

INCOME INEQUALITY AND REGIONAL DISPARITY IN THAILAND, 1962-81

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I. INTRODUCTION

IT is still not conclusive whether Thailand experienced a decrease or increase in income inequality during the 1960s and 1970s. The aim of this paper is to present measurements of income distribution and regional income disparity in Thailand.

Until the 1970s studies on the size distribution of income in Southeast Asian countries lagged far behind other regions of the world, though the situation has now drastically changed [16]. In 1970 Oshima [17] analyzed the income distribution in Thailand as well as other East and Southeast Asia countries.¹ His results show that income inequality in Thailand is higher than in East Asian countries and equal to that of other Southeast Asian countries [17, p. 16] and that the sources of this greater inequality in Southeast Asian countries are traceable to: (1) the larger differential in the average family income between the rural and urban sector, (2) the larger share of the rural population, and (3) the wider dispersion in the size of the family incomes in the larger cities [17, p. 24].

In 1972 Kerdpibule [9] analyzed the change of income inequality in Thailand between 1962/63 and 1970, as based on the 1962/63 and 1970 *Household Expenditure Survey*.² His results were given for the rural and urban sectors separately; and he showed that in the rural sector income inequality increased slightly between the two periods while in the urban sector it decreased significantly. Since the level of income inequality in both sectors was about the same in 1962/63 in terms of the Gini coefficient (Table I), this change in inequality made income distribution in the rural sector more unequal than in the urban sector. However the higher level of inequality in the rural sector seems to be improbable consider-

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¹ A review of income distribution studies in Thailand is given in Charuma [4].

² A part of his work had already appeared in ECAFE [5].

TABLE 1
REVIEW OF THE GINI COEFFICIENTS OF PAST STUDIES

Literature	1962	1969	1970	1971-73	1975	1981
Oshima [18]	0.50					
Kerdpibule [9]						
Rural	0.4360		0.4430			
Urban	0.4478		0.3664			
Meesook [14]		0.4289				
Rural		0.3813				
Urban		0.4290				
Wattanavitukul [19]	0.414	0.429		0.499		
Rural	0.361	0.381		0.66		
Urban	0.405	0.429		0.433		
Krongkaew [10]	0.414	0.429			0.451	0.473
Rural	0.361	0.381			0.395	0.437
Urban	0.405	0.429			0.435	0.447
Present Study	0.4128	0.4263			0.4174	0.4410
Rural		0.3840			0.3915	0.4133
Urban		0.4393			0.4027	0.4275

ing the experiences in other countries and the results of later studies on Thailand.

Meesook [13] [14] is the first study which presented consistent results on income distribution in Thailand. After adjusting the income distribution data of the 1968/69 *Socio-Economic Survey* to estimate the total income data, she showed the Gini coefficients in 1968/69 to be 0.4289 for the whole kingdom, 0.4290 for the urban sector, and 0.3813 for the rural sector.

Wattanavitukul [19] added an analysis of the *Socio-Economic Survey* of 1971-73 to the results of Meesook [14] and Chantaworn [3] for 1962/63 and 1968/69 to determine the change over time of income inequality in Thailand. His results show that the Gini coefficient of total income increased rapidly, from 0.429 in 1968/69 to 0.499 in 1971-73. His result is in accord with Kuznets' hypothesis that at the early stage of economic development income inequality increases [8]. However the estimation for 1971-73 seems to be very problematic. As Mizoguchi [16] pointed out, the *Socio-Economic Survey* of 1971-73 employed a regional rotation system which means that different regions were surveyed at different times. Therefore the survey must be adjusted to estimate the distribution of income of the whole kingdom at a specific point in time. Wattanavitukul [19] did this by deflating using the regional price indices. But his results show that the adjustment is still not sufficient to draw any reliable conclusions.³

In contrast with Wattanavitukul [19], Meesook concluded "that economic growth has been accompanied by a reduction in regional and urban-rural disparities in household incomes and in the proportion of the poor population in the total. Moreover, to the extent that the reduction in disparities originates from direct

³ For this reason we do not take up the *Socio-Economic Survey* of 1971-73 in the following analysis.

improvements in the agricultural sector, then we have not witnessed any trade-off between economic growth and equity" [15, p. 70]. Her conclusion, however, refers only to the disparities between regions and sectors and not to the disparities within themselves. She noted this herself when she commented that "one would, however, have to know what has happened to the distribution of income within the agricultural and non-agricultural sectors themselves before drawing final conclusion on this issue" [15, p. 70].

Krongkaew [10] tried to answer this question by estimating the total inequality, both between and within region. He used the *Socio-Economic Survey* of 1975/76 and 1981 and estimated the Gini coefficients as 0.451 and 0.473 in 1975/76 and 1981, respectively. These values are higher than 0.414 for 1962/63 and 0.429 for 1968/69, which are cited from Meesook [14] and Wattanavitukul [19] and he concludes that "income distribution in Thailand had become more unequal as the country continued on its economic development path" [10, p. 331]. The problem of his methodology is that while he uses the distribution of total individual income to calculate the Gini coefficients for 1975/76 and 1981, the Gini coefficients for 1962/63 and 1968/69, which he cited for the comparison, are calculated from the distribution of total household income, not individual income. Since he did not mention the comparability between these data in detail, we cannot tell whether they are readily comparable or not. Moreover, there seems to be inconsistency in his results.

Our analysis focuses on income distribution and regional income disparities in Thailand. We use the distribution of household income, not of individual income. And we employ the same methodology as Meesook [15] regarding the definition of the urban and rural areas. In the *Household Expenditure Survey* of 1962/63 the sanitary districts were classified as urban while the *Socio-Economic Survey* of 1968/69 classified them as rural. There was no way to solve this discrepancy in definitions; thus we adopted both of the definitions and applied them to *Socio-Economic Survey* of 1975/76 and 1981. We therefore have two series of data for each of the rural and urban sectors. The regional disparities are analyzed by the decomposable inequality measures, such as the Theil index and the variance of income logarithm. We further examined the skewness of the Lorenz curve which reflects changes in the income share of the middle-income classes.

