

A CONTRIBUTION TO INCOME DISTRIBUTION ANALYSIS IN MALTA

by E.P.Delia

Income and wealth distribution statistics constitute an important element in the formulation and assessment of pragmatic and effective economic and social policies. Yet, notwithstanding the unquestionable usefulness of such data - also spelled out in a report by economic advisers to the Maltese Government¹ — and notwithstanding claims regarding the elimination of poverty from the Maltese Islands², data on the size distribution of income and wealth are not readily available. Information on the income and assets of Maltese taxpayers and welfare recipients may be being compiled by the Departments of Inland Revenue and Social Welfare; but, if such data exist, they are not published. For this reason, fragmentary statistics on the wage or income distributions of certain subgroups in the Maltese population assume a relevant significance for socio-economic analysis despite any inherent shortcomings.

This paper presents and evaluates three recent studies which incorporate statistical information on selected wage or income patterns³. It first examines the data sources and the theoretical foundations of the Lorenz-Gini coefficient of concentration when used as a measuring rod for income "inequality". The estimated Gini coefficients, based on the three studies, are introduced and assessed; the paper is concluded by comments for welfare policy based on the results.

The Data Sources

The three references which include data on wage or income distributions are:

- i) a report on a Household Budgetary Survey carried out during 1980-1981 by the Central Office of Statistics, (COS), Malta⁴.
- ii) a paper evaluating social policy in Malta between 1972 and 1980 which includes data provided by the Department of Social Welfare on the distribution of Employees' Wage Income and on the Net Income of the Self-Employed in 1980⁵.
- iii) a report on the characteristics and the life style of the sixty-plus in the Maltese Islands based on a survey undertaken in 1982⁶.

The data considered refer to the years 1980 and 1981; from the time point of view the three studies could be taken to be complementary to each other. The reports were not primarily interested in compiling information on income distribution in Malta, although this was one

main consideration of interest to the author of the second study, Mr P. Kaim-Caudle. The shortcomings in the presentation of the data, discussed below, surely arose because of this. However, given the dearth of statistics on this social sector, it is worth assessing the information contained in the three studies, without, of course, attenuating the limitations imposed by the data on the derivation and the interpretation of the results. The data bases in the reports are examined in turn.

A Household Budgetary Survey, 1980/81

The results of the COS's survey are based on a sample of 1352 households. Included in the survey were households consisting of between two to six persons with not more than two full-time working members, and households whose head had an income between Lm22.88 — the then national minimum wage — and a maximum of Lm40 per week. Excluded were all households whose heads were employers, professional or own-account workers, pensioners or unpaid family helpers.

The survey covered a group of workers whose wage income fell within the wage range selected, a priori, by the COS. The objective of the survey was the derivation of consumption patterns which would yield the fixed weights in the structuring of a new retail price index. The survey collected information on both wages and total income of the households interviewed, but statistical material was published only in terms of the distribution of Gross Wage Income⁷, divided into four wage/salary classes. The data in the report were re-arranged to yield six different coefficients of income concentration in terms of various household sizes, ranging from two-person to six-person units.

Evaluation of Social Policy, 1972-1980

Mr Kaim-Caudle's study submits data on the distribution of wages and net income of employees and the self-employed, respectively. These statistics served as basis for estimating revenue from the National Insurance contributions in 1980; they give rise to two observations.

First, the Gainfully Occupied Population (GOP), in these workings is made up of 97850 employees and 16400 self-employed; a total of 114250. However, the actual GOP was 118832, representing an increase of 4582 on the data provided to Kaim-Caudle. Since there is no way of allocating these "missing" workers between the two categories, we proceed to process the data as presented; the results on wage or net income distribution do not necessarily reflect the 'correct', underlying distribution of earnings of the actual GOP. Of course, it can always be assumed that the distribution of earnings for the "missing" employees or self-employed tally with the distribution pattern inherent in the data provided, but such an assumption would remain conjectural.

Secondly, the data on the self-employed's net income conform to the classification laid down in the two-thirds retirement pension scheme introduced in 1979. They refer to "insurable income options" offered to the self-employed and they need not necessarily correspond directly to the own-workers' true income. In principle, there should be a close relationship between "insurable income" and "own income"; but this does not always happen in practice. The controversy over the practice of charging tax on the self-employed's income through 'ex-officio' tax assessments by the Inland Revenue Department would suggest that declared income for social insurance purposes and real income could differ substantially.

