 31)

Clothing

13% failed to buy needed items of clothing over the previous twelve months because of the expense. (Item 37)

20% bought a cheaper quality of clothing over the previous twelve months because of the cost. (Item 38)

26% put off buying small items of clothing for as long as possible over the previous twelve months. (Item 39)

5% did not buy a pair of shoes when they were needed over the previous twelve months because of the cost. (Item 40)

9% repaired worn-out clothing over the previous twelve months because of the cost of replacement. (Item 41)

2% had had to wear old or worn out clothing when visiting friend over the previous twelve months. (Item 42)

7% relied on gifts from relatives and others for replacement clothing over the previous twelve months. (Item 43)

2% had had to buy second-hand clothes over the previous twelve months. (Item 44)

1% had had to buy second-hand shoes over the previous twelve months (Item 45)

42% did not have a pair of good waterproof shoes during the previous winter (Item 47)

(description of 3rd decile continued)

Recreational and social

12% had to economise on, or do without, materials for a hobby, sewing or knitting, because of the cost. (Item 48)

9% had to economise on, or do without, tobacco or cigarettes, because of the cost. (Item 49)

25% had to economise on, or do without, visits to the hairdresser because of the cost. (Item 51)

7% had to economise on, or stop, visiting friends or relatives because of the costs involved. (Item 52)

4% had to economise on, or stop, entertaining friends and relatives because of the costs involved. (Item 53)

18% had to economise on, or do without, books or magazines because of the cost. (Item 54)

35% had to economise on, or do without, holidays away from home because of the cost. (Item 55)

20% had to economise on, or do without, running or owning a car because of the cost. (Item 56)

24% had to economise on, or do without, the use of taxis. (Item 57)

10% had to economise on, or do without, paid help in the garden because of the cost. (Item 59)

Need to budget generally

81% reported they had had to budget very carefully "to make ends meet". (Item 61)

Reduction of luxuries

73% reported they had had to cut down on luxuries they used to enjoy because of the expense. (Item 62)

Medical care

79% considered that they would not be able to afford a week in a private hospital if a minor operation was required. (Item 63)

4% had postponed visits to medical specialists over the previous twelve months because of lack of money. (Item 64)

12% had worn unsuitable glasses over the previous twelve months because of the cost of replacement. (Item 67)

12% had worn ill-fitting dentures because of the cost of replacement. (Item 68)

7% had postponed visits to the dentist over the previous twelve months because of the cost. (Item 69)

Drawing on saving

38% had had to draw on savings over the previous twelve months to meet every-day expenses. (Item 77)

Note: This decile comprised 189 respondents (i.e. 9.9% of the sample)

Accommodation

9% considered the cost of their present accommodation was causing financial difficulty. (Item 12)

3% stated that their accommodation had become run-down because of lack of finance. (Item 14)

Heating

17% stayed in bed longer or went to bed earlier during the previous winter because of the cost of heating. (Item 25)

19% often put up with feeling cold during the previous winter to keep down heating costs. (Item 28)

Food

15% boughtcheaper grades of meat over the previous twelve months to make ends meet. (Item 29)

2% did without meat on some day over the previous twelve months to make ends meet. (Item 30)

4% bought cheaper fruit and vegetables over the previous twelve months to make ends meet. (Item 31)

Clothing

2% failed to buy needed items of clothing over the previous twelve months because of the expense. (Item 37)

4% bought a cheaper quality of clothing over the previous twelve months because of the cost. (Item 38)

10% put off buying small items of clothing for as long as possible over the previous twelve months. (Item 39)

1% did not buy a pair of shoes when they were needed over the previous twelve months because of the cost. (Item 40)

2% repaired worn-out clothing over the previous twelve months because of the cost of replacement. (Item 41)

0% had had to wear old or worn out clothing when visiting friend over the previous twelve months. (Item 42)

1% relied on gifts from relatives and others for replacement clothing over the previous twelve months. (Item 43)

0% had had to buy second-hand clothes over the previous twelve months. (Item 44)

0% had had to buy second-hand shoes over the previous twelve months (Item 45)

22% did not have a pair of good waterproof shoes during the previous winter (Item 47)

(description of 4th decile continued)

Recreational and social

6% had to economise on, or do without, materials for a hobby, sewing or knitting, because of the cost. (Item 48)

6% had to economise on, or do without, tobacco or cigarettes, because of the cost. (Item 49)

20% had to economise on, or do without, visits to the hairdresser because of the cost. (Item 51)

