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9. ABSTRACT

The main purpose of this study is to assess data availability and problems with data for future research in collaboration with the joint Princeton University/Brookings Institution project on income distribution in developing countries. This report covers three geographically proximate Asian countries -- Thailand, Malaysia and Indonesia.

Following the guidelines provided by the project, this survey consists of three major parts. First, existing studies on income distribution for the three countries are briefly reviewed with emphasis on methodology and on conclusions and findings. Secondly, availability of, and problems with, data relating to income distribution are examined carefully, noting the differences in definitions and classifications among these countries. Also an effort is made to assess the availability of data for consistency checks and for specific interest areas of the joint project.

The last chapter deals with some suggestions for particular lines of inquiry for future research, especially in connection with problems of data sources and in view of existing studies on income distribution for this region.

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Review of Income Distribution Data:

Thailand, Malaysia and Indonesia

by

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Research Program in Economic Development

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THAILAND

T1. Survey of Existing Studies

Interest in income distribution in Thailand is comparatively recent, but in the last few years or so several people have done work in this area.

In 1971 there was an ECAFE report on economic growth and income distribution in Ceylon, India, the Philippines and Thailand.[1/] In the section on Thailand, the report discusses data sources and uses decile shares and the Gini coefficient to measure income inequality. Urban incomes are found to have become more equally distributed between 1962/3 and 1970, while rural income inequality has apparently shown little change over time. The report discusses some of the factors thought to influence income inequality but in a rather imprecise manner.

A paper prepared by the ECAFE secretariat on the distribution of income and wealth in Thailand appears to be a greatly expanded version of the earlier report.[2/] Both of these are useful for giving a general picture of the data situation and the types of likely changes over time. However, the existing data have not always been treated with care and some of the information given is misleading. For example, the definition of the family unit as used in the Household Expenditure Survey is given incorrectly, and the size distribution of income tables rely on estimates of the bottom and open-ended class means which are highly questionable. The rural sector is discussed in greater detail, but some of the conclusions are based on rather small samples. For example, the distribution of the value of assets of rice farmers depends on a study involving rice farmers in one province, Chainart, in 1963, in which the number of observations is 276. The study

also attempts to look at income distribution from the point of view of various factors, occupation, work status, sector and region, which are thought to affect income and also considers various social and institutional factors affecting the income distribution. Both these ECAFE reports are useful only in terms of giving suggestions for further research, but they themselves do not answer any questions in depth.

Udom Kerdpibule has written an article in Thai under the title "Income and the Distribution of Income in the Agricultural Sector."[3/] The study compares the income distributions, both of towns and villages, in the years 1962/3 and 1968/9, using the published reports of the earlier survey and preliminary worksheets for the later survey. Kerdpibule concludes that the disparity in the average levels of income between towns and villages has been increasing, that village incomes are more unequally distributed than town incomes, and that village incomes are becoming more unequal while town incomes are becoming more equal over time. He explains the first two results by the lower value added per employed person and its lower rate of increase over time in the agricultural sector, as well as the fact that land holdings are very unequally distributed. This study is neither very carefully thought out nor carried out. It is not always clear where some of the figures presented come from. For example, ten income classes are given for 1962/3 but in fact only the means of the bottom four classes are known. The estimation of the means of the other classes deserves some explanation, but none is given. Problems associated with the use of the two sets of survey data and of the Gini coefficient do not appear to have been recognized. The link between the factors which

the writer claims to account for inequality and the distribution of income is not convincingly established.

Another paper, written by William A. McCleary, is called "Sources of Change in Distribution of Income in Thailand, 1962/3 to 1968/9."[4/] It uses data from the 1962/3 Household Expenditure Survey and preliminary worksheets from the 1968/9 Socio-Economic Survey. Using decile shares and the Gini coefficient to measure income inequality, the paper concludes that income inequality has increased between the two survey dates, the reasons being that town incomes have grown more rapidly than village incomes and that inequality within the village sector has increased. The paper also uses Oshima's index of inequality to decompose total income inequality into its component parts. The breakdown is a strange one and is not intuitively meaningful, making the final results difficult to understand and interpret.

Oey Astra Meesook has been working since late 1972 on income distribution in Thailand, using the published results of the 1962/3 Household Expenditure Survey and the 1968/9 Socio-economic Survey, as well as the original data tapes for the latter. There are two major parts to her study. The first is an analysis of the sources of inequality in the distribution of income for economically active individuals, in which an analysis of variance technique is used and the measure of inequality is the variance of the logarithms of incomes. The second part is the construction of a poverty profile for both 1962/3 and 1968/9 in which a poverty standard of ฿1,000[5/] of household income per person per year is defined. The published data are used to provide a comparison over time in terms of the geographical distribution of poor people, as well as the

relative performances of different regions in raising their population above the poverty line. The data tapes are used to identify poor people by various socio-economic characteristics and also to adjust for income in kind. The first part is still in progress but a preliminary version of the second part has been written up.[6/] Both parts were presented at the Joint JERC-CAMS Seminar in Tokyo in December, 1974.[7/] The work has been expanded to allow for changes in the terms of trade between the agricultural and nonagricultural sectors. The agricultural sector is also analyzed in greater detail using the data collected by the Chulalongkorn University Social Science Research Institute.

Some graduate students at Thammasat University will be writing Masters theses on various aspects of income distribution in Thailand under Oey Astra Meesook this year. In addition, a faculty member, Medhi Krongkaew, is writing his Ph.D. dissertation on the effects of fiscal policy on the distribution of income in Thailand.

T2. Data Availability

By far the most useful sources of information on the size distribution of income are the household expenditure surveys conducted by the National Statistical Office (NSO) of Thailand. Altogether there have been four such surveys. These will be briefly discussed before going on to other less direct sources of income distribution statistics.

Household Expenditure Survey, 1958

The first survey was carried out in 1958 and is unfortunately not very useful since it excludes nonmunicipal areas altogether, covering as it does only Bangkok and some regional towns which have been selected

to represent their regions. The 1958 survey sample is thus highly unrepresentative and cannot really be used for the purpose of studying the income distribution situation in Thailand. Since rural-urban income differentials are of special interest in this heavily rural country, the complete exclusion of rural areas from the survey makes it unsuitable even for comparisons with later surveys.

Household Expenditure Survey, 1962/3

The 1962/3 survey has been published in seven volumes, one for the whole kingdom, one for Bangkok-Thonburi alone, and one for each of the five regions, the North, Northeast, Centre, East, and South.[8/] It was a multiple-purpose survey designed to represent the whole country. However, the primary objective of the 1962/3 Survey was in fact to obtain expenditure weights for various goods and services to be used in the construction of consumer price indices. To this end the data collected on household expenditures were very detailed, with a very large number of items included, whereas less attention was given to income as such. The information obtained has formed the basis for the calculation of consumer price indices for urban areas by the Department of Business Economics.[9/]

Households were selected to be interviewed by a three-stage stratified sampling technique. The first stage was the Amphur or district, the second stage was the Census Enumeration District city block or village, and the third stage was the household. At each stage sample units were selected with probabilities proportionate to size. The sample sizes in

terms of the numbers of household interviews conducted were as follows:

Region	Towns[a]	Villages[b]
North	350	950
Centre	280	720
East	160	350
Northeast	330	1,470
South	240	630
Bangkok-Thonburi[c]	950	---
Total	2,310	4,120

[a]Including large sanitary districts

[b]Including small sanitary districts

[c]Municipal area only

The sampling fractions varied from region to region and, within each region, between towns and villages. The overall sampling fraction was aimed to be about 1 in 1,000, but it was higher for towns to allow enough observations for tabulations. For Bangkok-Thonburi the sampling fraction was 1 in 350.

The survey was carried out in two rounds, where the households used in the two rounds were not identical. The purpose of this was to include seasonal effects in the resulting estimates, but by the NSO's own admission this effort was somewhat limited owing to time and budgetary restrictions.[10/]

The tabulations of the 1962/3 Survey refer to <u>economic families.</u>

An economic family is defined as either a single person who is financially independent of other family groups, or a group of persons who live and eat together, pooling their income and drawing from this common fund to pay for food, housing and other living essentials.[11]

Income in the tabulations refers to money income only and includes wages and salaries, self-employment income, and income from rents and other sources.[12]

The published tables are available for each region and for the whole kingdom, and are given for towns and villages separately. Income information was requested on both a monthly and an annual basis. All the tabulations are for family income classified into five income intervals. The average monthly income and expenditure data given for each of the annual income classes, however, are not those obtained by converting annual figures to monthly figures but those obtained directly in the questionnaires. This creates problems of consistency to the extent that the stated annual income tends to imply a monthly income lower than that actually given by the respondent. The orders of magnitude of the overall discrepancy can be seen in the following table.

Region	Towns		Villages	
	Monthly Income Average x 12	Reported Annual Income	Monthly Income Average x 12	Reported Annual Income
North (in baht)	9,606	9,266	3,164	3,681
Centre	13,046	11,380	7,900	6,521
East	14,697	11,457	6,328	5,607
Northeast	11,299	10,601	3,020	2,173
South	14,392	13,198	6,611	5,596

In most of the regions the two lowest income classes have mean incomes which exceed the upper limits of the classes when the figures are converted to an annual basis. The direction of the discrepancy is to be expected since recall problems would be more serious when asking questions about the past year than about the past month. In any case it is very difficult to make adjustments on the data since one is faced with accepting either the class means but not the income ranges or accepting the distribution of households by income classes but not the class means. In other words, the monthly and annual incomes collected are two estimates of income which are not compatible with each other.