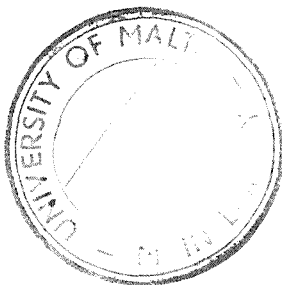
Data are classified into five income brackets. The wage distribution is based on annual pre-tax basic wage income; overtime earnings, commissions, remuneration in kind and any form of bonus are excluded. This definition covers a narrower range of workers' income than that surveyed in the COS's report; the latter includes overtime income, commissions and bonuses. For the self-employed, the information refers to annual pre-tax net income, that is the difference between total revenue from sales and the total costs incurred in running a business or in exercising a profession.

A Survey on the Aged, 1982

Details on the income distribution among Maltese aged sixty and over in 1981, are based on 767 replies to a questionnaire carried out among a randomly selected sample group. 'Income' stands for total revenue of respondents, the primary source being transfers arising from retirement pension schemes or from the non-contributory old age pension scheme. 55% of respondents relied exclusively on pensions for their income.

Nine income groups are included per distribution which is available in respect of the regional distribution of the respondents, their marital status and their past educational attainment. Three sets of Lorenz-Gini coefficients have, accordingly, been worked out.

The main features of the statistical bases in the three studies are summarised in the following table. It is observed that the reports apply different variables for analysis, cover two consuming units, and register differences in the 'robustness' of the data for analytical purposes, being 'strongest' in the *Survey on the Aged* with nine income categories.



Study	Variable	Unit	Income Classes
i) <i>Household Budgetary Survey</i>	Gross Wage Income of Employees	Household	4
ii) <i>Evaluation of Social Policy</i>	Basic Wages for Employees;	Persons	5
	Net Income for Self-Employed	Persons	5
iii) <i>Survey on the Aged</i>	Gross Income	Persons	9

Coefficients of Income Concentration and 'Inequality'

The values worked out for concentration coefficients, such as the Lorenz-Gini, depend on the consuming unit. Data based on personal income yield different ratios of concentration from data based on household income. The derived Lorenz-Gini coefficients presented below are not, therefore, comparable when the consuming unit changes.

Apart from comparative considerations, the choice of the measuring unit assessing the degree of "income inequality" as interpreted from the estimated coefficients reflects the underlying assumptions regarding equality implied in the consuming unit applied. Thus, if households form the unit, including single person units, it is assumed that equality is realised if all households irrespective of size have the same income. However, if equality is defined in terms of persons in families, it follows that children are equivalent to adults and that there are no economies of scale in family units. The variations in the concentration coefficients arising from different consuming units — personal or households — as a base depend upon the correlation between family size and income: if family size and income are positively related, the inequality coefficient decreases as we transfer the base from the number of household units to persons in families; conversely, the coefficient rises if income and family size are inversely related.

Additional information is therefore required before normative connotations may be attributed to an index of concentration and transform it into an index of 'inequality'. It may be argued that the 45 degree line of 'perfect equality', the basis of the Lorenz measure, has only mathematical significance, and no normative consideration should be ascribed to it⁹. Such an interpretation would render the Lorenzian area of inequality void of any meaning as an index of income distribution. To render the Lorenz measure useful for welfare policy, its basic faults have to be identified so that it would be correctly interpreted and applied in the relevant situations.

A fundamental fault of the Lorenz line of equality, based on annual income data, is that it assumes that all units must have equal income in a given year irrespective of their age-income profile. It also rules out the possibility of permitting a household's income to be increased by additional members entering the labour force. Given such underlying assumptions, the Lorenz-Gini becomes a legitimate welfare measure only for groups of comparable individuals, distinguished by age, or for household units with comparable socio-economic characteristics apart from the age of the head.

The classified information on the income distribution of the sixty-plus in Malta, and on the gross distribution of employees, by household, could be rearranged to derive comparable units. Considering the sixty plus as a group, in terms of age, given the past environment within which the present generation of Maltese aged sixty and over was brought up, normative connotations could be attributed to the Lorenz-Gini concentration statuses when these are estimated for the different regions, marital ratios and educational attainment. Similarly, welfare significance may be attached to the Lorenz-Gini results based on households' gross wage distributions when these are estimated for homogeneous units defined by family size whose heads offer their labour services for payments which are tightly demarcated. Wage differentials within, and between comparable, economic activities do not generally depend on the workers' age but on the wage-range related to particular job specifications and the length of time over which a worker is posted to that activity. If the wages' range related to a post is narrow, then age differences would not induce wide disparities in basic wage income distributions.