Our main conclusions are that from 1962/63 to 1975/76 the income inequality in Thailand remained stable, while between 1975/76 and 1981 it increased slightly. At the same time regional disparities decreased between 1968/69 and 1981. Thus both Meesook and Krongkaew are correct in the sense that during the 1970s income inequality increased while regional disparities narrowed. Another result of our study was a change in the skewness of the Lorenz curve reflecting an increase in the income share of the middle-income classes.

The organization of this paper is as follows. In Section II the data which were used in our analysis are examined and the methodology of the analysis is explained. Section III presents the results for income distribution and inequality while Section IV gives those for regional disparities. Section V discusses the skewness of the Lorenz curve. Section VI provides some concluding remarks.

II. DATA AND METHODOLOGY

This section examines the data used in our analysis and explains the methodology of the analysis.

A. Data

The data used in this paper are as follows: *Household Expenditure Survey (HES)* of 1962/63 and *Socio-Economic Survey (SES)* of 1968/69, 1975/76, and 1981. Hereafter these will be referred to as *HES* 1962, and *SES* 1969, 1975, and 1981. For *HES* 1962 we used the estimates given in Wattanavitukul [19], which were originally estimated in Chantaworn [3]. For *SES* 1969 we used the estimates in Meesook [14] and for *SES* 1975 and 1981 we used the data tapes.

Since the details regarding the concepts of these data are provided by Meesook [15] and National Statistical Office (NSO) [18], we have limited ourselves to defining the rural and urban areas, the regions and the income concepts, all which play an important part in the following analysis.

1. Rural and urban areas

Three categories are used when classifying rural and urban areas in Thailand; these are municipalities, sanitary districts, and villages.⁴ Rural and urban areas are defined differently in *HES* 1962 and *SES* 1969. The definitions are as follows:

	<i>HES</i> 1962	<i>SES</i> 1969
Rural areas	villages	villages + sanitary districts
Urban areas	sanitary districts + municipalities	municipalities
Overall areas	villages + sanitary districts + municipalities	

In *HES* 1962 rural areas were defined as villages and urban areas as municipalities and sanitary districts. On the other hand, in *SES* 1969, rural areas were defined as sanitary districts and villages while urban areas were defined only as municipalities and villages, the 1969 definition will make both urban and rural average incomes higher than will the 1962 definition.

Because there is no way to adjust these data for the rural and urban areas in 1962 and 1969 to make them comparable, we employed both of these definitions and applied them to *SES* 1975 and 1981.

The term "overall area" is used to imply both rural and urban area.

2. Region

In this study the whole kingdom is geographically divided into five regions: (i) Bangkok, (ii) Center, (iii) North, (iv) Northeast, and (v) South. In some cases the Central region is subdivided into the Eastern and the Central region.

⁴ See [15, p. 76] for the more details.

3. *Income concept*

Throughout this paper income is measured per household, not per capita household.

Total household income is composed of:

- (1) wages and salaries, tips, bonuses, etc.;
- (2) net profit from farming and individual non-farm enterprises;
- (3) property income such as land rent, royalties, interest, and dividends;
- (4) transfer payments received, such as assistance payments, pensions, scholarships, and grants;
- (5) income-in-kind
 - a. the value of goods and services received as part of pay,
 - b. home produced and consumed, or received free from other sources;
- (6) the rental value of owner-occupied dwellings; and
- (7) other money receipts, such as insurance proceeds, lottery winnings, and other windfall receipts.

We classified these items into three categories: (i) money income (1+2+3+4), (ii) total income (1+2+3+4+5+6+7), and (iii) wages and salaries (1+5.a). Category (iii) is available only for *SES* 1975 and 1981.

B. *Methodology*

1. *Decile distribution of income*

The distribution of income by household decile was estimated as follows. First the lognormal distribution was fitted to the lower income classes which compose the lower 80 per cent of households, and the Pareto distribution was fitted to the higher income classes which compose the upper 30 per cent of households. Next the boundary incomes for each decile were calculated using these two estimated distributions. Finally the mean income for each decile was calculated as the interval midpoint, except for the top decile where mean income was estimated from the Pareto distribution.⁵ The mean income of all decile groups combined became the average of the mean income of each decile.

2. *The Gini coefficient*

The Gini coefficient was estimated using two different methods. One was to calculate from the decile data directly. The other method was that introduced by Kakwani and Podder [8] where estimation is made using the original data, not the decile data. With the Kakwani and Podder method the skewness of the Lorenz curve can be measured [7]. According to Kakwani [7, pp. 382–89] the skewness of the Lorenz curve changes as a country develops, which is due to the fact that “as a country develops the share of the intermediate income group increases” [7, p. 382]. The measurement of the skewness is expressed as a ratio α/β where α and β are the estimated coefficients of a curve fitted to the Lorenz curve. The change in the skewness of the Lorenz curve mentioned above implies that the

⁵ See [1] for the lognormal distribution and [2, p. 31] for the Pareto distribution.