Cross classifications are also given by various socio-economic characteristics of households, such as household size, number of earners, level of educational attainment of household head, age of head and so on. The difficulty encountered with these tables is that the classifications are not detailed enough or are not what one would like to have. In addition, it is sometimes desirable to have the data simultaneously classified by a larger number of characteristics than are given in the tabulations.

The major problems with the 1962/3 Survey are that the income class means are inconsistent with the class limits. This is next to impossible to correct for, since one is then forced to make assumptions about the income distribution before one even starts. There are far too few income classes, and these are not very well placed. For example, in Northeastern villages, 78.5% of all households are found in the lowest income class. The corresponding figure for villages in the North is 63.9%. It is fantastic to imagine that one can talk about the income distribution when one is in no position to differentiate among such a large proportion

of all households. It was a pity that the income classes were chosen to be the same for towns and villages, since there was clearly a need for a much more detailed breakdown at the lower end of the distribution for villages. The concept of income excludes income in kind and, unlike in the 1968/9 Survey, the expenditure data do not cover income in kind either. Although average income in kind is given for each region, with breakdowns into towns and villages, the figures are not available by income class. The exclusion of income in kind has serious consequences on the picture which emerges for the income distribution situation, since income in kind makes up a much larger percentage of total income at the lower end of the income distribution. The omission thus leads to an exaggeration in the degree of total income inequality, as well as an overstatement in the disparity in average incomes between towns and villages, since the importance of income in kind is substantially greater in villages. The only possible way of correcting this would be to use information on income in kind from the 1968/9 Survey to estimate total income from money income in 1962/3. Oey Astra Meesook has estimated total income as a function of money income for 1968/9 by region and location.[13/] This can be applied to the money income figures for 1962/3 as long as one is prepared to make the assumption that the relationship between money and total incomes has remained unchanged between the two survey dates for any given location and region.

Apart from the problems already mentioned, there is of course the difficulty of having to work with data in the way they are presented in the published volumes. This implies little flexibility in the way one analyzes the data and any very detailed analysis is excluded. The original

data tapes have been destroyed so that one cannot generate tabulations as one wishes.

Socio-economic Survey, 1968/9

The tabulations from the 1968/9 Socio-economic Survey have been published in one combined volume.[14/] This has only just made its appearance after numerous delays, but pre-published results have been available to a limited number of people for over a year. Besides the published results, the original data tapes for this survey are still in existence and so can be used for a more detailed analysis of income distribution. Unfortunately, the fact that the 1962/3 data tapes have been destroyed means that a comparison over time cannot be made at such a detailed level.

The 1968/9 Socio-economic Survey was also a multi-purpose survey designed to represent the whole country. The types of information collected were similar to the 1962/3 Survey: income, expenditure and savings data, socio-economic characteristics of households and their members, ownership of consumer durable goods and the like. However, the later Survey had as one of its stated objectives the collection of information on household income, sources of income and the distribution of income.[15/] Expenditure data were also sought, but not at such a detailed level. Since more attention has been given to income itself, and some shortcomings of the earlier survey have been corrected, the 1968/9 Survey is considerably more suitable for examining the income distribution in Thailand, although the 1962/3 Survey provides some basis for comparison over time.

Households were again selected to be interviewed by a three-stage stratified sampling technique, although the stages were different.[16/]

With the exclusion of Bangkok-Thonburi the country was divided into four regions composing of 9 subregions. Two "changwads"[17/] were selected from each subregion with probabilities proportionate to size, the number of households in each changwad of the subregion. The selected changwads representing their subregions and Bangkok-Thonburi form the first-stage sample units. The second stage was the city block or village, selected at random from each sample changwad after dividing it into municipal, sanitary and rural areas. In each sample block or village, households were listed and classified by the occupation of the household head and then selected at random, giving the final sample households. The sampling fractions by region and location are given below:

Region	Towns	Villages
North	1/167	1/1,880
Centre & East	1/297	1/1,344
Northeast	1/134	1/1,801
South	1/149	1/1,102
Bangkok-Thonburi	1/226	1/322
Total	1/220	1/1,473

The resulting sample sizes in terms of the numbers of household interviews conducted were as follows:

Area	Number of interviews
All Villages, including all sanitary districts	6,750
All Towns	3,375
Bangkok-Thonburi	3,375
Total	13,500

It can be seen that in the later survey more attention has been given to Bangkok-Thonburi and municipal areas relative to villages. The total number of household interviews was also larger, but in fact the actual sample size was slightly smaller. The number of sample households involved in the 1968/9 Survey was 6,000 and these were divided into four equal groups, A, B, C and D, each group consisting of 600 households in villages, 150 in sanitary districts, 375 in municipalities and 375 in Bangkok-Thonburi. The survey was carried out in three rounds between January and September of 1969. In each round three groups, or 4,500 sample households, were interviewed. In all, three of the groups were interviewed twice and the remaining one three times.

Round	Group	A	B	C	D
1.	Jan.-Mar.	January	February	March	
2.	Apr.-June	May	June		April
3.	July-Sept.	September		July	August

The reasoning behind conducting the interviews in three rounds was that since data on income and expenditures of households varied according to the time of year, one-time interviewing would be inadequate because a household might have low income or expenditure in one month and high income or expenditure in another. This being the case it can be seen that the method of partial replacement of households used in 1968/9 was somewhat more satisfactory than what was done in 1962/3.

The unit of observation used in this survey, the household, was defined as a person or a group of related or unrelated persons who lived,

ate and consumed other living essentials together. This definition is identical to that of an economic family which was the unit of observation in the 1962/3 Survey, thus making the two surveys comparable in terms of the sampling unit used.

Income as it appears in the tabulations for the 1968/9 Survey is again identical with the earlier survey, being money income only and including wages, salaries, overtime, bonus, commissions, net profit from self-employment, share of profit and interest, pensions and annuities, money received for rents, and income from other sources.[18/]

Published tables are again available by region as well as for the whole kingdom, and for towns and villages separately. However, in the later survey the Central and Eastern regions have been combined into one. This presents no problems of comparison since the two regions can always be combined in the tabulations of the earlier survey. A more serious problem is encountered in the definitions of towns and villages in the two surveys. The area in each changwad is divided into municipal areas, sanitary districts and villages. In both surveys municipal areas were included in towns. With regard to sanitary districts, however, the 1962/3 Survey included large sanitary districts in the category "towns" while small sanitary districts were included in "villages". In the later survey <u>all</u> sanitary districts came under "villages". This means that the town/village classification in the two surveys are not the same, the difference being due to large sanitary districts, so that comparisons involving towns and villages between the two survey dates are not strictly speaking correct.

In general there seems to have been an attempt to keep the tabulations for the 1968/9 Survey comparable with the 1962/3 ones. As before,

the classifications by socio-economic characteristics as well as the number of characteristics used in any given tabulation are not always useful. In terms of income distribution statistics, however, many improvements have been incorporated into the later survey. As a result this survey is considerably more satisfactory than the 1962/3 Survey. The number of income classes has been increased from five to twelve for towns and eleven for villages. The lowest income class still contains those households with incomes under ฿3,000 per year, but since average incomes have increased, fewer households are found in this class. Thus the problem of there being too many households in the one class is less severe, although in rural areas it is still quite serious.

Another improvement is that although in the questionnaire each person was asked to state both his income for the month and for the year prior to the date of the interview, the monthly incomes are not tabulated in the published volume, and consistency is obtained in the income distribution tables since average annual incomes are classified by annual income classes.

The other tabulations are similar to the 1962/3 ones but much less detail is given for consumption expenditures. In general, the National Statistical Office has made many improvements in the 1968/9 Survey and judging by the description of the sampling survey method given, this is a more carefully planned and implemented survey than the earlier survey.

The problems encountered with the published report again involve inflexibility insofar as one has to accept tabulations as they are given. The income concept again refers to money income only and excludes income in

kind which leads to biases in the results which tend to exaggerate the disparity in incomes between towns and villages and, for any given region and location, overstate total income inequality.

Fortunately, some of these problems can be overcome by using the original data tapes for the Survey. These still exist but the National Statistical Office is generally reluctant to allow anybody to use them. In fact a much better and more detailed analysis of income distribution is made possible by the use of the tapes.

The data are available on the basis of individual household members who are grouped into family units. Thus it is possible to analyze both the income distributions of households and of the economically active population. For each person information is recorded on many socio-economic factors such as his age, sex, level of educational attainment, occupation, region and location of residence, income, sources of income and so on. Information pertaining to the household can be obtained from information involving the individual household members, but in some cases is also given on the tapes, for example household size and number of earners.

One of the things the tapes allow us to calculate is income in kind for each household. It is surprising that the National Statistical Office has not made more use of information which they have actually gone to the trouble of collecting. Every item of expenditure for each household was divided in the questionnaire into what the household actually purchased and what was obtained free or was home produced. The latter category corresponds to income in kind and we can obtain it for each household by adding together all the individual items. The adjustment on the income

figures to include income in kind is a significant one since for rural households, especially the poorer ones, income in kind forms a large percentage of total income. For example, it is 62% of total income for rural households with money incomes under ฿3,000 per year.

The difficulties with using the 1968/9 Survey data tapes come under three categories: unsatisfactory classifications of socio-economic characteristics, divergences from the published report and divergences from the national accounts.