2% had to economise on, or stop, visiting friends or relatives because of the costs involved. (Item 52)

6% had to economise on, or stop, entertaining friends and relatives because of the costs involved. (Item 53)

9% had to economise on, or do without, books or magazines because of the cost. (Item 54)

30% had to economise on, or do without, holidays away from home because of the cost. (Item 55)

18% had to economise on, or do without, running or owning a car because of the cost. (Item 56)

25% had to economise on, or do without, the use of taxis. (Item 57)

8% had to economise on, or do without, paid help in the garden because of the cost. (Item 59)

Need to budget generally

71% reported they had had to budget very carefully "to make ends meet". (Item 61)

Reduction of luxuries

64% reported they had had to cut down on luxuries they used to enjoy because of the expense. (Item 62)

Medical care

73% considered that they would not be able to afford a week in a private hospital if a minor operation was required. (Item 63)

1% had postponed visits to medical specialists over the previous twelve months because of lack of money. (Item 64)

4% had worn unsuitable glasses over the previous twelve months because of the cost of replacement. (Item 67)

4% had worn ill-fitting dentures because of the cost of replacement. (Item 68)

2% had postponed visits to the dentist over the previous twelve months because of the cost. (Item 69)

Drawing on saving

31% had had to draw on savings over the previous twelve months to meet every-day expenses. (Item 77)

Note: This decile comprised 182 respondents (i.e. 9.5% of the sample).

Accommodation

6% considered the cost of their present accommodation was causing financial difficulty. (Item 12)

0% stated that their accommodation had become run-down because of lack of finance. (Item 14)

Heating

11% stayed in bed longer or went to bed earlier during the previous winter because of the cost of heating. (Item 25)

7% often put up with feeling cold during the previous winter to keep down heating costs. (Item 28)

Food

10% bought cheaper grades of meat over the previous twelve months to make ends meet. (Item 29)

2% did without meat on some day over the previous twelve months to make ends meet. (Item 30)

2% bought cheaper fruit and vegetables over the previous twelve months to make ends meet. (Item 31)

Clothing

0% failed to buy needed items of clothing over the previous twelve months because of the expense. (Item 37)

1% bought a cheaper quality of clothing over the previous twelve months because of the cost. (Item 38)

4% put off buying small items of clothing for as long as possible over the previous twelve months. (Item 39)

1% did not buy a pair of shoes when they were needed over the previous twelve months because of the cost. (Item 40)

0% repaired worn-out clothing over the previous twelve months because of the cost of replacement. (Item 41)

0% had had to wear old or worn out clothing when visiting friend over the previous twelve months. (Item 42)

0% relied on gifts from relatives and others for replacement clothing over the previous twelve months. (Item 43)

0% had had to buy second-hand clothes over the previous twelve months. (Item 44)

0% had had to buy second-hand shoes over the previous twelve months (Item 45)

11% did not have a pair of good waterproof shoes during the previous winter (Item 47)

(description of 5th decile continued)

Recreational and social

3% had to economise on, or do without, materials for a hobby, sewing or knitting, because of the cost. (Item 48)

2% had to economise on, or do without, tobacco or cigarettes, because of the cost. (Item 49)

11% had to economise on, or do without, visits to the hairdresser because of the cost. (Item 51)

1% had to economise on, or stop, visiting friends or relatives because of the costs involved. (Item 52)

1% had to economise on, or stop, entertaining friends and relatives because of the costs involved. (Item 53)

2% had to economise on, or do without, books or magazines because of the cost. (Item 54)

14% had to economise on, or do without, holidays away from home because of the cost. (Item 55)

8% had to economise on, or do without, running or owning a car because of the cost. (Item 56)

10% had to economise on, or do without, the use of taxis. (Item 57)

3% had to economise on, or do without, paid help in the garden because of the cost. (Item 59)

Need to budget generally

63% reported they had had to budget very carefully "to make ends meet". (Item 61)

Reduction of luxuries

46% reported they had had to cut down on luxuries they used to enjoy because of the expense. (Item 62)

Medical care

65% considered that they would not be able to afford a week in a private hospital if a minor operation was required. (Item 63)

0% had postponed visits to medical specialists over the previous twelve months because of lack of money. (Item 64)

0% had worn unsuitable glasses over the previous twelve months because of the cost of replacement. (Item 67)

1% had worn ill-fitting dentures because of the cost of replacement. (Item 68)

1% had postponed visits to the dentist over the previous twelve months because of the cost. (Item 69)

Drawing on saving

40% had had to draw on savings over the previous twelve months to meet every-day expenses. (Item 77)

Note: This decile comprised 201 respondents (i.e. 10.5% of the sample).