TABLE II
DISTRIBUTION OF INCOME BY HOUSEHOLD DECILE

Region	Year	Decile									
		Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top
A. Overall											
Bangkok	1969	1.37	3.29	4.36	5.45	6.65	8.06	9.85	12.35	15.50	33.12
	1975	1.55	3.68	4.83	5.98	7.24	8.72	10.57	13.13	16.03	28.27
	1981	1.30	3.15	4.26	5.41	6.70	8.25	10.23	13.04	16.69	30.97
Center & East	1969	1.47	3.50	4.57	5.63	6.80	8.16	9.86	12.21	15.48	32.11
	1975	1.58	3.74	4.86	5.97	7.19	8.60	10.36	12.77	15.97	28.96
	1981	1.42	3.40	4.50	5.61	6.85	8.30	10.13	12.69	16.84	30.26
Center	1962	2.80	3.03	4.62	5.48	6.57	8.78	10.05	11.28	15.41	31.96
	1975	1.49	3.56	4.68	5.82	7.06	8.52	10.35	12.90	16.06	29.56
	1981	1.39	3.34	4.45	5.57	6.83	8.31	10.19	12.83	16.88	30.23
East	1962	3.25	3.54	3.65	5.61	6.53	7.96	10.82	12.42	15.49	30.73
	1975	1.85	4.28	5.40	6.47	7.62	8.93	10.51	12.65	16.09	26.70
	1981	1.49	3.53	4.63	5.72	6.92	8.33	10.09	12.52	16.87	29.91
North	1962	4.78	5.17	5.32	5.42	5.50	5.72	9.32	10.43	17.35	30.98
	1969	1.86	4.23	5.21	6.14	7.11	8.19	9.48	11.19	14.73	31.85
	1975	1.52	3.61	4.70	5.79	6.97	8.35	10.08	12.45	16.18	30.35
Northeast	1981	1.34	3.23	4.29	5.37	6.56	7.97	9.76	12.26	16.58	32.64
	1962	5.34	5.75	5.92	6.03	6.12	6.12	6.24	9.29	15.16	34.00
	1969	1.76	4.09	5.17	6.22	7.33	8.61	10.16	12.26	15.58	28.83
South	1975	1.81	4.16	5.17	6.14	7.15	8.29	9.67	11.50	15.23	30.86
	1981	1.53	3.61	4.66	5.69	6.81	8.11	9.71	11.91	15.48	32.49
	1962	3.31	3.59	3.71	5.51	6.45	7.15	10.13	12.19	15.25	32.70
Whole kingdom	1969	1.76	4.03	5.03	5.98	6.98	8.11	9.48	11.30	15.11	32.22
	1975	1.40	3.35	4.42	5.50	6.69	8.09	9.85	12.31	15.81	32.59
	1981	1.42	3.37	4.43	5.50	6.66	8.03	9.75	12.14	15.75	32.94
Whole kingdom	1962	3.85	4.15	4.26	4.34	4.71	7.37	8.38	13.16	15.48	34.31
	1969	1.54	3.59	4.57	5.54	6.57	7.75	9.20	11.17	15.25	34.81
	1975	1.46	3.46	4.52	5.57	6.72	8.07	9.75	12.06	16.15	32.25
Whole kingdom	1981	1.31	3.14	4.18	5.23	6.40	7.78	9.54	11.99	16.31	34.13
	B. Rural area										
	Bangkok	1969	1.64	3.81	4.83	5.83	6.88	8.09	9.57	11.57	15.13
1975		1.57	3.73	4.90	6.08	7.38	8.90	10.80	13.45	16.17	27.01
1981		1.48	3.56	4.75	5.96	7.31	8.90	10.93	13.77	16.85	26.47
Center	1969	1.52	3.60	4.68	5.75	6.92	8.28	9.97	12.30	15.48	31.49
	1975	1.62	3.83	4.96	6.09	7.32	8.75	10.52	12.96	16.00	27.94
	1981	1.42	3.39	4.47	5.56	6.76	8.17	9.94	12.41	16.55	31.33
North	1969	1.98	4.50	5.52	6.49	7.49	8.62	9.96	11.72	14.99	28.73
	1975	1.59	3.74	4.84	5.94	7.12	8.49	10.20	12.54	15.96	29.57
	1981	1.41	3.38	4.47	5.57	6.78	8.20	10.00	12.50	16.42	31.27
Northeast	1969	1.86	4.31	5.43	6.52	7.67	8.98	10.58	12.73	15.83	26.09
	1975	1.89	4.32	5.35	6.33	7.35	8.50	9.89	11.73	15.20	29.45
	1981	1.59	3.73	4.79	5.84	6.97	8.27	9.89	12.09	15.44	31.40
South	1969	2.05	4.68	5.77	6.81	7.90	9.12	10.58	12.51	15.41	25.17
	1975	1.52	3.61	4.71	5.81	7.02	8.43	10.19	12.62	15.64	30.45
	1981	1.50	3.56	4.63	5.71	6.88	8.25	9.95	12.30	15.80	31.43

TABLE II (Continued)

Region	Year	Decile									
		Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top
Whole kingdom	1969	1.74	4.02	5.07	6.08	7.16	8.39	9.88	11.88	15.42	30.36
	1975	1.61	3.77	4.86	5.93	7.09	8.42	10.08	12.33	16.00	29.91
	1981	1.46	3.47	4.54	5.61	6.79	8.17	9.89	12.28	16.22	31.59
C. Urban area											
Bangkok	1969	1.35	3.26	4.35	5.47	6.71	8.18	10.05	12.67	15.61	32.34
	1975	1.60	3.80	4.94	6.09	7.33	8.78	10.59	13.08	15.93	27.87
	1981	1.34	3.24	4.36	5.51	6.80	8.33	10.30	13.07	16.57	30.48
Center	1969	1.55	3.63	4.64	5.62	6.69	7.91	9.41	11.45	14.95	34.16
	1975	1.41	3.39	4.50	5.63	6.88	8.36	10.23	12.84	16.02	30.72
	1981	1.62	3.85	5.02	6.18	7.45	8.93	10.77	13.31	16.67	26.20
North	1969	1.26	2.99	3.92	4.86	5.88	7.08	8.59	10.68	14.17	40.56
	1975	1.27	3.08	4.11	5.17	6.35	7.76	9.54	12.05	14.75	35.92
	1981	1.35	3.24	4.31	5.39	6.59	8.01	9.81	12.32	16.22	32.77
Northeast	1969	1.54	3.55	4.45	5.31	6.22	7.25	8.51	10.18	14.42	38.56
	1975	1.44	3.42	4.48	5.54	6.69	8.05	9.74	12.08	16.24	32.32
	1981	1.24	3.01	4.05	5.12	6.31	7.74	9.55	12.12	16.09	34.75
South	1969	1.59	3.68	4.63	5.54	6.51	7.61	8.95	10.75	15.08	35.65
	1975	1.37	3.30	4.38	5.48	6.70	8.14	9.96	12.51	16.07	32.09
	1981	1.37	3.26	4.30	5.34	6.50	7.85	9.55	11.92	15.41	34.51
Whole	1969	1.36	3.25	4.27	5.30	6.44	7.77	9.44	11.76	15.27	35.14
	1975	1.44	3.45	4.58	5.72	6.98	8.46	10.34	12.97	15.99	30.07
	1981	1.29	3.13	4.23	5.35	6.62	8.12	10.05	12.79	16.53	31.88

Sources: Calculated from Meesook [14] for 1969 and *Socio-Economic Survey* data tapes for 1975 and 1981. For 1962 [19].

