March 20, 1974

THAMMASAT UNIVERSITY

FACULTY OF ECONOMICS

DISCUSSION PAPER SERIES

NUMBER 39

CHANGES IN TAX INCIDENCE IN THAILAND
FROM 1963 TO 1968

by

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Although numerous attempts have been made to measure the incidence
of taxes in the more advanced economies, such analyses are exceedingly sparse
for the developing countries.[1] While lack of suitable data may be used as
a rationalization for this state of affairs, the pressures on LDC's to equi-
tably and efficiently mobilize resources for their development efforts make
for a compelling case that studies of the progressivity or regressivity of
their tax systems be attempted. Thailand, like many of the developing nations
has been going through a rapid period of transition. This modernization has
involved a variety of social, institutional, and economic changes[2], not least
of which are changes in the structure and level of government revenues.[3] To
what extent such changes have altered the incidence of tax burdens across
income classes in Thailand over the period 1963 to 1968 is the purpose of
this study. Unfortunately, due to data limitations, the scope of this study
was restricted to an analysis of tax progressivity of only a portion, albeit
a large portion, of the total Thai government revenue for two years, 1963
and 1968.

In 1963 total government revenue represented approximately 13.1% of
gross domestic product in Thailand.[4] By 1968, although government revenue
had increased by over 85%, the ratio of government revenue to gross
domestic product had only risen to 14.2%. In Table 1 we present a summary of
the revenue structure of the government broken into nine broad revenue
categories. Notable among the changes from 1963 to 1969 are the decreasing
importance of export taxes and the increasing dependence upon business and
selective sales taxes. Export taxes, including export duties on a variety
of most agricultural products and the rice premiums which were special per
unit taxes on exports of rice, declined from 12.7% to 8.1% of government
revenue. While import duties declined relatively, they still represented
the lion's share of government revenue in both years. While individual
income taxes more than doubled over the period, it still represented less
than 6% of government revenue by 1968.

On the basis of the figures reported in Table 1 and some earlier studies
on the probable incidence of certain types of revenue measures, some
general observations regarding changes in incidence of the overall revenue
system can be made. It is widely believed and supported by some studies
that individual income taxes have a progressive incidence across income

Table 1

Composition of Thai Government Revenues

(in millions of baht[1])

	1963		1968	
	Amount	Percent	Amount	Percent
Individual Income Taxes	468.2	5.2%	972.7	5.9%
Export Duties	336.2	3.8%	239.0	1.4%
Rice Premiums	798.4	8.9%	1,115.7	6.7%
Import Duties	2,982.5	33.3%	4,990.7	30.0%
Business Taxes	1,297.1	14.5%	3,074.7	18.5%
Selective Sales Taxes	836.8	9.4%	2,142.2	12.9%
Corporation Income Taxes	242.7	2.7%	752.8	4.5%
Royalties, Fees & Permits and Property Registration Taxes	486.3	5.4%	1,013.0	6.1%
Revenues from Government Monopolies, State Enterprises, Service Charges and Miscellaneous Revenues	1,506.3	16.8%	2,340.6	100.1%
Total	8,954.5	100.0%	16,641.4	100.1%

[1] $1 = 20.8 Baht.

classes.[5] To the extent that the share of such taxes rises in the total tax
structure, the progressivity (regressivity) of the entire tax system would
tend to rise (fall). Analagously, export taxes, including export duties and
the rice premiums, are generally felt to entail regressive tax burdens so
that decreases in the importance of these revenue measures would tend to
reduce (increase) the regressivity (progressivity) of the overall tax system.[6]
Thus, on the basis of the observed changes in revenue shares, there is some
apriori evidence of improvement in the progressivity of the Thai tax system.
These observations are of relevance in so far as data limitations for 1968
precluded an analysis of the incidence of the burdens of such taxes for that
year.

For the analysis of the changes in the incidence of the remaining government revenue measures listed in Table 1, this study proceeds in the following manner. In section II we discuss the methodology by which the incidence of various revenue measures are computed and the progressivity or regressivity of the tax structure measured. The procedure employed has the advantage of going directly to the measurement of progressivity without recourse to data on income distribution or to assumptions regarding which income classes bear what percentages of the burdens of various revenue measures. This procedure was made possible by the availability of detailed government revenue data which could be assigned to distinct commodity groups according to a specified set of assumptions regarding how such revenue measures affected commodity prices. Discussion of the data availabilities regarding government revenues, consumer expenditures and household income is also contained in this section, along with the statistical model employed to estimate the progressivity or regressivity of a certain component of government revenue. The results obtained in this study are presented in section III. We conclude the paper with some observations regarding the applicability of our findings.