Such connotations would not be correctly attributed to the Lorenz-Gini coefficients estimated for all employees or own-accounts workers; additional information on the age distribution and the average age-income profiles is necessary for the construction of a new series of concentration coefficients which account for these factors. Presently data are available on the age composition of the Maltese population; what is needed is information on the age structure of the gainfully occupied population and the income by age-group of the GOP. Such information may be included in the published results of the 1985 Census of Population when these become available. The unadjusted Lorenz-Gini coefficients, based on the data submitted in Mr Kaim-Caudle's paper, overstate the degree of income "inequality" because they fail to account for lifetime income patterns, a factor which has to be accounted for when interpretation is made of results.

Estimated Indices of 'Inequality'

The computed Lorenz-Gini coefficients, the mean and the median Income values, based on the three studies as introduced in section 1,

are presented in Tables 1, 3 and 4. The data are self-explanatory and comments are directed to integrate the impressions formed from each set of statistics and, where deemed necessary and possible, to clarify further the normative implication of the concentration coefficients in the light of the problems discussed in the preceding section.

Distribution of Gross Wage Income: 1980/81

Age-income profiles would form an integral part of income distribution analysis when intertemporal evaluations are undertaken. However, when analysis is carried out in terms of gross wages at any point in time, the possibility has to be considered that wages and salaries are related to a post, and, hence, educational attainment, more closely than they are related to age. This observation becomes more applicable to a sample of workers who, in the survey's organisers' views, represents a socio-economically "homogeneous" group, with a household's income constrained within a restricted band, and the only means whereby the maximum level of income could be exceeded, and the household allowed to participate in the research programme, was through a second wage earned by a second member in the family.

Of course, age differences would be expected to be related to family size. In general, the head of a six-person household would be older than the newly-wed couple represented in the two-person unit category. Income, however, need not depend on age, but, on the job of the respondents. The COS's report does not include matrices correlating the age of the head of households with households' size or economic characteristics of different family heads, with one or two members gainfully active, and their age or income. Information on the age distribution refers to all persons included in the survey; these statistics are not relevant for our analysis.

To render the published information useful, the original data are rearranged in order to yield a set of income distribution concentration coefficients based on family size; these are presented in Table 1. Also

Table 1: Lorenz-Gini Coefficients based on the Household Budgetary Survey undertaken by the COS, Malta, in 1980-1981

Household Unit	Lorenz-Gini	Mean Income	Median Income
		Lm	Lm
2 Person Household	0.174	2137	2158
3 Person Household	0.149	2361	2314
4 Person Household	0.124	2465	2418
5 Person Household	0.213	2536	2491
6 Person Household	0.205	2569	2512
All Households	0.137	2421	2402

Note: Mean and Median values are rounded estimates.

Source: Basic data adapted from COS, Malta, (1984), Table 5.

included are the data for the entire sample, but such results have to be interpreted carefully, since in their case the application of the Lorenz-Gini as an index of 'inequality' stands on weak foundations.

Table 1 suggests that the least inequality of wage distribution within a household category occurred among four-person units, with a Lorenz-Gini equal to 0.124. Inequality was greatest among the five-person households, with a registered Lorenz-Gini of 0.213. These absolute values are not comparatively high; indeed if we consider that the overall, unadjusted, Lorenz-Gini is only 0.137, then the degree of wage income distribution approximates closely to the line of 'perfect equality'. The relatively low divergencies among wages possibly reflect the wages' policy pursued in the seventies of granting flat wage increases which induced, by 1980, a narrowing of wage differentials.¹⁰

The values for the mean and median incomes suggest almost total convergence, thus implying symmetric distributions. The differences between the two parameters observed in Table 1 are low; transformed to a weekly base, as they arise from the original data, the differences become negligible, particularly when the parameters for all households are considered. Generally income distribution functions tend to be non-symmetric, usually positively-skewed.

The observed wage distribution pattern could have arisen either as the outcome of the wages' policy, as suggested, or as a result of the prerequisites on which the Household Budgetary Survey was conducted. The localities selected were meant to provide examples of household units of comparable socio-economic characteristics, and once only employees whose income fell within the identified brackets were interviewed, the possibility of including wide wage differences was automatically excluded.