Note: Income concept is the total income.

smaller the ratio α/β , the more developed the economy is, given that the income share of the middle-income classes increases in the course of economic development.

3. *Decomposition of inequality index*

The decomposable inequality indices used in this paper are the Theil index and the variance of income logarithm. Both of these indices are decomposed into two component. One is a weighted average of the inequalities within a sub-group and the other is the inequality between sub-groups. The former is called the "within-group component" and the latter is called the "between-group component" of inequality.

III. INCOME DISTRIBUTION

The income concept we used for our study was the total household income. The distributions of income by household decile as shown in our study are given in Table II. The most impressive change from 1962 to 1981 is the significant decrease in income shares of both the bottom and the top deciles.

TABLE III
GINI COEFFICIENT BY REGION AND AREA

Region	Decile Method				Kakwani's Method			
	1962	1969	1975	1981	1962	1969	1975	1981
A. Overall area								
Bangkok	—	0.4257	0.3837	0.4217	—	0.4231	0.3833	0.4146
Center & East	—	0.4137	0.3861	0.4096	—	0.4130	0.3884	0.4205
Center	0.3983	—	0.3963	0.4115	—	—	0.3975	0.4212
East	0.3919	—	0.3515	0.4032	—	—	0.3590	0.4126
North	0.3586	0.3844	0.4004	0.4296	—	0.3861	0.4143	0.4360
Northeast	0.3412	0.3726	0.3823	0.4113	—	0.3735	0.3988	0.4194
South	0.4031	0.3947	0.4220	0.4230	—	0.4015	0.4333	0.4400
Whole kingdom	0.4128	0.4263	0.4174	0.4410	—	0.4342	0.4306	0.4516
B. Rural area								
1. Villages and sanitary districts								
Bangkok	—	0.4043	0.3745	0.3795	—	0.3999	0.3717	0.3791
Center & East	—	0.4050	0.3769	0.4155	—	0.4028	0.3782	0.4258
North	—	0.3568	0.3900	0.4148	—	0.3571	0.3920	0.4217
Northeast	—	0.3487	0.3680	0.4002	—	0.3485	0.3816	0.4063
South	—	0.3294	0.3987	0.4075	—	0.3304	0.4095	0.4199
Whole kingdom	—	0.3840	0.3915	0.4133	—	0.3873	0.4030	0.4194
2. Villages								
Bangkok	—	—	0.3839	0.3841	—	—	0.3863	0.3848
Center & East	—	—	0.3651	0.4061	—	—	0.3659	0.4150
Center	0.375	—	0.3741	0.4063	—	—	0.3743	0.4155
East	0.361	—	0.3506	0.4014	—	—	0.3512	0.4062
North	0.308	—	0.3852	0.4105	—	—	0.3839	0.4170
Northeast	0.264	—	0.3456	0.3948	—	—	0.3545	0.4038
South	0.370	—	0.3994	0.4077	—	—	0.4108	0.4195
Whole kingdom	0.361	—	0.3783	0.4078	—	—	0.3874	0.4160
C. Urban area								
1. Municipalities								
Bangkok	—	0.4222	0.3769	0.4150	—	0.4185	0.3777	0.4046
Center & East	—	0.4194	0.4091	0.3677	—	0.4208	0.4149	0.3684
North	—	0.4782	0.4476	0.4284	—	0.4784	0.4781	0.4335
Northeast	—	0.4486	0.4196	0.4482	—	0.4592	0.4299	0.4589
South	—	0.4282	0.4213	0.4354	—	0.4398	0.4248	0.4518
Whole kingdom	—	0.4393	0.4027	0.4275	—	0.4433	0.4078	0.4267
2. Municipalities and sanitary districts								
Bangkok	—	—	0.3798	0.4124	—	—	0.3802	0.4021
Center & East	—	—	0.4111	0.4046	—	—	0.4142	0.4094
Center	0.384	—	0.4150	0.4083	—	—	0.4199	0.4142
East	0.403	—	0.3749	0.4032	—	—	0.3871	0.3996
North	0.460	—	0.4287	0.4418	—	—	0.4479	0.4514
Northeast	0.422	—	0.4469	0.4238	—	—	0.4575	0.4313
South	0.360	—	0.4116	0.4263	—	—	0.4238	0.4416
Whole kingdom	0.405	—	0.4187	0.4369	—	—	0.4232	0.4424

Sources: Calculated from [14] for 1969 and *Socio-Economic Survey* data tapes for 1975 and 1981. For 1962, [19] though for overall area we recalculated.

Note: Income concept is the total income.

The values for 1962 are cited from Wattanavitukul [19] and thus the change after 1962 may include the bias due to the different method of estimation. However, this change is consistent with the idea discussed above about the skewness of the Lorenz curve. As noted the income share of middle-income classes increases as an economy develops, and this is reflected in the skewness of the Lorenz curve. The data in Table II is consistent with this; the income share of the top and the bottom decreased, which means the income share of the intermediate group increased. This result is also confirmed in Section V.

For the whole kingdom in 1981 the income shares of the bottom and top decile groups are 1.31 per cent and 34.13 per cent respectively. This shows a more equal distribution of income than Malaysia, for example, where in 1979 the shares are 0.9 per cent and 36.8 per cent respectively [6, Table II].