II. Methodology

Government revenue measures can have a variety of impacts upon the members of an economy. In addition to extracting a portion of individuals' incomes, revenue measures can also alter commodity and factor prices; and thus change the opportunity sets of individuals for earning income and consuming commodities.[7] There can also be macroeconomic effects of policies to raise government revenue, just as there can be a wide assortment of micro and macro-economic effects due to government disbursements. In general, the aggregative effects of various revenue policies are assumed away in tax incidence studies.[8] To do otherwise requires assumptions regarding government decision-making behavior that few economists are able or willing to make.

From the point of view of an individual economic agent, a given revenue measure can be considered to impose a tax burden according to the extent that it reduces his net earnings on the factors he supplies and reduces his ability to consume commodities. These effects, on both the "sources" side and the "uses" side, can be the result of many indirect influences that work their way through an inter-related economy. Accurate measurement of the incidence of revenue measures thus requires a fairly detailed model of the economy. When such is not available[9], attempts to measure tax burdens must rest upon some simplifying assumptions. In many studies, this is accomplished by assuming which income classes bear what percent of different tax burden.[10] Such a procedure is obviously subject to the criticism of

obtaining the results it assumes. In contrast, in this study we make assumptions regarding how certain revenue measures affect certain commodity prices. Tax burdens are then computed on the basis of how much of the consumer expenditure on various commodities is represented by these changes in prices. While changes in factor incomes due to various revenue measures could be similarly handled by appropriate assumptions, due to data limitations such a procedure was not feasible; although in defense of our study it might be noted that the revenue measures most likely to be associated with changes in factor incomes, the individual income tax and export taxes, were excluded from this study.[11] Thus, by assumption, we are concerned with the incidence of commodity tax burdens and how the progressivity or regressivity of the incidence of those burdens changed from 1963 to 1968.

The measurement of progressivity or regressivity of tax incidence can depend critically upon the standard of reference. While recent studies have raised issues regarding the concept, measurement and uses of alternative tax bases[12], in this study we rely upon measures of household income and expenditure as the standards of reference with which to measure the progressivity or regressivity of a portion of the revenue structure in Thailand. The measure of progressivity or regressivity of various revenue measures in this study is given by the elasticity of the tax burden with respect to the standard of reference. If this elasticity exceeds (is less than) unity, the tax structure may be regarded as progressive (regressive). Differences are likely to exist between the elasticities with respect to household income and those with respect to household expenditure. The differences will depend upon the elasticity of expenditure with respect to income which in general one would expect to be less than unity, i.e., as income rises people save a larger proportion of their income.

The model employed in this study rests upon the definition of income[13] and our assumption that revenue measures, excluding those ignored in this study, are passed on to consumers in the form of higher prices. Thus

$$(1) \quad Y_j = E_j + S_j = \sum_{i=1}^{n} P_i X_{ij} + S_j$$

where Y_j is money value of income of the jth household from all sources, E_j is the value of all goods consumed by household j, S_j is saving, P_i is the market price of commodity i, and X_{ij} is the amount of commodity i consumed by the jth household. By assumption,

$$(2) \quad P_i^* = (1 + t_i) P_i$$

where t_i is the tax rate on commodity i and P_i^* is the price of

commodity i in the absence of t a x e s. Thus, the commodity tax burden is

$$(3) \quad T_j = \sum_{i=1}^{n} t_i P_i X_{ij}$$

The elasticity of the tax burden with respect to household expenditure is

$$(4) \quad \epsilon_{TE} = \frac{E_j}{T_j} \frac{dT_j}{dE_j} = \sum_{i=1}^{n} \left(\frac{t_i P_i X_{ij}}{T_j}\right)\left(\frac{E_j dX_{ij}}{X_{ij} dE_j}\right)$$

Equation (4) indicates that the elasticity of the tax burden with respect to household expenditure is a weighted sum of the expenditure elasticities of demand for the various commodities. The weights are the shares of the total tax burden derived from taxes on each commodity.