Accommodation

2% considered the cost of their present accommodation was causing financial difficulty. (Item 12)

0% stated that their accommodation had become run-down because of lack of finance. (Item 14)

Heating

8% stayed in bed longer or went to bed earlier during the previous winter because of the cost of heating. (Item 25)

6% often put up with feeling cold during the previous winter to keep down heating costs. (Item 28)

Food

3% bought cheaper grades of meat over the previous twelve months to make ends meet. (Item 29)

1% did without meat on some day over the previous twelve months to make ends meet. (Item 30)

1% bought cheaper fruit and vegetables over the previous twelve months to make ends meet. (Item 31)

Clothing

0% failed to buy needed items of clothing over the previous twelve months because of the expense. (Item 37)

0% bought a cheaper quality of clothing over the previous twelve months because of the cost. (Item 38)

0% put off buying small items of clothing for as long as possible over the previous twelve months. (Item 39)

0% did not buy a pair of shoes when they were needed over the previous twelve months because of the cost. (Item 40)

0% repaired worn-out clothing over the previous twelve months because of the cost of replacement. (Item 41)

0% had had to wear old or worn out clothing when visiting friend over the previous twelve months. (Item 42)

0% relied on gifts from relatives and others for replacement clothing over the previous twelve months. (Item 43)

0% had had to buy second-hand clothes over the previous twelve months. (Item 44)

0% had had to buy second-hand shoes over the previous twelve months (Item 45)

3% did not have a pair of good waterproof shoes during the previous winter (Item 47)

(description of 6th decile continued)

Recreational and social

2% had to economise on, or do without, materials for a hobby, sewing or knitting, because of the cost. (Item 48)

0% had to economise on, or do without, tobacco or cigarettes, because of the cost. (Item 49)

5% had to economise on, or do without, visits to the hairdresser because of the cost. (Item 51)

2% had to economise on, or stop, visiting friends or relatives because of the costs involved. (Item 52)

0% had to economise on, or stop, entertaining friends and relatives because of the costs involved. (Item 53)

2% had to economise on, or do without, books or magazines because of the cost. (Item 54)

3% had to economise on, or do without, holidays away from home because of the cost. (Item 55)

2% had to economise on, or do without, running or owning a car because of the cost. (Item 56)

5% had to economise on, or do without, the use of taxis. (Item 57)

0% had to economise on, or do without, paid help in the garden because of the cost. (Item 59)

Need to budget generally

40% reported they had had to budget very carefully "to make ends meet". (Item 61)

Reduction of luxuries

19% reported they had had to cut down on luxuries they used to enjoy because of the expense. (Item 62)

Medical care

70% considered that they would not be able to afford a week in a private hospital if a minor operation was required. (Item 63)

0% had postponed visits to medical specialists over the previous twelve months because of lack of money. (Item 64)

0% had worn unsuitable glasses over the previous twelve months because of the cost of replacement. (Item 67)

1% had worn ill-fitting dentures because of the cost of replacement. (Item 68)

0% had postponed visits to the dentist over the previous twelve months because of the cost. (Item 69)

Drawing on saving

25% had had to draw on savings over the previous twelve months to meet every-day expenses. (Item 77)

Note: This decile comprised 130 respondents (i.e. 6.8% of the sample).

Accommodation

0% considered the cost of their present accommodation was causing financial difficulty. (Item 12)

0% stated that their accommodation had become run-down because of lack of finance. (Item 14)

Heating

14% stayed in bed longer or went to bed earlier during the previous winter because of the cost of heating. (Item 25)

7% often put up with feeling cold during the previous winter to keep down heating costs. (Item 28)

Food

2% bought cheaper grades of meat over the previous twelve months to make ends meet. (Item 29)

0% did without meat on some day over the previous twelve months to make ends meet. (Item 30)

0% bought cheaper fruit and vegetables over the previous twelve months to make ends meet. (Item 31)

Clothing

0% failed to buy needed items of clothing over the previous twelve months because of the expense. (Item 37)

0% bought a cheaper quality of clothing over the previous twelve months because of the cost. (Item 38)

0% put off buying small items of clothing for as long as possible over the previous twelve months. (Item 39)

0% did not buy a pair of shoes when they were needed over the previous twelve months because of the cost. (Item 40)