The regional difference in decile distribution seems to be very small. For example, excluding Bangkok the income share of the bottom decile ranges from 1.47 to 1.86 in 1969, from 1.40 to 1.85 in 1975, and from 1.30 to 1.53 in 1981. The difference between areas is that for the lower income classes their income share is larger in the rural areas and smaller in the urban areas than in the overall areas but that for the higher income classes the opposite is true with the exceptions of the urban areas of the whole kingdom and some regions.

The above results are confirmed by the inequality index. Table III sets forth the Gini coefficients estimated both from the decile data and by means of the Kakwani and Podder method. Table IV presents the Theil index and the variance of income logarithm. The estimation from the decile data method shows lower Gini coefficients than does the Kakwani and Podder method. Thus the decile method seems to have a downward bias of income inequality. We have also presented Chantaworn's 1962 data, which was also cited by Wattanavitukul, in the decile method column, although we do not know what method he used. We have done this however because we recalculated the overall data using the decile method. Thus only for the rural and urban areas the trend of income inequality may have a bias toward equality unless the Gini coefficients in 1962 are more biased toward equality than those in 1975 and 1981. Hereafter, if not mentioned otherwise, we refer to the decile method when discussing the Gini coefficient.

The Gini coefficient for the whole kingdom was 0.4128, 0.4263, 0.4174, and 0.4410 in 1962, 1969, 1975, and 1981 respectively. This means that between 1962 and 1969 income inequality slightly increased, then decreased between 1969 and 1975 to about the same level as in 1962; however it increased again between 1975 and 1981, rising to a level higher than in 1969. Thus it can be said that between 1962 and 1975 the income inequality remained stable but that it increased between 1975 and 1981. For comparison Table IV shows the Theil index and the variance of income logarithm. The Theil index for the whole kingdom was 0.3082, 0.3220, 0.2976, and 0.3346 for the respective years 1962, 1969, 1975, and 1981. This shows the same pattern as the Gini coefficient though the level of inequality in 1975 was lower than in 1962. Using the variance of income logarithm, the data for the same four years was 0.4801, 0.6454, 0.6639, and 0.7445. This indicates an increase in income inequality between 1969 and 1975 when compared with the Gini coefficient and the Theil index. But as this increase

TABLE IV
THEIL INDEX AND VARIANCE OF INCOME LOGARITHM

Region	Theil Index				Variance of Income Logarithm			
	1962	1969	1975	1981	1962	1969	1975	1981
A. Overall area								
Bangkok	—	0.3115	0.2442	0.2973	—	0.7014	0.6033	0.7313
Center & East	—	0.2938	0.2491	0.2803	—	0.6539	0.5949	0.6727
Center	0.2728	—	0.2624	0.2824	0.5035	—	0.6328	0.6859
East	0.2597	—	0.2040	0.2716	0.4782	—	0.4930	0.6434
North	0.2429	0.2614	0.2700	0.3137	0.3552	0.5212	0.6263	0.7192
Northeast	0.2560	0.2344	0.2537	0.2920	0.3167	0.5329	0.5294	0.6322
South	0.2821	0.2735	0.3044	0.3074	0.4821	0.5553	0.6887	0.6853
Whole kingdom	0.3082	0.3220	0.2976	0.3346	0.4801	0.6454	0.6639	0.7445
B. Rural area								
1. Villages and sanitary districts								
Bangkok	—	0.2855	0.2306	0.2349	—	0.5938	0.5896	0.6232
Center & East	—	0.2802	0.2356	0.2913	—	0.6296	0.5750	0.6772
North	—	0.2188	0.2555	0.2902	—	0.4698	0.5970	0.6777
Northeast	—	0.2010	0.2327	0.2746	—	0.4875	0.4993	0.6055
South	—	0.1800	0.2686	0.2826	—	0.4308	0.6253	0.6400
Whole kingdom	—	0.2528	0.2585	0.2899	—	0.5494	0.5928	0.6608
2. Villages								
Bangkok	—	—	0.2508	0.2412	—	—	0.5781	0.6341
Center & East	—	—	0.2204	0.2765	—	—	0.5449	0.6557
Center	—	—	0.2319	0.2745	0.428	—	0.5769	0.6733
East	—	—	0.2029	0.2769	0.404	—	0.4901	0.6037
North	—	—	0.2494	0.2831	0.267	—	0.5813	0.6673
Northeast	—	—	0.2019	0.2675	0.207	—	0.4533	0.5895
South	—	—	0.2697	0.2835	0.394	—	0.6345	0.6382
Whole kingdom	—	—	0.2401	0.2823	0.353	—	0.5584	0.6440
C. Urban area								
1. Municipalities								
Bangkok	—	0.3036	0.2355	0.2875	—	0.7058	0.5797	0.7079
Center & East	—	0.3104	0.2815	0.2210	—	0.6340	0.6722	0.5665
North	—	0.4218	0.3528	0.3127	—	0.7941	0.7589	0.7148
Northeast	—	0.3734	0.3005	0.3466	—	0.6661	0.6726	0.7767
South	—	0.3298	0.3014	0.3300	—	0.6314	0.6984	0.7130
Whole kingdom	—	0.3383	0.2717	0.3079	—	0.7178	0.6564	0.7385
2. Municipalities and sanitary districts								
Bangkok	—	—	0.2382	0.2831	—	—	0.5999	0.7042
Center & East	—	—	0.2825	0.2710	—	—	0.6866	0.6732
Center	—	—	0.2871	0.2776	0.559	—	0.7103	0.6776
East	—	—	0.2436	0.2688	0.637	—	0.5106	0.6749
North	—	—	0.3126	0.3341	0.726	—	0.7310	0.7593
Northeast	—	—	0.3468	0.3061	0.692	—	0.7562	0.6957
South	—	—	0.2898	0.3131	0.508	—	0.6390	0.6933
Whole kingdom	—	—	0.2942	0.3235	0.628	—	0.7092	0.7623

Sources: Calculated from [14] for 1969 and *Socio-Economic Survey* data tapes for 1975 and 1981. For 1962, [19] though for overall area we recalculated.