Even though many socio-economic characteristics of individuals and households are available and can be cross-classified with income, they are not always as good as one would like them. The educational classification is somewhat confused and too aggregate. Most people have had only a few years of schooling or none at all, and the breakdown at lower levels of schooling should be more detailed so that some differentiation is possible for those who after all make up the majority of the population. Instead we have people with no education at all forming one category and all those with less than ten years of schooling forming another, with a more detailed breakdown above this level. The occupational code is also difficult to use, being in fact neither a sectoral code nor an occupational code. For villages there are only two codes, agriculture and nonagriculture. For municipal areas and sanitary districts six codes are given: government employees; trade and services workers; farmers; labourers; clerks and others. It would be as well if these defects are noted and corrected in future surveys. The educational code should record both the level of schooling reached, for example primary or secondary education, and the number of years completed at that level. On the side of occupation there should be

a clear sectoral code and in addition an occupational code which would indicate the skill level of the individual.

Even though the results published by the NSO are supposed to have been derived directly from the data tapes, evidently some adjustments have been made on the final tabulations. The difficulty is in knowing whether or not these were justified. The appendix which has been attached gives comparisons between the published results and those obtained directly from the tapes. Table T-1 compares the weights used by the NSO to combine the different regions and locations to obtain national averages with the implicit sample weights. These are seen to be slightly different but in fact if one believed the NSO weights to be correct one could still use them with the data tapes. Tables T-2a and T-2b give percentage distributions of households by income class, region and location, and show a very close correspondence between the data tapes and the published tabulations. In contrast, Tables T-3a, T-3b and T-3c show that there are some significant divergences between the income class means of the published NSO report and of the data tapes. Moreover, these divergences appear to be systematic. The larger differences are found in the lowest and highest income classes. The NSO figures tend to be higher for the lowest income classes and lower for the open-ended classes. Some of the differences are enormous, for example for towns in the South the published mean of the bottom income class is 83% higher than the data tapes, and for towns in the Northeast the open-ended class has a mean which is only 75% of that of the data tapes. Nonetheless, taken as a whole the divergences tend to reduce higher incomes and raise lower incomes, thereby reducing total income inequality in the income distribution.

Table T-4 gives total income, the sum of money income and income in kind, by money income class and Table T-5 gives the percentage of income in kind in total income, using figures obtained from the data tapes. These show that income in kind is quite significant and should not be excluded from any analysis of income distribution in Thailand. The proportion of income in kind in total income varies by region, is much larger for rural than urban households and also for the lower income classes. The inclusion of income in kind thus reduces the apparently great disparity between towns and villages and also income inequality as a whole.

Even though there are problems of definitions and coverage when comparing the NSO income with the national accounts, it appears certain from a comparison made by the National Economic and Social Development Board that personal income has been understated in the sample survey.

The 1968/9 Socio-Economic Survey is the best single existing source of income distribution statistics in Thailand at the present time. More flexibility and a more detailed analysis can be achieved by using the data tapes than by relying on the published results alone.

Household Expenditure Survey, 1970

According to the National Statistical Office, this survey is being processed and results will not be available for some time. Two ECAFE reports have used worksheets obtained from this survey, but at the moment the NSO will not release any figures. When the results are complete they will provide a further check on income distribution in Thailand, although it will not add much to an inter-temporal comparison, following so closely on the 1968/9 Survey.

Other Data

It is worthwhile mentioning the Rural Manpower Utilization Study initiated by the National Economic Development Board and carried out by the Chulalongkorn University Social Science Research Institute and the Department of Agricultural Economics at Kasetsart University. As the name implies, this covers village households only. Since Thailand is highly rural, it is useful to get an insight into the agricultural sector. The study has already been carried out in two rounds, and there may be a third round as well. The first round was for 1969/70 and covered about 1,600 households from ten villages in three changwads, Chiengmai in the North, Khon Kaen in the Northeast and Ayudhya in the Central Plain. The Chulalongkorn University Social Science Research Institute collected data both for households and for individual members. Apart from the usual socio-economic information, a great amount of detail was obtained which pertains to agriculture, involving numbers of persons engaged in various activities; information on landholding, land ownership, inheritance practice and reasons for change in size of landholding; details on source of water for irrigation, farm inputs and the use of fertilizers; sources of borrowed money, rates of interest on loans and form of security; areas planted and yields of various crops; market outlets, and so on. The data provide a great deal of information and are worth examining even though the sample size is small and only covers three changwads which cannot be taken as representative of the whole kingdom.

The Department of Agricultural Economics of Kasetsart University collected further information for these ten villages, but their sample only included ten households per village. The Manpower Planning Division of the

National Economic Development Board has put out a report based on this smaller sample which does provide some interesting information on the rural sector in Thailand.[19/] The report for the Chulalongkorn sample is not yet complete, but the data have been processed and the necessary tabulations have been made. Even though there are many problems associated with these data, they form the only source of detailed information concerning the size distribution of income in rural Thailand. The data for the second round are now being processed, and the report on them should be available in due course.

In terms of manpower related data, the most important ones are issued by the Department of Labour, Ministry of Interior. A publication called Labour Statistics and Employment Market Information has been available on an annual basis since 1967, by changwad and for the whole kingdom. This gives information on numbers of workers, average wage rates and numbers of working hours by industry and sex. The National Statistical Office has conducted various labour force surveys on an ad hoc basis. The coverage of these varies, but there has been an emphasis on municipal areas, in particular Bangkok-Thonburi. The most useful of these is probably the labour force survey of 1971 which covered the whole kingdom and was carried out in two rounds, the first in January-March 1971 and the second in July-September 1971. The findings from the survey have been published in two volumes.[20/] These report on: a) the number and characteristics of employed and unemployed persons, b) the number and kinds of occupations which workers were performing in each type of industry, as well as working hours during a given period, and c/ changes in the size of the labour force in various periods.[21/]

The National Statistical Office is responsible for census materials. The Population and Housing Census is conducted every ten years, the last one being in 1970. The results are published by changwad, by region and for the whole kingdom.[22/] There is also a Census of Business, Trade or Services, a Census of Agriculture and a Census of Industry.

In 1971, the National Statistical Office carried out a survey of low-income households in order to obtain information on the living conditions, problems and attitudes of low-income households, these being defined as households with total monthly incomes below 1,800 baht. Altogether 6,400 households were interviewed in Bangkok-Thonburi and other selected provinces, after a preliminary listing had been made to identify those households with low incomes. The results of this survey have been published in a report titled Report of the Survey of Low-Income Households. Unfortunately, this survey sounds more promising than it actually is. A great many of the questions asked are not useful or at least have not been tabulated in a useful way. It may be worthwhile trying to get the original data which may yield useful information about poor households.

The Division of Agricultural Economics of the Ministry of Agriculture has put out a publication called Agricultural Statistics of Thailand.[23/] This gives statistics on area planted, total production and market value of various agricultural products, going back in most cases to the early 1950's.

National income statistics come under the responsibility of the National Economic and Social Development Board which publishes them in National Income of Thailand.[24/]

The problem with statistics in Thailand is that even though there

is quite a large volume of them, they are not always useful. Through lack of coordination between the various collecting agencies there are always problems of compatibility and comparability of data. At the present time, however, the situation is quite reasonable with respect to income distribution statistics, and the prospects for more and better data in the near future are good.

T3. Suggestions for Future Research

Studies on the size distribution of income in Thailand have only been made possible recently through the collection of appropriate data. A great deal remains to be done, however, and even now additional statistics would be welcome. Another household expenditure survey will be conducted soon and hopefully this will be designed with income distribution problems in mind. With data from a really good survey including details of socio-economic characteristics of households and individuals, a careful study can be made of their relative contributions to total income inequality.

Many government policies have a direct bearing on the distribution of income, for example tax policy, wage and price policy, population policy and the allocation of government expenditures. Some of the policies directly affect the position of the agricultural sector vis-à-vis the rest of the economy, such as the rice premium policy and policies affecting the fertilizer industry. It seems certain from the present political climate that more attention will be dovoted to improving agriculure and it is also almost certain that some form of land reform will be carried out. We know too little of what any of these changes will do to the size distribution of

income. Any of them will very likely lead to fruitful research and now is a good time since the government is more receptive, being more committed to reducing the gap between the rich and the poor.

Table T-1

Comparison of Distribution of Households by Region and Location, 1968/9

Region	NSO Prepublished Tables	Data Tapes
North:	23.08	28.43
Towns	1.43	1.70
Villages	21.65	26.72
Centre & East:	22.64	21.60
Towns	2.11	1.74
Villages	20.53	19.86
Northeast:	33.05	31.32
Towns	1.39	1.10
Villages	31.66	30.22
South:	13.23	12.27
Towns	1.40	1.52
Villages	11.83	10.75
Bangkok-Thonburi:	8.00	6.39
Towns	6.66	4.85
Villages	1.34	1.54
Whole-Kingdom:	100.00	100.00
Towns	13.00	10.91
Villages	87.00	89.09

Sources: Prepublished Sheets and Data Tapes, NSO Socio-economic Survey, 1968/9.