0% repaired worn-out clothing over the previous twelve months because of the cost of replacement. (Item 41)

0% had had to wear old or worn out clothing when visiting friend over the previous twelve months. (Item 42)

0% relied on gifts from relatives and others for replacement clothing over the previous twelve months. (Item 43)

0% had had to buy second-hand clothes over the previous twelve months. (Item 44)

0% had had to buy second-hand shoes over the previous twelve months (Item 45)

7% did not have a pair of good waterproof shoes during the previous winter (Item 47)

(description of 7th decile continued)

Recreational and social

0% had to economise on, or do without, materials for a hobby, sewing or knitting, because of the cost. (Item 48)

0% had to economise on, or do without, tobacco or cigarettes, because of the cost. (Item 49)

8% had to economise on, or do without, visits to the hairdresser because of the cost. (Item 51)

0% had to economise on, or stop, visiting friends or relatives because of the costs involved. (Item 52)

0% had to economise on, or stop, entertaining friends and relatives because of the costs involved. (Item 53)

0% had to economise on, or do without, books or magazines because of the cost. (Item 54)

5% had to economise on, or do without, holidays away from home because of the cost. (Item 55)

2% had to economise on, or do without, running or owning a car because of the cost. (Item 56)

3% had to economise on, or do without, the use of taxis. (Item 57)

0% had to economise on, or do without, paid help in the garden because of the cost. (Item 59)

Need to budget generally

0% reported they had had to budget very carefully "to make ends meet". (Item 61)

Reduction of luxuries

0% reported they had had to cut down on luxuries they used to enjoy because of the expense. (Item 62)

Medical care

0% considered that they would not be able to afford a week in a private hospital if a minor operation was required. (Item 63)

0% had postponed visits to medical specialists over the previous twelve months because of lack of money. (Item 64)

0% had worn unsuitable glasses over the previous twelve months because of the cost of replacement. (Item 67)

0% had worn ill-fitting dentures because of the cost of replacement. (Item 68)

0% had postponed visits to the dentist over the previous twelve months because of the cost. (Item 69)

Drawing on saving

52% had had to draw on savings over the previous twelve months to meet every-day expenses. (Item 77)

Note: This decile comprised 196 respondents (i.e. 9.9% of the sample).

Accommodation

0% considered the cost of their present accommodation was causing financial difficulty. (Item 12)

0% stated that their accommodation had become run-down because of lack of finance. (Item 14)

Heating

0% stayed in bed longer or went to bed earlier during the previous winter because of the cost of heating. (Item 25)

0% often put up with feeling cold during the previous winter to keep down heating costs. (Item 28)

Food

0% bought cheaper grades of meat over the previous twelve months to make ends meet. (Item 29)

0% did without meat on some day over the previous twelve months to make ends meet. (Item 30)

0% bought cheaper fruit and vegetables over the previous twelve months to make ends meet. (Item 31)

Clothing

0% failed to buy needed items of clothing over the previous twelve months because of the expense. (Item 37)

0% bought a cheaper quality of clothing over the previous twelve months because of the cost. (Item 38)

0% put off buying small items of clothing for as long as possible over the previous twelve months. (Item 39)

0% did not buy a pair of shoes when they were needed over the previous twelve months because of the cost. (Item 40)

0% repaired worn-out clothing over the previous twelve months because of the cost of replacement. (Item 41)

0% had had to wear old or worn out clothing when visiting friend over the previous twelve months. (Item 42)

0% relied on gifts from relatives and others for replacement clothing over the previous twelve months. (Item 43)

0% had had to buy second-hand clothes over the previous twelve months. (Item 44)

0% had had to buy second-hand shoes over the previous twelve months (Item 45)

0% did not have a pair of good waterproof shoes during the previous winter (Item 47)

(description of 8th decile continued)

Recreational and social

0% had to economise on, or do without, materials for a hobby, sewing or knitting, because of the cost. (Item 48)

0% had to economise on, or do without, tobacco or cigarettes, because of the cost. (Item 49)

0% had to economise on, or do without, visits to the hairdresser because of the cost. (Item 51)

0% had to economise on, or stop, visiting friends or relatives because of the costs involved. (Item 52)

0% had to economise on, or stop, entertaining friends and relatives because of the costs involved. (Item 53)

0% had to economise on, or do without, books or magazines because of the cost. (Item 54)

0% had to economise on, or do without, holidays away from home because of the cost. (Item 55)

0% had to economise on, or do without, running or owning a car because of the cost. (Item 56)