Notes: Income concept is the total income.

TABLE V
DISTRIBUTION OF HOUSEHOLDS BY AREA

Area	1962	1969	1975	1981
Overall area	100.0	100.0	100.0	100.0
Rural area				
Sanitary districts and villages	—	89.1	86.8	86.7
Villages	81.0	—	73.5	72.6
Urban area				
Municipalities	—	10.9	13.2	13.3
Municipalities and sanitary districts	19.0	—	26.5	27.4

Sources: [13] for 1962 and 1969, *Socio-Economic Survey* data tape for 1975, and National Statistical Office, *Report for the 1981 Socio-economic Survey: Whole Kingdom* (Bangkok, n.d.) for 1981.

was only slight, it can be concluded from these three inequality indices that income inequality was largely stable until 1975 but increased thereafter.

Krongkaew [10] showed that the Gini coefficient increased rapidly from 1962 to 1981, the data being 0.414, 0.429, 0.451, and 0.473 for 1962, 1969, 1975, and 1981. The estimates for 1975 and 1981 are higher by 0.03 than ours, which may be partly due to the differences in the income concept and the method of estimation. However Krongkaew's result is consistent with ours in that income inequality increased rapidly only during the latter half of the 1970s.

The comparative study of the 1970s done by Oshima still holds true [17]. The level of income inequality in Thailand was higher than in East Asian countries where Gini coefficients range from 0.3 to 0.4 (see [16]). But Thailand showed lower income inequality compared to other Southeast Asian countries where Gini coefficients were about 0.5.

Within rural and urban area of the kingdom as a whole there was an increasing trend in income inequality. This pattern held true except in the case where the urban area was defined as consisting only of municipalities. In this case the data indicate a decrease in income inequality between 1969 and 1975. These changes can be seen by the all indices. The data also show that the level of inequality was lower in the rural area, regardless of how defined, than in the overall area. For the urban areas in each region the inequality was about the same as or higher than in the overall area but for the whole kingdom in 1975 and 1981 it is lower than in the overall area.

IV. REGIONAL DISPARITY

The distribution of households by year and area is shown in Table V. Most of the households live in the rural areas, about 90 per cent if the rural area is defined as sanitary districts and villages and about 80 per cent if defined only as village. The tendency has been for the share of rural households to decline and for those in urban areas to increase.

TABLE VI
MEAN INCOME AT CONSTANT PRICES

Region	Mean Income (Baht) ^a				Indices (1975=100)			
	1962	1969	1975	1981	1962	1969	1975	1981
Whole kingdom	1,152.9	1,822.4	1,856.6	2,001.9	62.1	98.2	100.0	107.8
Rural area								
Sanitary district and villages	—	1,542.9	1,601.2	1,663.9	—	96.4	100.0	103.9
Villages	869.6	—	1,478.5	1,580.5	58.8	—	100.0	106.9
Urban area								
Municipalities	—	4,210.4	3,629.1	3,475.1	—	116.0	100.0	95.8
Municipalities and sanitary districts	2,361.0	—	2,970.1	2,908.4	79.5	—	100.0	97.9

Sources: Calculated from Table VIII.

Notes: Income concept is the total income.

^a At 1975 prices.

TABLE VII
SHARE OF MONEY INCOME AND WAGES AND SALARIES

Region	Money Income				Wages and Salaries	
	1962	1969	1975	1981	1975	1981
Bangkok	— ^a	92.8	87.9	78.5	49.9	45.1
Center	81.3	85.1	77.8	74.9	26.9	23.7
North	83.5	61.4	68.8	70.7	24.0	20.3
Northeast	94.5	75.2	59.7	62.0	18.7	17.9
South	84.2	78.8	76.7	74.3	32.6	23.6
Whole kingdom	89.6	78.6	73.1	71.1	30.0	24.3

Sources: Calculated from [19] for 1962, [14] for 1969 and *Socio-Economic Survey* data tapes for 1975 and 1981.

^a The value for Bangkok 1962 exceeds 100 which means the value in [19] is not correct.

The change in the mean household income at constant prices is shown in Table VI where the deflator is the consumer price index for the whole kingdom. With income equal to 100 in 1975, the mean income for the overall area increased from 62.1 in 1962 to 107.8 in 1981. For the rural area, when defined as villages only, it increased at about the same rate as for the overall area. But for the urban area the increase was very small, and even decreased between 1969 and 1981. The reason why the increase in the overall area is higher than in either the rural or urban areas is because of the shift in households from the rural to the urban areas where the mean income is more than twice as high as in the rural areas. This increased the overall mean income much faster than within either area. The decline in urban income is a surprising result. This