Table T-2a

Percentage Distribution of Households
by Household Annual Money Income Class, Region and Location

Towns

Income Class	Less than 3,000	3,000-5,999	6,000-8,999	9,000-11,999	12,000-14,999	15,000-17,999	18,000-23,999	24,000-29,999	30,000-35,999	36,000-47,999	48,000-59,999	60,000 and over
North	1.7	11.0	12.4	15.2	10.6	8.3	15.3	6.0	5.8	7.2	1.3	5.2
Centre & East	1.2	4.9	7.6	10.2	14.7	11.1	18.3	12.5	5.1	4.8	3.2	6.4
Northeast	1.3	3.7	9.4	12.9	11.5	9.2	18.9	10.7	5.8	4.2	5.3	7.1
South	0.9	6.3	13.7	13.8	11.5	10.3	14.5	9.0	5.8	5.2	3.8	5.2
Bangkok-Thonburi	0.5	1.2	4.4	8.9	10.2	9.8	19.7	12.3	7.9	9.1	5.6	10.4

Villages

Income Class	Less than 3,000	3,000-4,499	4,500-5,999	6,000-7,499	7,500-8,999	9,000-10,499	10,500-11,999	12,000-14,999	15,000-17,999	18,000-32,999	33,000- and over
North	18.0	19.1	14.8	12.4	8.9	5.0	4.0	7.3	4.0	5.7	0.8
Centre & East	7.0	9.2	8.9	10.8	10.9	10.2	6.3	10.3	7.5	13.2	5.7
Northeast	50.3	15.4	7.5	6.0	4.4	4.8	1.4	3.3	1.9	3.7	1.3
South	16.6	18.4	18.8	13.8	8.7	6.1	3.5	4.7	2.8	5.7	0.9
Bangkok-Thonburi	1.1	3.1	5.8	5.9	3.2	7.3	6.6	15.3	11.3	24.8	15.6

Source: N.S.O., Socio-economic Survey, B.E. 2511-2512, Table 1.

Table T-2b
Percentage Distribution of Households
by Household Annual Money Income Class, Region and Location

Towns

Income Class	Less than 3,000	3,000-5,999	6,000-8,999	9,000-11,999	12,000-14,999	15,000-17,999	18,000-23,999	24,000-29,999	30,000-35,999	36,000-47,999	48,000-59,999	60,000 and over
North	1.5	12.5	12.5	16.2	10.6	8.2	14.8	5.4	5.3	7.1	1.1	4.6
Centre & East	1.2	5.0	7.4	10.5	14.5	11.1	18.2	12.3	5.3	4.8	3.4	6.2
Northeast	1.4	3.6	9.6	13.2	11.5	9.4	19.5	10.3	6.1	4.2	5.0	6.2
South	1.2	6.4	13.9	14.5	11.9	10.1	14.0	8.8	5.4	5.1	3.8	5.0
Bangkok-Thonburi	0.5	1.2	4.4	8.9	10.2	9.8	19.8	12.4	7.8	9.0	5.6	10.4

Villages

Income Class	Less than 3,000	3,000-4,499	4,500-5,999	6,000-7,499	7,500-8,999	9,000-10,499	10,500-11,999	12,000-14,999	15,000-17,999	18,000-32,999	33,000 and over
North	18.4	19.4	14.9	12.3	8.9	4.9	4.0	7.2	3.8	5.4	0.8
Centre & East	7.0	9.7	9.4	11.2	10.6	10.3	6.1	10.2	7.4	12.6	5.6
Northeast	52.1	15.6	7.2	5.8	4.2	4.7	1.1	3.1	1.6	3.4	1.1
South	17.2	19.5	19.2	14.2	8.7	6.2	3.6	3.8	3.0	4.2	0.4
Bangkok-Thonburi	1.1	3.1	5.8	6.0	3.2	7.3	6.6	15.3	11.3	24.8	15.6

Source: Data Tapes, N.S.O. Socio-economic Survey, 1968/9

Table T-3a

Household Money Income, 1968/9, by Income Class, Region and Location

Towns

Income Class	Less than 3,000	3,000-5,999	6,000-8,999	9,000-11,999	12,000-14,999	15,000-17,999	18,000-23,999	24,000-29,999	30,000-35,999	36,000-47,999	48,000-59,999	60,000 and over
North	2,363.27	4,492.83	7,571.24	10,147.36	13,095.61	16,196.05	20,720.09	26,093.92	32,663.78	40,096.40	53,474.64	93,093.41
Centre & East	1,871.60	4,169.95	7,356.94	10,369.95	13,155.53	15,802.97	20,020.73	25,673.92	32,187.73	40,619.86	51,927.53	93,000.01
Northeast	2,094.68	4,233.35	7,201.99	10,292.97	12,939.26	16,073.59	20,438.20	25,361.91	32,202.28	40,463.85	51,761.93	97,536.90
South	2,380.63	4,524.72	7,145.64	10,308.99	13,197.20	16,311.74	21,931.06	26,800.52	32,340.92	41,115.60	56,669.53	103,864.49
Bangkok-Thonburi	2,746.84	4,545.25	7,428.78	10,227.94	13,216.27	16,292.29	20.946.39	26,302.58	32,168.91	40,658.08	56,305.43	117,123,54

Villages

Income Class	Less than 3,000	3,000-4,499	4,500-5,999	6,000-7,499	7,500-8,999	9,000-10,499	10,500-11,999	12,000-14,999	15,000-17,999	18,000-32,999	33,000 and over
North	1,926.03	3,635.83	4,919.86	6,485.59	8,028.85	9,692.40	11,249.54	13,487.23	16,079.11	23,338.27	44,413.01
Centre & East	1,832.07	3,670.28	5,132.81	6,525.64	7,937.52	9,545.28	10,959.36	13,031.37	15,862.58	21,658.60	54,226.01
Northeast	1,803.09	3,622.39	5,163.55	6,556.61	7,983.20	9,526.51	11,070.75	13,097.02	16,216.29	23,115.19	56,335.20
South	2,265.38	3,823.54	5,340.93	6,608.52	8,228.01	9,715.11	11,150.17	13,330.25	17,258.30	23,969.04	54,286.48
Bangkok-Thonburi	2,532.03	3,694.04	5,265.82	6,743.42	8,013.76	9,707.84	11,094.48	13,402.99	16,214.84	23,157.70	60,824.31

Source: N.S.O., Socio-economic Survey, B.E. 2511-2512, Table 10.

Table T-3b

Household Money Income, 1968/69 By Income Class, Region and Location

Towns

Income Class	Less than 3,000	3,000-5,999	6,000-8,999	9,000-11,999	12,000-14,999	15,000-17,999	18,000-23,999	24,000-29,999	30,000-35,999	36,000-47,999	48,000-59,999	60,000 and over
North	2,326.35	4,503.43	7,529.64	10,143.79	13,111.97	16,182.25	20,195.54	25,837.81	32,285.91	40,295.11	53,702.56	115,354.19
Centre & East	1,578.21	4,170.73	7,525.98	10,393.58	13,244.26	16,065.88	20,207,86	25,650.24	32,327.37	40,628.01	52,035.27	101,226.43
Northeast	1,617.06	4,264.81	7,127.58	10,302.28	12,899.33	16,070.45	20,117.44	25,638.62	32,786.30	40,664.18	52,864.59	130,290.97
South	1,302.16	4,522.78	7,191.86	10,302.34	13,166.15	16,323.57	20,312.95	25,964.90	31,871.35	40,032.54	53,614.46	126,847.29
Bangkok-Thonburi	1,746.84	4,545.25	7,428.77	10,277.94	13,216.26	16,186.00	20,256.53	26,302.57	32,168.90	40,669.61	52,705.45	117,123.49

Villages

Income class	Less than 3,000	3,000-4,499	4,500-5,999	6,000-7,4999	7,500-8,999	9,000-10,499	10,500-11,999	12,000-14,999	15,000-17,999	18,000-32,999	33,000- and over
North	2,077.64	3,637.99	5,125.35	6,490.68	8,028.61	9,698.61	11,244.51	13,117.36	16,083.39	23,469.70	43,947.19
Centre & East	1,831.64	3,674.43	5,145.27	6,664.64	8,188.23	9,618.28	11,096.29	13,086.92	15,880.51	22,861.41	50,286.54
Northeast	1,545.70	3,621.70	5,149.55	6,556.35	8,163.94	9,542.42	11,080.71	13,102.72	16,148.34	23,058.41	55,632.68
South	2,124.73	3,588.74	5,082.21	6,682.34	8,226.30	9,687.88	11,043.58	13,103.90	16,097.05	22,386.17	51,946.10
Bangkok-Thonburi	1,732.02	3,694.04	5,265.80	6,734.40	8,013.75	9,707.83	11,094.45	13,402.98	16,214.83	23,157.71	59,824.28

Source: Data Tapes, N.S.O., Socio-economic Survey, 1968/9.