Table 1 also suggests that wage income and family size are positively correlated; therefore a Lorenz-Gini estimated on an individual rather than a household basis, as in the present instance, would be lower still.

The **total** income distribution, against the **wage** income distribution, represents a different issue altogether. The COS's report points out that wage income falls short of households' expenditure for all units whose wage earnings fall below Lm2600 annually; saving is recorded by households whose wages or salaries were in excess of Lm2600. The other units relied on non-wage income sources to bridge the gap between wage-earnings and consumption, and register saving. The consumption — wage income relationships, reproduced from the COS's report, are presented in Table 2.

Table 2: Income and Expenditure of Households Classified by Economic Groups — 1981

Income & Expenditure	Under Lm30 (Lm)	Lm30-Lm40 (Lm)	Lm40-Lm50 (Lm)	Lm50 plus (Lm)	Total (Lm)
Average Weekly Wage	28.92	31.83	37.22	52.58	40.89
Average Other Weekly Income	3.98	5.61	6.33	7.34	6.30
Average Weekly Income	32.90	37.44	43.55	59.92	47.19
Average Weekly Expenditure	29.60	35.60	40.74	49.70	41.82
Average Weekly Saving	3.30	1.84	2.81	10.22	5.37

Source: COS, Malta, (1984) Table 8, p.7

Note: The averages in Table 2 are the simple, unweighted means. The overall mean for Wage Income, given as Lm40.89, with an annual equivalent of Lm2126.3, falls short of the weighted average of Lm2421 given in Table 1.

Although the apparent wage inequalities in the sampled population may not be great, yet this conclusion would not necessarily hold for total income inequalities. Non-wage income appears to be directly related to wage income — the higher the average weekly wage, the higher the additional income. Unfortunately, the COS's report does not tabulate information on households' total income. Such information would have enabled the identification of the non-wage income distribution and its effects on the induced final change in income patterns, by household size and in the aggregate, on the initial wage-income distribution.

The impression of a low degree of inequality which emerges from the COS's data does not hold, a fortiori, for Maltese households. Non-wage income would represent a more prominent share in the income of non-wage employees such as the self-employed and in the income of top managerial personnel; both of these workers' categories were excluded from the survey. The role of capital-yields, and the opportunities for secondary employment become more important when the whole population is examined. Although the COS's results serve as a guide for the degree of wage differences in the sub-groups surveyed, yet an opportunity to assess the total income of the same subgroup has been dissipated; a lapse which, hopefully, would not be repeated when the next Household Budgetary Survey is undertaken.

Distribution of Basic Wages and Net Income: 1980

Results based on the data in Mr Kaim-Caudle's paper appear to support the impressions formed from the Household Budgetary

Survey; the distribution of basic wage rates for employees, a close counterpart to the Gross Wage Income Variable in the COS's report, tends to 'perfect equality'. The data yield a Lorenz-Gini coefficient of 0.086 (Table 3); really, an 'idealised' situation.

Table 3: Lorenz-Gini Coefficients: Employees' Basic Wages and the Net Income of the Self-Employed — 1980

	Lorenz-Gini	Mean Income Lm	Median Income
Employees' Wages and Salaries	0.086	1454	1392
Net Income of Self Employed	0.119	1528	1352

Source: Kaim-Caudle P.R. (1981), Table 4, p.8.

The result gives rise to several observations. The lower value of the Lorenz-Gini compared to those presented in Table 1 reflects the fact that the distribution is worked out in teams of **personal** wage income instead of **households'** wage income as in the COS's report; it corroborates the relationship between the value of the coefficient of concentration and the consuming units explained in Section II. Furthermore, had adjustment been made for life-income profiles, the value of the Lorenz-Gini would have been reduced even more; a perfect 'income equality', adjusted for life-income profiles, would have possibly emerged!

These low values of the coefficients, however, point at an important welfare-efficiency policy dilemma. It has been recently claimed that it is government's policy 'to improve the quality of life...not by making everybody richer but by an even more equitable distribution of what was earned through labour'¹¹. Judging from the result in Table 3, such a policy objective has already been attained! It follows, therefore, that either the policy makers in Malta are not aware of the present wage-distribution state as reflected in official data, or that the data do not reflect correctly the welfare situation as evaluated by policy makers who believe that further wage redistribution is possible. Besides, more thought should be given to a conciliation of the above policy objective with another aim, also officially announced, to 'ensure that differentiation in remuneration in itself acts as an incentive to effort, responsibility and initiative'¹². It is essential to distinguish a mirage from reality, otherwise effective policies cannot be devised and implemented.