TABLE VIII
MEAN INCOME BY REGION AND AREA

Region	Mean Income (Baht)				Indices (Whole Kingdom=100)			
	1962	1969	1975	1981	1962	1969	1975	1981
A. Overall area								
Bangkok	1,509.0	2,746.4	3,535.0	5,934.8	253.7	249.9	190.4	172.3
Center	780.1	1,409.6	2,211.9	3,878.1	131.1	128.3	119.1	112.6
North	438.7	812.6	1,460.2	3,018.3	73.7	73.9	78.6	87.6
Northeast	318.1	916.9	1,452.6	2,637.2	53.5	83.4	78.2	76.5
South	718.2	929.9	1,729.6	3,362.4	120.7	84.6	93.2	97.6
Whole kingdom	594.9	1,098.9	1,856.6	3,445.2	100.0	100.0	100.0	100.0
B. Rural area								
1. Villages and sanitary districts								
Bangkok	—	2,031.0	2,923.8	4,138.7	—	218.3	182.6	144.5
Center	—	1,327.3	2,115.2	3,599.3	—	142.7	132.1	125.7
North	—	752.0	1,370.4	2,767.5	—	80.8	85.6	96.6
Northeast	—	848.9	1,375.6	2,506.1	—	91.3	85.9	87.5
South	—	758.2	1,522.9	3,002.0	—	81.5	95.1	104.8
Whole kingdom	—	930.3	1,601.2	2,863.5	—	100.0	100.0	100.0
2. Villages								
Bangkok	—	—	2,806.0	3,967.0	—	—	189.8	145.8
Center	718.3	—	2,000.5	3,430.9	160.1	—	135.3	126.1
North	377.8	—	1,313.3	2,664.1	84.2	—	88.8	97.9
Northeast	249.0	—	1,280.4	2,395.4	55.5	—	86.6	88.1
South	618.3	—	1,489.9	2,921.1	137.8	—	100.8	107.4
Whole kingdom	448.7	—	1,478.5	2,720.1	100.0	—	100.0	100.0
C. Urban area								
1. Municipalities								
Bangkok	—	2,983.3	3,980.0	6,906.2	—	117.5	109.7	115.5
Center	—	2,247.3	3,510.2	4,997.0	—	88.5	96.7	83.6
North	—	2,600.4	3,243.4	5,350.5	—	102.4	89.4	89.5
Northeast	—	1,980.5	3,079.4	4,649.8	—	78.0	84.9	77.7
South	—	2,092.6	3,151.5	5,043.0	—	82.4	86.8	84.3
Whole kingdom	—	2,538.9	3,629.1	5,980.7	—	100.0	100.0	100.0
2. Municipalities and sanitary districts								
Bangkok	1,509.0	—	3,667.0	6,711.3	123.9	—	123.5	134.1
Center	1,089.8	—	2,900.7	4,433.4	89.5	—	97.7	88.6
North	833.0	—	2,279.3	4,121.2	68.4	—	76.7	82.3
Northeast	1,089.0	—	2,560.7	3,733.1	89.4	—	86.2	74.6
South	1,205.0	—	2,538.0	4,520.1	98.9	—	85.5	90.3
Whole kingdom	1,218.3	—	2,970.1	5,005.4	100.0	—	100.0	100.0

Sources: Calculated from [14] for 1969 and *Socio-Economic Survey* data tapes for 1975 and 1981. For 1962, [19].

Note: Income concept is the total income.

may be due partly to the change in the classification of area (see [15]) and partly to the fact that we might have underestimated the total income in 1962 and 1969. Table VII shows the share of money income and wages and salaries in the total income. The percentage shows a declining trend in all regions. Since the

share of money income can be considered to increase as an economy develops, this declining share may imply a widening in the definition of total income or the insufficient adjustment for total income by Chantaworn and Meesook. Though there still remains a difficulty in trying to make comparisons over time, the comparison between regions can partly alleviate this difficulty.

The mean income by region and area is shown in Table VIII. For the overall area the regional disparity in mean income has been decreasing over time. When the mean income of the whole kingdom is equal to 100, the regional incomes range from 53.5 to 253.7 in 1962, from 73.9 to 249.9 in 1969, from 78.2 to 190.4 in 1975, and from 76.5 to 172.3 in 1981. The ratio of the highest regional income to the lowest decreased from 4.7 in 1962 to 2.2 in 1981. Thus we were able to confirm Meesook's findings that regional disparity has been decreasing. Even within the rural and urban areas, regional disparity is decreasing, though the regional disparity within the urban areas was already small by 1962. We can also notice a decreasing disparity between the rural and urban areas. The ratio of urban to rural income decreased from about three in the 1960s to two in the 1970s, regardless of which definitions of the rural and urban is used.

The finding above can also be confirmed by the decomposable inequality indices, the Theil index and the variance of income logarithm. The total inequality is decomposed into the "within-group component" and the "between-group component." In this paper "group" is defined as region and area. The "contribution" of these two components is defined as the percentage of the component in the total inequality. Table IX is the result by the income concept. Since Wattanavitukul [19] has already provided the decomposition of variance of money income logarithm, we first made a comparison with his results. For 1969 Wattanavitukul's result, which was originally provided by Chantaworn, is consistent with ours. His regional component is 0.2400 with a contribution of 24.0 per cent; ours is 0.2448 and 21.66 per cent. According to Wattanavitukul, both the component and the contribution of the between-region inequality increased from 1962 to 1969, the values for 1962 are 0.1832 and 19.2 per cent, respectively. From 1969 to 1975 the between-region component increased while its contribution decreased (Table IX). This is due to the fact that total inequality increased more rapidly than the within-region component. But from 1975 to 1981 both the component and the contribution decreased which means the regional disparity decreased not only relatively but also absolutely. This can be confirmed by the Theil index. The only difference is that the between-region component decreased slightly between 1969 and 1975. When comparing the regional disparity with the change in income inequality (see the Gini coefficient given in Table III), the data show that when income inequality was stable (1962-75) the regional disparity of money income was also stable and when income inequality increased (1975-81) the regional disparity decreased. This same pattern remained true for total income disparity as well, and our conclusions here are the same as with the relationship between income inequality and regional disparity, although the period is slightly different depending upon the index of decomposition.

By comparing the results of decomposition derived from the income concepts,

TABLE IX
DECOMPOSITION OF INEQUALITY BY INCOME CONCEPT

Income	Year	Theil Index						Variance of Income Logarithm					
		Component			Contribution (%)			Component			Contribution (%)		
		Total	Within	Between	Within	Between	Total	Within	Between	Within	Between	Total	Within
Money	1969	0.5422	0.4165	0.1257	76.82	23.18	1.1302	0.8854	0.2448	78.34	21.66		
	1975	0.5280	0.4231	0.1049	80.14	19.86	1.4549	1.1756	0.2794	80.80	19.20		
	1981	0.5408	0.4663	0.0746	86.22	13.78	1.3983	1.2109	0.1875	86.59	13.41		
Total	1969	0.3674	0.2953	0.0721	80.38	19.62	0.6563	0.5681	0.0882	86.57	13.43		
	1975	0.3241	0.2702	0.0540	83.35	16.65	0.6854	0.5973	0.0881	87.14	12.86		
	1981	0.3495	0.3041	0.0454	87.02	12.98	0.7478	0.6777	0.0701	90.62	9.38		
Wages and salaries	1975	0.9887	0.7486	0.2402	75.71	24.29	4.6014	3.9019	0.6996	84.80	15.20		
	1981	1.0592	0.8366	0.2226	78.98	21.02	4.7950	3.9332	0.8618	82.03	17.97		

Sources: Calculated from [14] for 1969 and *Socio-Economic Survey* data tapes for 1975 and 1981.