Table T-3c

Comparison of Household Money Income, 1968/9, by Income Class, Region and Location: Ratio of Published Figures to Data-Tape Figures

Towns

Income Class	Less than 3,000	3,000-5,999	6,000-8,999	9,000-11,999	12,000-14,999	15,000-17,999	18,000-23,999	24,000-29,999	30,000-35,999	36,000-47,999	48,000-59,999	60,000 and over
North	1.0159	.9977	1.0055	1.0004	.9988	1.0009	1.0260	1.0099	1.0117	.9951	.9959	.8070**
Centre & East	1.1846*	.9998	.9775	.9977	.9933	.9836	.9907	1.0009	.9957	.9998	.9979	.9187**
Northeast	1.2954*	.9926	1.0104	.9991	1.0031	1.0002	1.0160	.9392	.9327	1.0000	.9792	.7486**
South	1.8282*	1.0004	.9936	1.0006	1.0024	.9993	1.0797*	1.0322	1.0147	1.0271	1.0570*	.8188**
Bangkok-Thonburi	1.5725*	1.0000	1.0000	1.0000	1.0000	1.0066	1.0341	1.0000	1.0000	.9997	1.0683*	1.0000

Villages

Income Class	Less than 3,000	3,000-4,499	4,500-5,999	6,000-7,499	7,500-8,999	9,000-10,499	10,500-11,999	12,000-14,999	15,000-17,999	18,000-32,999	33,000 and over
North	.9270**	.9994	.9599	.9992	1.0000	.9994	1.0005	1.0282	.9997	.9944	.9665
Centre & East	1.0002	.9989	.9976	.9792	.9694	.9924	.9877	.9958	.9989	.9474**	.8995**
Northeast	1.1665*	1.0002	1.0008	1.0000	.9779	.9983	.9991	.9996	1.0042	1.0025	1.0126
South	1.0662*	1.0654*	1.0509*	.9890	1.0002	1.0028	1.0097	1.0173	1.0721*	1.0707*	1.0451
Bangkok-Thonburi	1.4619*	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0167

Note: *NSO figure more than 5% higher than Data-Tape figure.

**NSO figure more than 5% lower than Data-Tape figure.

Table T-4

Household Total Income, 1968/9, by Money Income Class, Region and Location

Towns

Income Class	Less than 3,000	3,000-5,999	6,000-8,999	9,000-11,999	12,000-14,999	15,000-17,999	18,000-23,999	24,000-29,999	30,000-35,999	36,000-47,999	48,000-59,999	60,000 and over
North	3,276.14	5,921.56	8,398.47	10,751.71	14,222.36	17,409.03	20,664.29	26,942.76	32,547.59	41,232.80	55,793.95	115,729.75
Centre & East	4,324.12	4,671.47	8,109.23	11,010.00	14,249.85	17,452.00	21,683.93	26,611.62	33,390.41	43,799.24	54,130.03	102,948.76
Northeast	1,778.80	5,881.06	7,968.93	11,144.27	13,668.91	17,584.74	22,107.26	26,154.15	33,177.75	42.107.88	58,462.64	133,841.15
South	3,793.71	5,265.97	7,966.53	11,223.40	14,549.11	17,457.09	21,454.13	26,986.55	33,812.04	41,613.75	56,907.47	129,556.50
Bangkok-Thonburi	2,475.66	6,603.82	8,057.62	11,286.68	13,983.80	17,233.41	21,256.88	27,500.92	33,339.45	41,973.45	54,367.41	118,677.25

Villages

Income Class	Less than 3,000	3,000-4,499	4,500-5,999	6,000-7,499	7,500-8,999	9,000-10,499	10,500-11,999	12,0000-14,999	15,0000-17,999	18,0000-32,999	33,000 and over
North	3,770.86	5,511.71	7,017.29	8,667.23	10,633.37	11,494.53	12,488.28	14,941.74	18,497.04	25,339.52	53,567.15
Centre & East	3,593.50	5,394.69	7,179.06	8,630.67	10,231.97	11,585.27	13,102.88	15,209.30	18,142.82	25,165.52	62,787.19
Northeast	4,988.95	7,158,96	8,099.62	9,772.18	10,450.81	12,205.66	13,192.34	15,549.75	18,722.29	25,263.61	58,282.06
South	3,526.24	4,953.07	6,696.29	8,188.31	10,089.32	11,709.83	13,191.08	15,232.09	17,697.15	24,647.41	53,214.46
Bangkok-Thonburi	2,626.90	4,396.05	6,712.78	7,786.13	9,708.34	11,017.01	12,507.99	14,490.94	16,781.29	24,417.54	62,272.66

Source: Data Tapes, N.S.O. Socio-economic Survey 1968/9

Table T-5

Percentage of Income in Kind in Total Income by Money Income Class, Region and Location, 1968/9

Towns

Income Class	Less than 3,000	3,000-5,999	6,000-8,999	9,000-11,999	12,000-14,999	15,000-17,999	18,000-23,999	24,000-29,999	30,000-35,999	36,000-47,999	48,000-59,999	60,000 and over
North	29.0	24.0	10.4	5.7	7.8	7.0	2.3	4.1	0.8	2.3	3.8	0.3
Centre & East	63.5	10.7	7.2	5.6	7.1	8.0	6.8	3.6	3.8	7.2	3.9	1.7
Northeast	9.1	27.5	10.6	7.6	5.6	8.6	9.0	2.0	1.2	3.4	9.6	2.7
South	65.7	14.1	9.7	8.2	9.5	6.5	5.3	3.8	5.7	3.8	5.8	2.3
Bangkok-Thonburi	29.4	31.2	7.8	8.9	5.5	6.1	4.7	4.4	3.5	3.1	3.0	1.3

Villages

Income Class	Less than 3,000	3,000-4,499	4,500-5,999	6,000-7,499	7,500-8,999	9,000-10,499	10,500-11,999	12,000-14,999	15,000-17,999	18,000-32,000	33,000 and over
North	44.9	34.0	27.0	25.1	24.5	15.6	10.0	12.2	13.0	7.4	14.0
Centre & East	49.0	31.9	28.3	22.8	20.0	17.0	15.3	14.0	12.5	9.2	4.0
Northeast	69.0	49.4	36.3	32.9	21.9	21.8	16.0	15.7	13.8	8.7	2.0
South	39.8	27.6	24.1	18.5	18.5	17.3	16.3	14.0	9.0	9.2	2.4
Bangkok-Thonburi	34.1	16.0	21.6	13.4	17.5	11.9	11.3	7.5	3.4	5.2	3.9

Source: Data Tapes, N.S.O. Socio-economic Survey, 1968/9

MALAYSIA

M1. Survey of Existing Studies

There have been several studies on income distribution in Malaysia. Mrs. Lim Lin Lean of the University of Malaya was one of the first researchers to work on this subject and has kept up her interest in this area. Her Masters thesis has been published as a monograph under the title Some Aspects of Income Differentials in West Malaysia.[25/] The study deals with income differentials by industry, by state, by location (rural/urban) and by race in some detail, using data existing at the time.[26/] Since then Mrs. Lim has been updating and expanding the original study, using more recent data. She has written a paper for the Joint JERC-CAMS Seminar on Income Distribution[27/] in which she has constructed a poverty profile for West Malaysia. Two definitions of poverty are used, one involving the bottom 40% of the income distribution and the other those with incomes below the national average. Those considered to be in poverty are then classified by various socio-economic characteristics. Mrs. Lim is also working on a study for the ILO on trends in income distribution and the effects of employment on income distribution.[28/] In addition she has done some work with Dr. D. R. Snodgrass who is writing a book on income distribution in Malaysia. They have jointly written a paper assessing "How the Fiscal System Works to Redistribute Income" which will be included in Snodgrass' book. Snodgrass has compiled a bibliography on income distribution for the Economic Planning Unit in Kuala Lumpur,[29/] and has also written an as yet unpublished report on sources of income distribution data in Malaysia titled "The Distribution of Household Income in West Malaysia: An Interim Report on Sources and Issues."

The World Bank has shown interest in the distribution of income in Malaysia, as it has in many other countries. Sudhir Anand has written a confidential World Bank report, "Income Distribution in West Malaysia in 1970", using data from the Post-enumeration Survey of that year. The World Bank has a complete set of the data tapes. Anand analyzes the data from the point of view of poverty, which he arbitrarily defines as the bottom 40% or 20% of the income distribution. Rice University, together with University Sains in Penang, is doing work which will have some bearing on income distribution in Malaysia.

The Economic Planning Unit of the Prime Minister's Department has made various studies on income distribution from time to time for policy purposes in conjunction with development planning.

Most studies regard households rather than individuals as the units of analysis. Anand used household income in his study as well, but on a per capita basis. The method of analyzing the data typically involves the use of decile shares and the Gini coefficient. Every writer has concluded that income inequality has increased in West Malaysia since 1957 (for example, if 1957 and 1970 are compared). A second conclusion is that relative to the rural-urban income differential and its contribution to total income inequality, the inequality <u>within</u> the two sectors is more important than that <u>between</u> the sectors.

M2. Data Availability

Income distribution statistics for Malaysia are comparatively respectable. The first problem which must be clearly pointed out straight

away is that all surveys which make up the existing collection of income distribution data cover only West Malaysia, otherwise known as Peninsular Malaysia. These include eleven states altogether, while the two remaining states excluded from the surveys, Sabah and Sarawak, are in East Malaysia.

There have been five official surveys which are important for purposes of studying income distribution and two others conducted by a private market research firm. These surveys will be discussed briefly in turn.

Household Budget Survey of the Federation of Malaya, 1957/8

This survey was conducted by the Department of Statistics of the Federation of Malaya and is available in published form.[30/] Its main purpose was to gather information for the construction of consumer price indices. The sample size is 2,760 households, 1,920 of which are rural and 840 urban. This represents only .25% of all households, so that sampling errors would be considerable.[31/] Detailed expenditure figures are given for four income classes with breakdowns by location (rural/urban), as well as by race. There is only one page of figures on income distribution, giving percentage distributions of households by 28 income classes, broken down by race and location.