The results for the self-employed, a Lorenz-Gini of 0.119, does not reflect the true situation. It has been pointed out in Section 1 that the distribution for the own-account workers was constructed in terms of

the National Insurance Scheme Retirement Pension Options; for various reasons — e.g. self-employed whose income exceeds Lm1600 annually are not entitled to sickness benefits; the option to remain in gainful employment until the age of 65 instead of 61 as in the case of employees; the possibility of adjusting one's payments and, hence, the value of retirement pension, as the planned retirement year approached — the net income classification assessed by Mr Kaim-Caudle does not correspond to the true revenue of the self-employed.

Comments regarding the 'equitability' of the existing wage or net income patterns based on these data are, consequently, of doubtful value. This situation renders the formulation of an incomes policy of any sort hazardous, independent of any long term consequences for economic activity which it may induce. Evidently, research in this area is required; perhaps, the results of the 1985 Census of Population would turn to be a useful starting point.

Distribution of Income among Maltese Aged Sixty and Over: 1981

Income distribution among the Maltese aged sixty and over, analysed from the survey on the Aged carried out in 1982, differs from the 'perfect equality' situation conveyed by the data in Kaim-Caudle's paper. The Lorenz-Gini coefficients, by region, marital status and the educational attainment of the sixty plus, are presented in Table 4.

Analysed on a regional basis, the personal income distribution of the sixty-plus registers the least 'inequality' in the Western Region - a Lorenz-Gini equals to 0.107; the highest 'inequality' is recorded in the Outer Harbour Region — with a coefficient of 0.243. Since 55% of the respondents depended on pensions, primarily social retirement pensions, for their income, it appears that variations in personal income arose mainly from the possession of non-pension income sources, that is, past savings and the ownership of income-yielding immovable property.

Assessing income 'inequality' in terms of the marital status of respondents — a distribution which transforms 'personal' income into 'household' income — it is observed that incomes are more evenly spread among the sixty-plus who are single or widowed — with coefficients of 0.143 and 0.141 respectively — than they are for couples. The coefficients registered under marital classification correspond closely to the values of the Lorenz-Gini submitted in Table 1; though, of course, they refer to a different subgroup, one which was omitted from the COS's survey. The Lorenz-Gini for a two-person household is given at 0.174 in Table 1; for the sixty plus, the comparable coefficient is 0.192. The distributions of income units in these sub-groups of the population are similar, though the absolute income levels differ; the median income for a two-person unit in the COS's survey is Lm2158 against a median income of Lm1195 in the Survey on the Aged.¹³

Table 4: Lorenz-Gini coefficients based on the Personal Income Distribution of the Sixty-Plus in the Maltese Islands — 1981

	Lorenz-Gini	Mean Income Lm	Median Income Lm
<i>i) Region</i>			
Inner Harbour Region	0.215	1217	1074
Outer Harbour Region	0.243	1248	1161
South Eastern Region	0.128	1117	1099
Western Region	0.107	1137	1247
Northern Region	0.161	1130	1124
Gozo	0.197	1048	911
Maltese Islands	0.193	1183	1098
<i>ii) Marital Status</i>			
Single	0.143	983	922
Married	0.192	1337	1195
Widowed	0.141	977	919
<i>iii) Educational Attainment</i>			
Minimal Education	0.130	1035	1025
Primary Education	0.161	1121	1089
Secondary Education	0.256	1484	1215
Tertiary Education	0.289	2090	1699

Source: i) Delia, E.P. (1982), Appendix Table C, p.6
 ii, iii) Centre for Social Research, Social Action Movement, *Project: Survey on the Aged, 1981*, Unpublished data.

Interesting results emerge from the third classification: income levels and income 'inequality' vary directly with the respondents' education. The median income rises from Lm1025 for those with minimal education to Lm1699 for those with tertiary education, while the estimated coefficient of concentration increases from 0.13 for the minimal education group to 0.289 for the tertiary educated. Since the

ownership of property — including house, flat or land — was found to be inversely related to formal educational training of the group,¹⁴ it may be concluded that liquid savings were more popular with respondents in the upper educational levels.