In similar fashion we can show that the elasticity of the revenue burdens on commodities with respect to income is given by

$$(5) \quad \epsilon_{TY} = \frac{Y_j dT_j}{T_j Y_j} = \sum_{i=1}^{n} \left(\frac{t_i P_i X_{ij}}{T_j}\right) \left(\frac{Y_j}{X_{ij}} \frac{dX_{ij}}{dY_j}\right)$$

$$= \sum_{i=1}^{n} \left\{ \left(\frac{t_i P_i X_{ij}}{T_j}\right) \left(\frac{E_j dX_{ij}}{X_{ij} dE_j}\right) \left(\frac{Y_j}{E_j} \frac{dE_j}{dY_j}\right) \right\}$$

Thus, the elasticity of tax burdens with respect to income can be viewed as a weighted sum of the income elasticities of demand for the various commodities, or as the elasticity of expenditure with respect to income times the elasticity of the tax burden with respect to household expenditure. In order to compute the tax rates applicable to various commodities and commodity groups a detailed breakdown of government revenues in Thailand for the years 1963 and 1968 was required.[14] Fortunately fairly detailed listings of government revenues was available from several sources.[15] For each revenue category, assignments were made to eight different commodity groups of as many separate revenues as appeared to be derived directly from the corresponding commodity group.[16] For example, import duties from vehicles were assumed to be derived from transportation expenditures and were therefore assigned to that commodity group. Likewise, profits from the tobacco monopoly were assigned to the tobacco and alcoholic drinks commodity group. Revenues for which there was doubt over their commodity group origin were assigned proportionately over all commodity groups, each commodity being assigned a share of the revenue equal to its share of total consumer expenditure. In some cases, a given revenue was assigned proportionately to a subset of the commodity groups. After all the assignments had been accomplished, the amount of government revenue assigned to each commodity group was divided by the total consumer expenditure on that commodity group to yield an average tax rate for the corresponding group of commodities. This procedure was

employed for both 1963 and 1968. The computed average tax rates on commodity groups are reported in Table 2. The results indicate a rise in tax rates from 1963 to 1968 for all commodity groups except recreation and miscellaneous household expenses. From previous studies, it has been estimated that the elasticity of recreation, as well as that miscellaneous household expenses, with respect to income or expenditure exceeds unity.[17] This suggests that some of the changes in the tax structure which gave rise to the computed tax rates did not increase the progressivity of the tax structure.

TABLE 2

AVERAGE TAX RATES ON COMMODITY GROUPS: 1963 AND 1968

	1963	1968
Food & Non-alcoholic Beverages	7.76%	9.32%
Clothing & Material	19.01%	20.09%
Dwelling	12.25%	13.93%
Medical & Personal Care	8.53%	14.02%
Transportation	36.07%	48.04%
Recreation	24.96%	17.56%
Tobacco & Alcoholic Drinks	37.63%	46.51%
Miscellaneous Household Expenses	18.20%	16.17%

Similarly increases in the tax rates on food and non-alcoholic beverage, clothing and material, medical and personal care, and tobacco and alcoholic drinks were likely to have made the incidence of various government revenues more progressive in so far as those commodity groups had income elasticities of demand estimated to be less than unity in 1963. Since the income elasticity of demand for transportation exceeded unity in 1963,[18] the rise in its computed tax rate by 1968 was likely to reduce the regressivity of the tax structure.

Data on household income and expenditure for the years 1963 and 1968 was obtained from household expenditure surveys for those two years.[19] Individual household data was not available for either year, but summary data on income and expenditure by income class, by region for the capital, towns and villages was available. While the two surveys were not perfectly comparable with regards to the definition of income,[20] the regional breakdowns[21] and the number

of income classes,[22] the procedure employed in this study ignored the latter
two discrepancies. The information on total household income, family expend-
itures, and expenditure on the eight commodity groups for each income class
was treated as a separate observation.[23] With the use of the average tax
rates on commodity groups the tax burden for each observation was computed.

The elasticity of the tax burden with respect to the standards of
reference were estimated using the following regression model

(6) $\text{Log } T_{jt} = a_{st} + b_{st}\text{Log } S_{jt} + U_{jt}$

where T_{jt} is the tax burden of the jth income class in the tth period,
a_{st} is a constant for the sth standard of reference, either family income
or expenditure, in the tth period, b_{st} is the elasticity of the tax burden
in the tth period with respect to the sth standard of reference, S_{jt}
is the standard of reference of the jth income class in the tth period and
U_{jt} is an error term in the tth period which is assumed to be normally and
independently distributed with a common variance σ_t^2. The results obtained
with this model are reported and discussed in the following section.