There are many problems associated with this set of figures. The breakdown by race includes Malay, Chinese and Indian whereas the usual breakdown includes the category "others" as well. Thus the survey does not cover all races in the population. The tabulations of the survey include only incomes up to M$1,000 [32/] per month, so that for a construction of the entire income distribution, it is necessary to use other sources of data to fill in the range greater than M$1,000 per month, for example, the

Inland Revenue Report, which is published. The income data given in this survey are highly questionable, and since the original data are no longer available, certain questions cannot be answered. For example, the definition of income used in the data is not clear. The table on income distribution contains some subjective estimation where income was not entered on the questionnaire or was believed to be incorrect. In such cases estimates of income were made from the expenditure figures or by reference to the occupations of household members. Moreover, the percentage distributions of households by income class as presented in the tabulations did not come directly from processing the questionnaires, but smooth graphs of cumulative income distributions were drawn freehand and the published income distributions were derived from them. Thus any irregularities have already been eliminated before hand. Presumably on account of all these problems, we find a warning on the page presenting income distribution data that "this sample...is subject to an appreciable significant margin of error as a source of information relating to income distribution".[33/]

In conclusion, the 1957-8 Household Budget Survey can only be used with extreme caution. The data do not cover all races, exclude household incomes over M$1,000 per month, income figures may be inaccurate and the allocation of households to income classes has been smoothed out by free-hand graphs. The data are not available in more detail so that the use of this survey is very limited.

Federation Savings Survey, 1960

This household sample survey was carried out by the Department of Economics of the University of Malaya, with financial assistance from the Central Bank of Malaysia. Altogether, 5,691 households, representing about .5% of the total number of all households in West Malaysia, were interviewed.

The original tables obtained from this survey are lost and the only information now available appears in Lee Hock Lock's monograph, Household Saving in West Malaysia and the Problem of Financing Economic Development.[34/] These tabulations were based on 5,147 observations, the remainder being considered unreliable or having incomplete information. The study yields a great deal of information on savings but much less on income. A percentage distribution of households is given by 17 income classes, with the class means also known. The data were classified by race into Malay, Chinese, Indian and others and also by location (rural/urban). Although income distributions are not actually given by race, it would be easy to construct them from the existing tables on savings. There are tables giving percentage distributions by race of positive, zero and negative savers within each income group.[35/] The actual number of households in an income class under each category of savings is given, and therefore we can calculate the number of households of each race in an income class by savings categories, from which we can aggregate to obtain the income distributions by race. Savers were also classified into four groups, rural self-employed, rural employees--self-employed, urban self-employed and employees. Again tables are given of percentage distributions by employment status within each income group of the three categories of savers.[36/] Accordingly, it would be pos-

sible to obtain income distributions by employment status as well. The tables given in the study do not permit a construction of income distributions by location since the category "employees" referred to above includes rural as well as urban employees.[37/]

The major problem with the Federation Savings Survey is that we only have Lee Hock Lock's tables to work with. These give very detailed information on savings but not always of income. The sample used is quite large but it does exclude households headed by unemployed persons and those living on pensions.[38/] The omission is quite serious from the point of view of studying income distribution, even though it was evidently considered appropriate by Lee Hock Lock for his study on savings.

Socio-economic Sample Survey of Households, 1967 - 1968

This was conducted by the Department of Statistics of the Federation of Malaya and is being published in many separate sections. The section on income is not yet available, although the others already are. The original data tapes are theoretically still in existence, but there have recently been some problems reported in trying to locate the income portion of the tapes.

Some tabulations of the survey are available[39/] and these have been used by Don Hoerr in his article, "Education, Income and Equity in Malaysia.[40/] Seven income classes are given but their means are not presented and so have to be estimated. This is somewhat problematic with regard to the lowest income class and the open-ended class where it is not simply a question of taking the midpoint of the income range.

In fact if the tapes could be obtained, one would then be able

to ignore these tabulations altogether and work with the original data. These would allow great flexibility in analyzing income distribution. The sample size of the Socio-economic Sample Survey is very large. Altogether about 30,000 households were interviewed, and these formed 2.5% of all households. The data were collected both on the basis of households and of household members. Information is available on many socio-economic characteristics, such as education, employment status, sector, occupation, sex, race, location (rural/urban) and number of hours worked. Thus the sample would permit a very detailed study of income distribution in Malaysia.

The major problem with this sample survey lies in the definition of income. Whereas in the other surveys, income in kind is included, in the 1967/8 sample survey only cash income is involved. This makes the survey incompatible with the other surveys in addition to being incomplete on its own. Moreover, the data are not classified by region or state. Judging from overall income figures by state there are substantial differences in incomes across regions so that it is a great pity that it is not possible to use any of the surveys to study these in detail.

Repetions of the 1967/8 Socio-economic Sample Survey of Households were carried out in July-December 1968 and January-June 1971. These were done on a reduced scale, for example the sample size of the July-December 1968 survey was only one-third that of the 1967/8 Survey. Information collected was limited to the labour force and a few related particulars.

Post-enumeration Survey, 1970

This was carried out to provide a check on the 1970 Population Census. The survey was conducted on 25,273 households, representing a 1.5%

sample of the total number of households. The original data tapes are not available in Malaysia but the World Bank has a complete set of them. If it were possible to obtain the data tapes one would be able to get more information than what is presently available.

The tabulations from this survey have not been published but some worksheets are available. The number of income classes used is fifteen, although the World Bank uses twenty in its tables. Information is given for both households and individuals, and is classified by education, employment status, sector, occupation, location (rural/urban), age and race. The breakdown for race is the usual one into Malay, Chinese, Indian and others. For households there is no breakdown by household size. As in the other surveys there is no classification by region.

The strong point of this survey is that it has excellent income information which moreover permits it to be compared with any of the other surveys. There are two income concepts, stated income and computed income. Stated income is the income the respondent said he had and corresponds to cash income. To arrive at computed income, the interviewer checked on different categories of income and computed total income for the income recipient. There were eleven categories of income altogether, salaries and wages, sale of produce, business income, rent income, allowances, other cash income, goods, clothing, own consumption, goods received, owner-occupied housing and others.

This survey is a good source of income distribution data and is especially useful because it gives both cash income and total income and so can be compared with any of the other surveys. It would be advisable to try and obtain the original data tapes in order to extract the maximum informa-

tion out of this survey which appears to have been carefully carried out.

Household Expenditure Survey, 1973/4

This survey was carried out by the Department of Statistics and promises to be the best and most comprehensive survey to date for the purpose of analyzing income distribution. It should have all the usual breakdowns. and tabulations will probably be done by state as well. Although no actual details about this survey are known at this time, it appears certain that the data from this survey should be taken into account in future studies of income distribution.

Ford/SRM Surveys

As well as the five surveys already described, which may be termed "official" surveys, there are two other surveys conducted by a private market research firm called Survey Research Malaysia [SRM]. The Surveys are known as Ford/SRM Surveys and are for the years 1967/8 and 1970. The results of the surveys are not published, but a set of tabulations are available for private circulation.

The definition of income used in the Ford/SRM Surveys is close to the National Accounts concept. The Survey was carried out on the basis of adults, and in the sampling it was adults who were selected and not households. The tabulations accordingly apply to the adult population in contrast with the other surveys in which households are the units concerned. For the income distribution tabulations, six income classes are given with the open-ended class including incomes greater than M$1,000 per month. The information

is classified by location (rural/urban), race (Malay, Chinese, Indian, and others), size of household and number of wage earners. Because of the way the sampling was carried out, it is possible by using the income distribution for adults in conjunction with the distribution of adults by household size to construct a distribution of income by households. The method for doing this is explained in the special tabulations put out in connection with the surveys.

Other Data

In terms of peripheral data, it is worth mentioning the Annual Reports of the Ministry of Labour which give detailed wage data broken down by occupation and industry, but not by state.[41/] There was also a survey done by the Economic Planning Unit in 1970-71 on the participation of different ethnic groups in ownership and employment, where ownership included industry as well as agriculture, meaning both companies and acreage, and in which there was quite a detailed breakdown of employment. The results of this survey were actually published, but the publication was ordered destroyed immediately afterwards. A very few copies have survived, however. The Annual Reports of the Department of Inland Revenue are useful for data involving income tax. National Accounts Statistics are available on an annual basis.[42/]

After a pilot survey carried out in October 1971, a labour force survey was conducted by the Department of Statistics in April/May and September/October 1972. The purpose was to obtain a regular and periodic picture of the employment, unemployment and underemployment situation in

Malaysia. The survey covered the six largest towns of Sabah and Sarawak as well as the entire area of West Malaysia. The data collected involved household, demographic, educational and labour force information of individuals. Households formed the basic sampling units, with the updated list of living quarters used in the 1970 census of population and housing and the national household sampling frame being used as the sampling frames of urban and rural areas respectively. For urban areas the sample size was 5,612 households, with a sampling fraction of 1 in 140. For rural areas the sampling fraction was 1/20 in the first stage and 1/14 in the second stage, yielding a sample size of 6,963 households. The results of the survey are reportedly for official use only.

In terms of census data, the population census does not contain income information. There are also the usual censuses of manufacturing, mining, and so on.

Taken as a whole, the state of statistics in Malaysia is good so that one can usually expect the more common types of data. Income distribution statistics are good if one could get hold of them. Government officials are reluctant to admit that certain sets of data exist, let alone permit one to use them.

M3. Suggestions for Future Research

In view of new data which should soon become available, it would be useful to follow up on some of the existing studies and conclusions. Since it is clear that the 1957/8 Household Budget Survey was not a reliable source of income distribution statistics, it would be as well to check on the conclusion reached in existing works of increasing income inequality

in Malaysia, using a somewhat later period.