Table 4 suggests that the income distribution functions are positively skewed — the mean higher than the median — except for the distribution in the Western Region. The differences observed between the two parameters are accentuated more than those obtained from the COS's results in Table 1. Such differences could be real, but they could also be partly illusory, the outcome of data presentation. The differences would be real if, in the COS's survey, they reflect the wages distribution in the labour sub-markets following a decade of flat-rate wages increases which narrowed wages differentials. They could be illusory, however, if the degree of skewness reflect the limitation imposed on the results by the 4-income classification presented in the COS's report. Wage differences are minimised when income-groups are agglomerated within a wider wage range; a normally distributed wage income within the group, around the mid-point of the group's wage class, would be implied. In the survey on the aged, information on income is spread over nine categories which enabled the derivation of percentile values from plotted cubic functions instead of interpolated through the issue of standard formulae which imply symmetric intra-class distribution.¹⁵

Given this possibility, an alternative measurement of income distribution for the sixty plus is presented in Table 5. It expresses the distribution in terms of a series of coefficients made up of selected percentile values and the median. Unlike a summary statistic, like the Lorenz-Gini, a series conveys more information on the income spread. The series of coefficients in Table 5 corroborate the conclusions based on Table 4; they suggest that the smallest range of income spread occurs for respondents living in the Western Region, for persons single or widowed, and for those with minimal education.

Welfare Policy Implications

Several important considerations for welfare policy emerge from the preceding discussion. These relate to households' general welfare level to the extent that this is directly correlated to households' incomes.

The data in Table 2 identify the dependance of low income families on secondary income sources to meet their weekly expenditure. At a time when it is proving difficult to generate new employment opportunities in Malta, and economic planners are preoccupied to induce competitive cost positions for local manufacturing and service units, the level of wages could be maintained relatively low in relation to the basic needs of a 'representative' Maltese household. It becomes necessary, for social policy formulation, to establish 'Poverty levels'.¹⁶

Table 5: Distribution of Personal Income of Maltese Aged Sixty and Over — 1981

	P_{10}/P_{50}	P_{25}/P_{50}	P_{75}/P_{50}	P_{90}/P_{50}
<i>i) Region</i>				
Inner Harbour Region	0.75	0.81	1.20	1.75
Outer Harbour Region	0.67	0.78	1.13	1.52
South Eastern Region	0.72	0.82	1.18	1.20
Western Region	0.70	0.81	1.02	1.11
Northern Region	0.75	0.80	1.18	1.36
Gozo	0.86	1.00	1.35	1.63
Maltese Islands	0.70	0.76	1.18	1.32
<i>ii) Marital Status</i>				
Single	0.88	0.88	1.14	1.38
Married	0.72	0.91	1.07	1.42
Widowed	0.82	0.88	1.15	1.41
<i>iii) Educational Attainment</i>				
Minimal Primary	0.77	0.87	1.12	1.27
Primary Education	0.71	0.82	1.14	1.25
Secondary Education	0.67	0.72	1.28	1.91
Tertiary Education	0.56	0.80	1.42	2.34

Source: Delia, E.P. (1982), p.30.

Poverty is primarily subjective; a man is poor if he considers himself to be poor. In this sense, therefore, poverty is ineradicable. To this writer's knowledge, research on this subjective valuation of poverty in Malta has never been undertaken. But this issue was probed in the survey on the aged. 77% of respondents considered that their income satisfied their needs; however, 19% found it inadequate and they depended upon supplementary assistance in cash or kind from their relatives and friends.¹⁷

An 'objective' evaluation of poverty level could be applied to the data at hand, estimating a poverty line at one-half the median income. If this criterion is used to estimate a poverty line for a five-person family in Malta — the 'standard', representative family unit usually referred to in the budget speech by the Maltese Ministers of Finance — the poverty income line for 1981 would be Lm23.9 per week, being half the median income of the five person household as estimated from the COS's Budgetary Survey. Poverty lines for other household units based on Table 1 give Lm20.75, Lm22.25, Lm23.25 and Lm24.15 for the two-, three-, four- and six-person household units respectively. Had the poverty level been estimated on total gross income distribution, instead of wage income, the values of the relative poverty limits would have been higher.