II. Methodology

In Table 3 we present the results obtained using equation (6) to
estimate the tax elasticities with respect to family income and family expend-
iture for the years 1963 and 1968. The estimated elasticities are all
significantly greater than zero and different than unity at the 1 percent
confidence level. The results indicate that for the revenues covered in
this study the tax incidence is progressive when viewed from the expenditure
point of view, but regressive when family income is the standard of refer-
ence. However, the elasticity with regard to either income or expenditure
is lower in 1968 which indicates that structural changes in the Thai tax
system were not making the system more progressive. Indeed, in conjunction
with the individual income tax which represented less than 6% of government
revenue in 1968 and export duties, it is difficult to believe that the overall
tax system is more than proportional. Of course, this is conjectural
and further analysis could refute it, but given that the revenues included
in this study represented 82.1 percent and 86.0 percent of total revenue
in 1963 and 1968 respectively, the estimated tax elasticities with respect
to income suggest a significant regressive incidence of the overall tax
system in Thailand. However, it is worth noting that the estimated elastic-

ities of commodity tax burdens with respect to family expenditure suggest that the Thai tax structure is biased towards taxing commodity groups with higher expenditure elasticities of demand, although this tendency was reduced by 1968.

TABLE 3

TAX ELASTICITIES FOR THAILAND 1963 AND 1968*

	1963		1968	
	Tax Elasticity Regressions with Respect to		Tax Elasticity Regressions with Respect to	
	Income	Expenditure	Income	Expenditure
Tax Elasticity	.872 (34.8)	1.094 85.21	.802 (72.3)	1.059 (151.7)
Constant	-1.053 (6.1)	-2.587 (-29.4)	.011 (.11)	-2.381 (-36.0)
R^2	.957	.993	.959	.990
F-Statistic	1,212.0	7,262.3	5,225.6	23,008.0
Number of Observations	56	56	227	227

* t-statistics of coefficients are given in parentheses.

IV. Concluding Remarks

Studies on tax incidence invariably encounter methodological and data difficulties which make drawing strong conclusions a questionable exercise. This study was no different in that data limitations restricted the scope of coverage of the revenue system of Thailand. In addition, there were comparability of data set problems as well as methodological shortcomings of the assumptions employed in order to assign various categories of revenues to different commodity groups. Thus, the results obtained must be considered crude and tenuous at best.

Nevertheless, the results do suggest, somewhat consistently over the two time periods, that indirect commodity taxation imposes regressive burdens on households with respect to income. This being the case, it can be argued that reliance on such forms of taxation, especially those taxes

applied to commodity groups with low income elasticities of demand, should be reduced. More reliance should be placed on direct taxes on income or property if a significantly progressive tax structure is to be achieved. While there are administrative costs of such reforms which can be used to justify the existing tax structure, the bureaucratic modernization that has occurred in Thailand already suggests that it should be easier to implement such changes now.

FOOTNOTES:

[1] See Bishop (2); Bridges (3); Davies (6), (7), (8); Gillespie (9); Johnson (11); McLure (15), (16), (17); Musgrave (18); and Sahota (23).

[2] See Ingram (10), Silcock (26), and Riggs (21).

[3] See Lewchalermwong (13).

[4] These and subsequent figures are based on our detailed revenue data obtained from various official sources and the National Income Statistics of Thailand (28). Excluded are foreign loans and grants and alien registration fees.

[5] See Lewchalermwong (13), pp. 58-70, and Salkin (24).

[6] The argument that export taxes are regressive rests primarily on the demand for Thai exports being very elastic. Thus, taxes on the export of rice reduce the price farmers receive and rice farmers are among the poorest members of the economy. See Kridikara (12), Usher (39), Ingram (10), and Silcock (26).

[7] See Musgrave (19), pp. 205-231.

[8] See Prest (20), and Conrad (5).

[9] Such was not available for Thailand, although two fairly aggregative input-output models for Thailand based upon other countries' data have been constructed. See Malprasert (14) and Suwankiri (27).

[10] See Johnson (11) and McLure (16), (17).

[11] Income and other direct taxes on households was excluded because the 1968 Socio-economic Survey (36) did not provide such information which was available in the 1963 Household Expenditure Survey (29), (30), (31), (32), (33), (34), (35). Export taxes were excluded because there was no accurate information on income from agricultural, especially rice production, activities for both years.

[12] See Aaron (1), Davies (8), and Schaefer (25).