The conclusion that in classifying households into urban and rural, the inequality within sectors is larger than that between sectors is not very interesting. What could be pursued is the contributions of many different factors to income inequality. A more systematic comparison of 'between-group' inequality by different factors would be more meaningful than a comparison of "between-Group" with "within-group" inequalities. Malaysia possesses data which are suitable for such an analysis. The 1967/8 Socio-economic Sample Survey, the 1970 Post-enumeration Survey and the 1973/4 Household Expenditure Survey can all be used if the data tapes were obtained.

There are distinct differences in Malaysia by region, but interest in region is only recent, and data suitable for income distribution purposes have tended not to include region. Per capita gross domestic product is available by state, and indicates great disparity in income across regions. Western states have considerably higher incomes on average than Northern and Eastern states. Although average income figures exist by state, the only income distribution data available by state are those used by Mrs. Lim Lin Lean in her monograph[43/] which refer to employees contributing to the Employees Provident Fund in the year 1968. These include all those over the age of sixteen employed under a contract of service or apprenticeship receiving a gross cash remuneration of up to M$500 per month.[44/] Thus the income distributions by state obtained from this sample cannot be claimed to reflect the income distribution situation as a whole. In addition, it is a pity that statistics are not so far available for East Malaysia. In any case, when data permit, such as in

the 1973/4 Household Expenditure Survey, the distribution of income should be considered from the point of view of regional differences as well as other factors.

Mrs. Lim has expressed an interest in looking at the effects of income redistribution on employment, possibly using Felix Paukert's model. Such a study would be feasible given the existing data. She is also interested in testing the hypothesis that recent governmental policy to reduce the disparity in average incomes between the Malay and non-Malay populations may have acted to increase income inequality among Malays.

To conclude, the data situation in Malaysia is good and much more work could still be done.

DISTRIBUTION OF INCOME BY INCOME GROUP OF HOUSEHOLDS

% of Households	% of Income			
	1957/58 HBS[a]	1960 FSS[b]	1967/68 SES[c]	1970 PES[d]
Bottom Decile	2.2	1.1	1.1	1.2
2nd "	3.5	2.2	1.9	2.8
3rd "	4.6	2.7	3.2	3.2
4th "	5.4	3.8	3.7	4.5
5th "	6.5	4.3	6.3	5.5
6th "	7.7	5.9	6.5	6.8
7th "	9.2	8.3	7.1	9.1
8th "	11.1	9.9	10.7	10.7
9th "	15.0	16.7	15.3	15.1
Top "	34.8	45.1	44.2	41.1
Monthly Mean Income	$220	$250	$235	$275
Monthly Median Income	$156	$129	$139	$170
Gini Ratio	.421	.551	.530	.499
Mean Income Estimated from National Accounts	$257	$262	$325	$388
Coverage of Survey Data	85.4%	95.4%	72.5%	77.3%
% of Households with Income above Mean	29%	25%	17%	29%
Income Shares of Bottom Five Deciles	22%	14%	16%	17%

a = Household Budget Survey, b = Federation Savings Survey,

c = Socio-Economic Survey, d = Post-Enumeration Survey.

Source: Lim Lin Lean, "The Pattern of Income Distribution in West Malaysia, 1957-1970," (Geneva: International Labor Office, World Employment Program, 1974), Table I, p. 13.

INDONESIA

II. Survey of Existing Studies

There has been very little work done in the area of income distribution in Indonesia. This appears to be the result of lack of appropriate data on the one hand, and the unfavourable political climate in the country on the other.

One of the researchers who is interested in Indonesian income distribution is H. W. Arndt at the Australian National University in Canberra. He is in the process of writing a paper on income distribution in Indonesia and has also written a note on regional wage differentials.[45/] The data allow an examination of wage differentials by skill level and by province and district. The findings of the study are that wages for labour in the categories under study are generally low, with an all-Indonesian average of Rp. 185, or less than U.S.$0.50, per day. There is a relatively modest variation in wages by level of skill, but very substantial differences in wages paid to all categories within provinces as well as between provinces.

Not much has been published concerning income, but a few papers deal with consumption expenditures. Peter Timmer, in his article, "Estimating Rice Consumption," has estimated the elasticity of demand for rice which he finds declines at high expenditure levels.[46/] Sundrum uses the National Sample Survey to examine expenditure patterns and finds the urban-rural disparity in expenditures for Indonesia to be moderate by Asian standards.[47/] He also finds that the inequality, as measured by the Gini coefficient, of per capita monthly expenditures, is small compared with other countries. For any given household size, per capita expenditure is smaller for rural than for urban households. Average per capita expenditure

is found to fall with increasing family size. Because the age of the household head is not given in the surveys, it is not possible to examine the relationship between per capita expenditures and any index of life cycle. However, using household size as a proxy for life cycle, Sundrum finds that inequality in total consumption expenditure per capita increases in the course of the life cycle. In comparing households engaged in different household enterprises it is found that there are substantial differences in their monthly expenditures.

Sundrum has written another paper called "Household Income Patterns" which is already published.[48/]

C. Geoffrey Swenson at the Agricultural Development Council in Bogor, Indonesia, is developing a research project to study income distribution at the village level. He and William Collier are also working with two students at the Institut Pertanian Bogor who are doing research on income distribution and employment at the village level.

In conclusion, there are no studies at the present time which deal directly with income distribution in Indonesia. A few studies deal with consumption expenditures, but not income. In any event, none of them covers the whole of Indonesia but only certain parts of it.

I2. Data Availability

Income distribution statistics for Indonesia are evidently difficult to come by. Information on consumption expenditures is somewhat easier to obtain, but there does not seem to be a set of data designed to be representative of all of Indonesia.

National Sample Survey

A major source of information on households is the Indonesian National Sample Survey, sometimes referred to as the Socio-economic Survey, collected by the Central Bureau of Statistics and known as "Susenas". There have been four rounds of the survey and they have been used by R. M. Sundrum in his study of expenditure patterns.[49/] The third one was used by Peter Timmer in his paper on rice consumption.[50/]

The National Sample Survey was initiated by the Indonesian government and the Statistical Research and Development Centre set up with the assistance of the United Nations Special Fund in 1962.[51/] The survey was initiated in 1962 for the purpose of obtaining socio-economic and demographic information about the population to be used for economic planning. The following chart indicates the survey period, subject coverage and geographic coverage for each round of the survey.

Round Number	Survey Period	Subject Coverage	Geographical Coverage
I	November 1963-February 1964	Demography, employment, consumer expenditure, housing facilities, land use, household enterprises, village statistics and rural prices.	Jawa-Madura
II	December 1964-March 1965	Demography, births and deaths, employment, housing facilities, consumer expenditure, agricultural enterprises, land use, capital formation and household income.	Indonesia, excluding the provinces of Maluku and West Irian.
III	July-October 1967	Same as round II above.	Jawa-Madura
IV	September 1969-August 1970	Demography, births and deaths, employment, land use and area survey, crop-cutting and drying experiment and small-scale industries.	Indonesia, excluding the provinces of Maluku and West Irian.

The survey has different sample designs for rural and urban areas. In rural areas a multi-stage stratified sampling technique is used. In the first three rounds of the survey, subdistricts and enumeration districts form the first- and second-stage sampling units. These reduce to just villages as the first-stage sampling units in the fourth round. The final sampling units are households, household manufacturing enterprises and agricultural households for socio-economic enquiries, household manufacturing information and agricultural data respectively. For the crop yield survey in the fourth round, crop plots and square cuts form the second- and third-stage sampling units.

In urban areas, only socio-economic data are sought. A two-stage sampling is used, with enumeration districts and households forming the first- and second-stage units. For Jakarta city, the community group of households has been considered the first-stage unit since the third round.

In order to deal with seasonal fluctuations in the agricultural sector, the survey period of the last round has been taken as a complete year and divided into three subrounds in accordance with the harvesting seasons. The reference period is fixed in terms of the length of time and refers to the period preceding the date of the interview which varies for different households over the entire survey period. The length of the moving reference period varies for different questions, for example it is a week for enquiries on employment, a month for those concerning consumer expenditure on food and the crop season for the crop survey. The rationale behind the moving reference period is to reduce recall lapses of the respondents and to obtain estimates of the averages of characteristics

over the survey period.

According to Sundrum,[52/] the surveys were carried out "in rather disturbed conditions" so that the information collected is already somewhat out of date. The dates and coverage of the first three rounds given by Sundrum show minor discrepancies when compared with the information given by Soeradji. Evidently Sundrum only had access to Susenas II and Susenas III when he wrote his papers.

In comparing population estimates obtained from the surveys with Census estimates, Sundrum concludes that there is an underestimate of the urban population in the surveys. The average household size in the Susenas is intermediate between the 1961 Census and the Pre-Census Houselisting Survey of 1970. Urban households are found to be about 10% larger than rural households because of the difficulty of getting housing in urban areas.

Although Soeradji distinctly includes income information in the subject coverage of rounds II and III of the survey,[53/] and this is confirmed in the List of Publications Issued by Central Bureau of Statistics, 1973, Sundrum claims that only consumption expenditure data are available, but not income.[54/] Sundrum finds that the consumption expenditure in the surveys is an underestimate when compared with the estimate of private consumption expenditure in the National Accounts. However, many assumptions are built in to the comparison which was very difficult in any case since 1964-5 was a period of great inflation.