These results give rise to an important observation: at Lm22.8, the National Minimum Wage fell **below** the 'poverty limit' for the four-, five-, and six-person family units in 1980. The minimum wage practically correspond to the poverty line for the family with one child; it exceeded, by 10%, the poverty income level for a married couple with no children. It follows, that families whose heads depended exclusively on the minimum wage-income would find themselves in financial difficulties.¹⁸ Indeed, government economic planners estimate that between 1500 and 2000 households would need state assistance in housing allocation, as their income would not permit them to provide themselves with adequate housing facilities.¹⁹ On the assumption that there are 100,000 households in Malta and Gozo, between 1.5% and 2.0% of households could be classified as 'poor'; these data surely do not account for household units whose heads are over sixty.²⁰ The problem of families living close to poverty or subsistence level in Malta may not have been solved after all! This social issue demands a thorough investigation.

In sum, by utilising statistical information on wage or income distributions published recently in three reports — a Household Budgetary Survey, an Evaluation of Social Policy in Malta, and a Study on the Aged — we may conclude that these distributions do not suggest wide wage or income inequalities within the sub-groups of population analysed.

The results on gross wage income distribution were interpreted to record the policy of granting flat wage increases over the seventies — a policy which was being reconsidered in the early eighties in order to give way to a more flexible wage policy, but which was eventually overtaken by a wage freeze introduced in 1983 — although the manner in which data are classified could have partly contributed to the obtained results.

In the survey on the sixty-plus, it is concluded that the lowest income inequalities are registered in the Western Region; for those households whose heads are widowed or live alone; and for those respondents with minimal education. It appears that income levels and income 'inequality' are directly related to the educational attainment of the present sixty-plus sub-group.

Wage income falls short of expenditure for all household units included in the COS's survey whose gross wage income was less than Lm50 weekly. On investigating the establishment of a Poverty Income limit — always granting that Poverty is intrinsically a subjective matter — it emerges that a Poverty Line, defined as one-half the median income value of a 'representative' five-person household, exceeded the national minimum wage in 1980. This observation, associated with an inference on the incidence of poverty among the sixty-plus, leads to a conclusion that a number of Maltese households — tentatively set at a minimum of 5% — could be living either in poverty or close to subsistence level. Evidently, this issue demands a thorough investigation; the data on wage or income patterns which may be published in the results of the COS's Census of Population carried out in 1985 may be a valid start, provided that the data could be usefully organised to derive the desired parameters.

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NOTES:

1. Stewart and Streeten (1971), p.5.
2. Refer, for example, to address by the Minister of Labour and Social Welfare at the ILO conference in Geneva in June 1986. See *The Times*, Malta, June 18, 1986, p.24.
3. An evaluation of Wages' distributions based on the 1957 and 1967 Population Censuses is given in Delia (1976).
4. Central Office of Statistics, Malta, (1984).
5. Kaim-Caudle (1981).
6. Delia (1982).
7. Central Office of Statistics, Malta, (1984), p.6., Table 5.
8. Delia (1982), p.24.
9. A similar problem arises with the interpretation of coefficients of an aggregate income tax function for the Maltese Islands. See Delia (1978).
10. Economic Division, Office of the Prime Minister, *Guidelines for Progress: Economic Plan 1981-85*, (1981), p.50. This document considers the re-introduction of differential awards for 'special skills, responsibilities, initiative and effort' (p.82), considerations which were not implemented., Instead a wage/salary freeze was introduced in 1983.
11. Address by the Minister of Labour and Social Welfare at the ILO Conference, June 1986.
12. *Guidelines for Progress*, p.82.
13. One fifth of respondents had dependents. Delia (1982), p.31.
14. Delia (1982), p.26.

$$15. \text{ Median} = L_c + \left(\frac{N/2 - (\sum f)_i}{f_{\text{median}}} \right) c$$

where

L_c = lower class boundary of the Median Class

N = Total frequency

$(\sum f)_i$ = Sum of frequencies of all classes lower than the median class.

f_{median} = frequency of median class.

c = size of median class interval.

16. A useful synthesis of poverty line definitions is found in Hagenaars and van Praag (1985).
17. Delia (1982), p. 31. In the interviewers' opinion 2% of the respondents were considered very poor; 45% gave an impression of 'modest means'; 42% appeared to be of 'adequate means' and 10% seemed to be well-off.
18. The changes in money and real disposable income — post tax, post transfer payments — between 1977 and 1980 are recorded for the five-person household in Delia (1983), pp.50-52.
19. Economic Division, Ministry of Trade and Economic Planning, *Development Plan For Malta 1986-1988*, p.66.
20. Note (17) above.

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