[13] Total money income in the Household Expenditure Survey for 1963 was defined to include wages and salaries, profits from family enterprises, income from rents, pensions and annuities, interest, dividends, brokerage fees, money received through public and private assistance, net winnings from gambling, the value of food received as pay, and the value of rice draw from storage for family use. This income figure for 1963 was adjusted by deleting the value of rice drawn from storage for family use to yield an income measure compared to that in the 1968 data.

[14] The six revenue categories included in this study were (1) general sales taxes, (2) specific commodity sales taxes, (3) import duties, (4) company income taxes, (5) royalties fees, permits and property registrations taxes, and (6) government monopoly profits, state enterprises, government sales, service charges and miscellaneous revenue.

[15] The detailed listing of revenues, as well as the manner in which these revenues were employed to compute average tax rates for commodity groups is available from the authors upon request.

[16] The eight commodity groups consisted of good and non-alcoholic beverages, clothing and material, dwelling, medical and personal care, transportation, recreation (including reading and education), tobacco and alcoholic drinks, and miscellaneous household expenses.

[17] See Salkin (24).

[18] Ibid.

[19] Household Expenditure Survey (29), (30), (31), (32), (33), (34), (35) and Socio-Economic Survey (36).

[20] See Footnote 13.

[21] There were six regions in the 1963 survey, while the 1968 survey contained ten regions.

22 In the 1963 survey, except for Bangkok-Thonburi which contained six income classes demarcated as less than ฿6,000; ฿6000 to ฿11,999; ฿12,000 to ฿23,999; ฿24,000 to ฿35,999; ฿36,000 to ฿59,999; and ฿60,000 or over, the remaining five regions had, for both town and village classifications, 5 income classes, demarcated as follows: less than ฿3,000; ฿3,000 to ฿5,000; ฿6,000 to 11,999; ฿12,000 to ฿17,999; and ฿18,000 or over. The 1968 survey contains eleven income classes for villagers by region, and twelve for municipal area households. The income class demarcations for villagers were less than ฿3,000, ฿3,000 to ฿4,999, ฿4,500 to ฿5,999, ฿6,000 to ฿7,499 ฿7,500 to ฿8,999, ฿9,000 to ฿10,499, ฿10,500 to ฿11,999, ฿12,000 to ฿14,999 ฿15,000 to ฿17,000, ฿18,000 to ฿32,999, and ฿33,000 and over. The breakdown of income classes for municipal households in 1968 was less than ฿3,000; ฿3,000 to ฿5,999, ฿6,000 to ฿8,999; ฿9,000 to ฿11,999, ฿12,000 to ฿14,999, ฿15,000 to ฿17,999, ฿18,000 to ฿23,999, ฿24,000 to ฿29,999, ฿30,000 to ฿35,999, ฿36,000 to ฿47,999, ฿48,000 to ฿59,999, ฿60,000 and over.

23 For the year 1963 there were 56 observations, 6 for Bangkok-Thonburi and 10 for each of the five other regions of Thailand. For each of those regions there were five income classes for towns and five for villages. For 1968 there were 230 observations, 23 for each region, 11 of which were for villages, 12 of which were for towns. Three of the 1968 observations we deleted for missing income data.

REFERENCES

1. Aaron H., "What is a Comprehensive Tax Base Anyway?" Nat. Tax Jour., Vol. XXII, (December, 1969).

2. Bishop, G. A., "The Tax Burden by Income Class, 1958," Nat. Tax Jour., Vol. XIV, (March, 1961).

3. Bridges, B., "Family Need Differences and Family Tax Burden Estimates," Nat. Tax Jour., Vol XXIV, (December, 1971).

4. Bucovetsky, M., and R. M. Bird, "Tax Reform in Canada: A Progress Report," Nat. Tax Jour., Vol. XXV, (March, 1972).

5. Conrad, A. H., "On the Calculation of Tax Burdens," Economica, (November, 1955).

6. Davies, D. G., "An Empirical Test of Sales-Tax Regressivity," J.P.E., LXVII, (February, 1959).

7. Davies, D. G., "Progressiveness of a Sales Tax in Relation to Various Income Bases," A.E.R., L, (December, 1960).

8. Davies, D. G., "Clothing Exemptions and Sales Tax Regressivity: Note," A.E.R., Vol. LXI, (March, 1971).

9. Gillespie, W. I., "The Incidence of Taxes and Public Expenditures in the Canadian Economy," in Studies of the Royal Commission on Taxation, Number 2, (Ottawa: Queen's Printer, 1966).