Susenas II and III give the distribution of the population by per capita monthly expenditures. Susenas II classifies households by their

principal enterprise, and monthly household expenditures by principal household enterprise are available. Consumption expenditures are broken down by major commodity groups, with further details for food. The proportion of total expenditures spent on food is very high, and raises questions about the reliability of the data. There are altogether nine expenditure classes in Susenas II which are quite well spaced.

In general the Susenas data can be used to examine the distribution of consumption expenditures among a certain part of the population. The data are available by household size and principal household enterprise, but other household characteristics such as the age and education of the household head are not. It is most unfortunate that income data either were not collected in the surveys, or else have not been made available to researchers.

Family Expenditure Survey

This was conducted by the Central Bureau of Statistics in 1968/9 in Jakarta and seven other cities in Indonesia; namely, Surabaya, Bandung Jogjakarta, Denpasar (Bali), Medan (Sumatra), Palembang and Makassar. In 1970 three more cities were covered: Bandjarmasin and Pontianak in Kalimantan (Borneo), and Manado in Sulawesi (Celebes). The two rounds were similar, with the exception of the sampling design.

The object of the survey was to collect data to make up weights for the new consumer price index. Household interviews were conducted for the purpose of collecting information on income, consumption expenditure, housing condition and so on. With some frequent and recurrent items of expenditure, the family was asked to write down all items received for

consumption during one week. Consumption expenditures of such items as renter's or home-owner's cost, fuel, electricity, clothing and miscellaneous items were also obtained by interview, with the reference period being the month preceding the week of the interview. For information on household income, expenditure on furniture, appliances and utensils, a reference period of three months for Jakarta and six months for other cities was used.

The first round of the survey was carried out in four rounds each lasting one month, in June, September and December of 1968 and March of 1969, for Jakarta. For the other seven cities it was done in two rounds, in November of 1968 and June-July of 1969.

For Jakarta a two-stage sampling technique was used, with Rukun Tetanggas[55/] (RT's) forming the first-stage units and households the second-stage units. A sampling fraction of 1 in 100 was used to select 160 RT's from the list for metropolitan Jakarta. In the second stage households were selected with a sampling interval of two, and on average twenty families were selected per RT, yielding a sample of around 3,000 households for Jakarta.

For the other seven cities of the first round, the first-stage units were enumeration districts identified at the time of the 1961 census of population, updated before being used for the survey. A sampling fraction of 1 in 40 was used in the first stage for Bandung and Surabaya, with the second-stage sampling fractions being 1 in 4 for Bandung and 1 in 5 for Surabaya. For the five remaining cities the sampling fraction was larger at the first stage and at least 300 families were sampled in each city. About 4,000 households were selected from the seven cities taken together.

The second round of the survey was carried out in September-October 1970. The sampling again depended on a two-stage technique, but with census blocks forming the first-stage and households the second-stage sampling units. A census block here means a continuous location, easily identifiable on the ground, which was newly created in 1970 for the Population Census of 1971. For all areas, urban and rural, outside Jawa and Madura and for urban areas in Jawa and Madura, a census block covered 40-70 households. For rural areas in Jawa and Madura it covered 50-125 households.

The sampling fraction at each of the two stages and the resulting sample sizes for the three cities covered in the second round of the survey are given below.

City	Sampling Fraction		Number of Households
	First Stage	Second Stage	Sampled
Pontianak	1/7	1/4	590
Bandjarmasin	1/19	1/5	500
Manado	1/10	1/4	420

The Family Expenditure Survey was concerned with cities only, so that its use would be limited in any study on income distribution. Nonetheless, the coverage of urban areas appears good and there is consistency in the data collection for these eleven cities. If the original data could be obtained, and if household income data are in fact available as reported, this sample would be useful for throwing some light on the income distribution situation in urban Indonesia.

Integrated Agricultural Survey and Socio-Economic Survey

This survey is being conducted by the Central Bureau of Statistics as part of the Statistical Development Project in the first five-year

development plan which started in November 1969. Twelve sub-rounds, most of them lasting four months, have so far been completed. The first five sub-rounds were carried out in November-December 1969, January-April 1970, May-August 1970, September-December 1970 and January-April 1971. The socio-economic survey was designed to provide data on demographic characteristics, labour force, births and deaths, income and expenditure, small-scale manufacturing and handicraft. The agricultural survey collected data on crop-cutting of major food products, drying experiment on paddy and so on. The socio-economic survey covered both urban and rural areas while the agricultural survey covered rural areas only. The survey covered the whole country in 1969 and 1970, but in 1971 the coverage was reduced to thirteen provinces having a high density of paddy fields. A stratified sampling technique was used, but the details were not invariant by subrounds.

Unfortunately for our purposes the collection of data involving demographic, labour force, income and expenditure particulars has been dropped since the third subround. It may still be worthwhile to obtain data from the first two subrounds since, in theory at any rate, these covered both urban and rural areas in the whole country and included both income and expenditure data.

Other Data

Between November 1968 and January 1969 an expenditure survey was conducted for Jakarta only. This was used by Peter Timmer in his paper on rice consumption.[56/] Unfortunately, population weights are not given and so we cannot obtain a distribution of households by expenditure class.

In his Note, H. W. Arndt used data on daily wages recommended, and

presumably paid, on public works projects under the kabupaten subsidy scheme.[57] This is supposed to be one of the most comprehensive collections of wage statistics for Indonesia. For all but two of the twenty-six provinces of Indonesia, wage data are available for seven categories of workers: unskilled, semi-skilled, skilled workers, foremen, head foremen, mechanics and night watchmen. For each province the data were given separately for each kabupaten or district.[58]

H. W. Arndt is writing a paper on income distribution in Indonesia in which he asserts having in his possession, "a very extensive collection of Indonesian published and unpublished statistics" but does not elaborate on these.

The Central Bureau of Statistics of Indonesia is responsible for most of the data collection. The last Population Census was in 1971, and there was also a Census of Agriculture carried out in 1963, some details of which have been published in the Statistical Pocketbooks. The Agro-Economic Survey, a part of the Department of Agriculture, is carrying out a large number of surveys on a sample basis. At one time another agricultural census was planned by this agency but progress on this is not known. Various labour force surveys are listed but any given one of them covers only specific regions. Labour force data for the manufacturing sector have been published in a number of volumes of the Survey of Manufacturing Industry Reports for 1970 and 1971. The Population Census of 1971 gives a breakdown by employment status of the labour force by major industrial groups.

I3. Suggestions for Further Research

So far income distribution studies in Indonesia have not been possible because of lack of data. With the present state of statistics in Indonesia, there is little prospect of doing a reasonable study on income distribution, especially if one wants to look at the whole country or compare two different points in time. Before planning to do research in this area, the first priority would appear to be the collection of decent statistics on the size distribution of income. From the point of view of an outsider it would seem sensible to cut down on the number of different surveys conducted, while concentrating on getting representative and consistent data which would permit cross-sectional analyses, repeated after an interval of time on an identical basis to allow comparisons over time.

With regard to existing statistics, the National Sample Survey can be used to study poverty, if poverty is defined in terms of consumption expenditure and not income, unless the income data supposedly collected can be located. Poverty can be related to household size, type of household enterprise, region and location (rural/urban).

FOOTNOTES

1/ United Nations, Economic Survey of Asia and the Far East, Part One: Social Justice, Employment and Income Distribution in the ECAFE Region, Chapter 3: "Economic Growth and Income Distribution," (United Nations, 1971) pp. 43-73.

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10/ Details of the sampling method can be found in N.S.O., Advance Report, Part II: Survey Methodology, pp. 89-97.

11/ Ibid., p. 92.

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36/ Ibid., tables 2.3 (a), 2.3 (b) and 2.3 (c), pp. 19-21.

37/ Ibid., p. 18.

38/ Ibid, p. 13.

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47/ R. M. Sundrum, "Consumer Expenditure Patterns: An Analysis of the Socio-Economic Surveys," Bulletin of Indonesian Economic Studies, vol. 9 (March 1973).

48/ R. M. Sundrum, "Household Income Patterns," Bulletin of Indonesian Economic Studies, vol. 10 (March 1974).

49/ R. M. Sundrum, "Consumer Expenditure Patterns," op. cit.

50/ C. Peter Timmer, "Estimating Rice Consumption," op. cit.

51/ Information pertaining to the National Sample Survey was mostly obtained from Budi Soeradji, "On Sample Design of the Indonesian National Sample Survey," (unpublished paper).

52/ R. M. Sundrum, "Consumer Expenditure Patterns," op. cit.

53/ Buni Soeradji, "On Sample Design", op. cit.

54/ In his paper, "Consumer Expenditure Patterns", Sundrum writes "there is no information about income levels" (p. 99). And in reply to this writer's question on this matter he says that he is "not sure whether the household income data were collected in Rounds II and III of the Socio-Economic Surveys of Indonesia but, if so, they have not been published."

55/ "Rukun Tetangga" is a group of 40-60 households in continuous geographical location whose boundaries are easily identifiable on the ground.

56/ Peter Timmer, "Estimating Rice Consumption", op. cit.

57/ H. W. Arndt, "Regional Wage Differentials", op. cit.

58/ The reference given by Arndt (Ibid) is T. A. Salim and Islanders, Daftar Upah Harian beberapa djenis pekerdja tiap kodya/kabupaten 1971/1972, Perentjanaan Regional dan Daerah, Bappenas, Djakarta, May 1971.