0% had to economise on, or do without, the use of taxis. (Item 57)

0% had to economise on, or do without, paid help in the garden because of the cost. (Item 59)

Need to budget generally

18% reported they had had to budget very carefully "to make ends meet". (Item 61)

Reduction of luxuries

11% reported they had had to cut down on luxuries they used to enjoy because of the expense. (Item 62)

Medical care

71% considered that they would not be able to afford a week in a private hospital if a minor operation was required. (Item 63)

0% had postponed visits to medical specialists over the previous twelve months because of lack of money. (Item 64)

0% had worn unsuitable glasses over the previous twelve months because of the cost of replacement. (Item 67)

0% had worn ill-fitting dentures because of the cost of replacement. (Item 68)

0% had postponed visits to the dentist over the previous twelve months because of the cost. (Item 69)

Drawing on saving

0% had had to draw on savings over the previous twelve months to meet every-day expenses. (Item 77)

Note: This group comprised 446 respondents (i.e.23.3% of the sample).

Accommodation

0% considered the cost of their present accommodation was causing financial difficulty. (Item 12)

0% stated that their accommodation had become run-down because of lack of finance. (Item 14)

Heating

0% stayed in bed longer or went to bed earlier during the previous winter because of the cost of heating. (Item 25)

0% often put up with feeling cold during the previous winter to keep down heating costs. (Item 28)

Food

0% boughtcheaper grades of meat over the previous twelve months to make ends meet. (Item 29)

0% did without meat on some day over the previous twelve months to make ends meet. (Item 30)

0% bought cheaper fruit and vegetables over the previous twelve months to make ends meet. (Item 31)

Clothing

0% failed to buy needed items of clothing over the previous twelve months because of the expense. (Item 37)

0% bought a cheaper quality of clothing over the previous twelve months because of the cost. (Item 38)

0% put off buying small items of clothing for as long as possible over the previous twelve months. (Item 39)

0% did not buy a pair of shoes when they were needed over the previous twelve months because of the cost. (Item 40)

0% repaired worn-out clothing over the previous twelve months because of the cost of replacement. (Item 41)

0% had had to wear old or worn out clothing when visiting friend over the previous twelve months. (Item 42)

0% relied on gifts from relatives and others for replacement clothing over the previous twelve months. (Item 43)

0% had had to buy second-hand clothes over the previous twelve months. (Item 44)

0% had had to buy second-hand shoes over the previous twelve months (Item 45)

0% did not have a pair of good waterproof shoes during the previous winter (Item 47)

escription of 9th & 10th deciles continued)

Recreational and social

C% had to economise on, or do without, materials for a hobby, sewing or knitting, because of the cost. (Item 48)

C% had to economise on, or do without, tobacco or cigarettes, because of the cost. (Item 49)

C% had to economise on, or do without, visits to the hairdresser because of the cost. (Item 51)

C% had to economise on, or stop, visiting friends or relatives because of the costs involved. (Item 52)

C% had to economise on, or stop, entertaining friends and relatives because of the costs involved. (Item 53)

C% had to economise on, or do without, books or magazines because of the cost. (Item 54)

C% had to economise on, or do without, holidays away from home because of the cost. (Item 55)

C% had to economise on, or do without, running or owning a car because of the cost. (Item 56)

C% had to economise on, or do without, the use of taxis. (Item 57)

C% had to economise on, or do without, paid help in the garden because of the cost. (Item 59)

Need to budget generally

C% reported they had had to budget very carefully "to make ends meet". (Item 61)

Reduction of luxuries

C% reported they had had to cut down on luxuries they used to enjoy because of the expense. (Item 62)

Medical care

C% considered that they would not be able to afford a week in a private hospital if a minor operation was required. (Item 63)

C% had postponed visits to medical specialists over the previous twelve months because of lack of money. (Item 64)

C% had worn unsuitable glasses over the previous twelve months because of the cost of replacement. (Item 67)

C% had worn ill-fitting dentures because of the cost of replacement. (Item 68)

C% had postponed visits to the dentist over the previous twelve months because of the cost. (Item 69)

Drawing on saving

C% had had to draw on savings over the previous twelve months to meet every-day expenses. (Item 77)

APPENDIX 5

PRINCIPAL SURVEY DOCUMENTS

This appendix comprises the following survey documents:

Interview Questionnaire: SR/SA/03

Assessment Schedule: SR/SA/04

Daily Record of Expenditure: SR/SA/01