10. Ingram, James C., Economic Change in Thailand Since 1850, (Stanford: Stanford University Press, 1955).

11. Johnson, J. A., The Incidence of Government Revenues and Expenditures, (Ontario: Queen's Printer, 1966).

12. Kridakara, H.S.H. Prince Sithiporn, Some Aspects of Rice Farming in Siam, (Bangkok: Sivaphorn, 1970).

13. Lewchalermwong, Anan, Taxation and Tax Reform in Thailand, (Bangkok: Kurusapha Ladprao Press, 1972).

14. Maprasert, Lamduan, The Domestic Product of Thailand and Its Regional Distribution, Ph.D. Thesis, University of London (Bangkok: National Institute of Development Administration, 1967).

15. McLure, C. E., Jr., "The Inter-regional Incidence of General Regional Taxes," Public Finance, Vol. XXIV, (1969).

16. McLure, C. E., Jr., "The Incidence of Taxation in Columbia," Program of Development Studies, Paper No. 14, Rice University, Spring, 1971.

17. McLure, C. E., Jr., "The Incidence of Taxation in West Malaysia," Program of Development Studies, Paper No. 17, Rice University, Fall, 1971.

18. Musgrave, R. A., "Estimating the Distribution of the Tax Burden," Income Registribution and the Statistical Foundations of Economic Policy, Clark, C. and G. Stufel, editors, Income and Wealth: Series X (New Haven: International Association for Research in Income and Wealth, 1964).

19. Musgrave, R. A., The Theory of Public Finance, (New York: McGraw-Hill, 1959).

20. Prest, A. R., "Statistical Calculations of Tax Burdens," Economica, (August, 1955).

21. Riggs, F. W., Thailand: The Modernization of a Bureaucratic Polity (Honolulu: East West Center Press, 1967).

22. Roy, E. Van, "The Pursuit of Growth and Stability through Taxation of Agricultural Exports: Thailand's Experience," Public Finance, 3/1968.

23. Sahota, Gian S., "The Distribution of Tax Burdens among Different Education Classes in Brazil," Economic Development and Cultural Change, Vol. 19, No. 3, April, 1971.

24. Salkin, J. S., "Tax Progressivity in Thailand," Faculty of Economics Discussion Paper Series, No. 24, Thammasat University, Spring, 1973.

25. Schafer, J. M., "Sales Tax Regressivity Under Alternative Tax Bases and Income Concepts," Nat. Tax Jour., Vol. XXIV, (December, 1969).

26. Silcock, T. H., (ed.), Thailand: Social and Economic Studies in Development (Canberra: Australian National University Press, 1967).

27. Suwankiri, Trairong, The Structure of Protection and Import Substitution in Thailand, M.A. Thesis, University of the Philippines, 1970.

28. Thailand, NEDB, National Income Statistics of Thailand (Bangkok, 1970).

29. Thailand, NSO, Advanced Report of Household Expenditures Survey, 1963: Whole Kingdom (Bangkok, 1966).

30. Thailand, NSO, Advanced Report of Household Expenditures Survey, 1963: Bangkok-Thonburi (Bangkok, 1966).

31. Thailand, NSO, Advanced Report of Household Expenditures Survey, 1963: Central Region (Bangkok, 1966).

32. Thailand, NSO, Advanced Report of Household Expenditures Survey, 1963: Region (Bangkok, 1966).

33. Thailand, NSO, Advanced Report of Household Expenditures Survey, 1963: Northeastern Region (Bangkok, 1966).

34. Thailand, NSO, Advanced Report of Household Expenditures Survey, 1963: Northern Region (Bangkok, 1966).

35. Thailand, NSO, Advanced Report of Household Expenditures Survey, 1963: Southern Region (Bangkok, 1966).

36. Thailand, NSO, Socio-Economic Survey 1968-1969 (Bangkok, 1972).

37. Thailand, NSO, Official Yearbook: 1968 (Bangkok, 1968).

38. Thailand, NSO, Statistical Yearbook, Number 26 (Bangkok, 1965).

39. Thailand, NEDB, Third National Economic and Social Development Plan (Bangkok, 1971).

40. Thailand, NSO, 1960 Population Census (Bangkok, 1961).

41. Usher, D., "The Economics of the Rice Premium," Bank of Thailand, 1966 (mimeographed).