Notes: 1. Income concept is the total income.

2. Decomposition is between region.

3. Total value is not necessarily equal to the figures in Table IV because total is an aggregate of area and region in this table.

TABLE X
DECOMPOSITION OF INEQUALITY BETWEEN REGIONS

Area	Year	Theil Index						Variance of Income Logarithm					
		Component			Contribution (%)			Component			Contribution (%)		
		Total	Within	Between	Within	Between	Total	Within	Between	Within	Between	Total	Within
Rural	1969	0.2676	0.2314	0.0361	86.50	13.50	0.5540	0.5089	0.0451	91.86	8.14		
	1975	0.2721	0.2423	0.0298	89.03	10.97	0.6088	0.5597	0.0491	91.94	8.06		
	1981	0.2904	0.2785	0.0120	95.88	4.12	0.6588	0.6380	0.0208	96.84	3.16		
Urban	1969	0.3436	0.3315	0.0122	96.46	3.54	0.7204	0.6938	0.0266	96.31	3.69		
	1975	0.2715	0.2657	0.0058	97.86	2.14	0.6561	0.6351	0.0210	96.80	3.20		
	1981	0.3075	0.2944	0.0131	95.73	4.27	0.7318	0.7021	0.0297	95.94	4.06		
Whole kingdom	1969	0.3674	0.2953	0.0721	80.38	19.62	0.6563	0.5681	0.0882	86.57	13.43		
	1975	0.3241	0.2702	0.0540	83.35	16.65	0.6854	0.5973	0.0881	87.14	12.86		
	1981	0.3495	0.3041	0.0454	87.02	12.98	0.7478	0.6777	0.0701	90.62	9.38		

Sources: Calculated from [14] for 1969 and *Socio-Economic Survey* data tapes for 1975 and 1981.

Note: Income concept is the total income.

we find that the regional disparity of wages and salaries is the largest and that the regional disparity of total income is the smallest. This means that money income, excluding wages and salaries, and non-money income are equalizing factors in the regional disparity.

The decomposition between regions by area is shown in Table X. We have already discussed results for the whole kingdom. For the rural areas a pattern generally like that of the overall area can be seen. This shows that between 1969 and 1975 the disparity between regions was stable, but between 1975 and 1981 it decreased. However, the level of regional disparity is lower in the rural areas than in the overall area. For the urban areas the regional disparity is much smaller than for the rural areas. The between-region component is only about 0.01 and its contribution is less than 5 per cent. Thus in the urban areas regional disparity is small and perhaps can be regarded as negligible.

The decomposition between the rural and urban areas within regions is shown in Table XI. As we have already mentioned in the analysis of the mean income, the disparity between the rural and urban areas in the whole kingdom has been decreasing. In terms of the Theil index the contribution decreased from 21.95 per cent in 1969 to 15.34 per cent in 1981. The between-area components for regions are also decreasing except for Bangkok and the Central region.

Though differences exist according to the inequality indices, we may conclude that regional disparity decreased during the 1970s.

V. THE SKEWNESS OF THE LORENZ CURVE

Kakwani [7] showed that the skewness of the Lorenz curve changes as economic development proceeds to reflect the increasing share of the middle-income classes. He measured the skewness by a ratio α/β where the α and β are the estimated coefficients of a curve fitted to the Lorenz curve. This ratio is considered to decrease as a country develops or, more strictly, as the income share of the middle-income classes increases. His result is cited in Table XII. From this table it is very clear that the ratio for developed countries is greater than unity and that of the ratio for the listed Asian countries is less than unity. Our result of the skewness of the Lorenz curve for Thailand is shown in Table XIII. The ratio of the whole kingdom for the overall area shows a decreasing trend: 1.1137 in 1969, 1.0474 in 1975, and 1.0652 in 1981. Thus the whole kingdom is undergoing a change in the skewness of the Lorenz curve toward greater developed, and the figures for Sri Lanka, Hong Kong, the Republic of Korea, and Taiwan, given in Table XII, are comparable with the figures provided for Thailand in this study. We have further results for Malaysia in 1957 and 1970 whose values are 1.0953 and 1.0142 respectively [12]. Thailand in 1969 was at the position between Hong Kong and Malaysia in 1957 and between Taiwan and Malaysia in 1970 in the latter half of 1970s.

This declining trend can be seen within the rural and urban areas and even within each region. However the between-region comparisons do not show a consistent result; the more developed regions do not necessarily have the smaller ratio.

TABLE XI
DECOMPOSITION OF INEQUALITY BETWEEN AREAS

Region	Year	Theil Index						Variance of Income Logarithm					
		Component			Contribution (%)			Component			Contribution (%)		
		Total	Within	Between	Within	Between	Total	Within	Between	Within	Between		
Bangkok	1969	0.3121	0.3004	0.0117	96.25	3.75	0.7009	0.6788	0.0221	96.85	3.15		
	1975	0.2446	0.2340	0.0106	95.65	4.35	0.6060	0.5835	0.0225	96.28	3.72		
	1981	0.3009	0.2748	0.0261	91.34	8.66	0.7271	0.6785	0.0486	93.31	6.69		
Center	1969	0.2978	0.2841	0.0137	95.40	4.60	0.6492	0.6299	0.0192	97.04	2.96		
	1975	0.2492	0.2398	0.0093	96.26	3.74	0.5920	0.5806	0.0114	98.08	1.92		
	1981	0.2825	0.2724	0.0100	96.44	3.56	0.6796	0.6540	0.0256	96.24	3.76		
North	1969	0.3420	0.2554	0.0866	74.69	25.31	0.5515	0.4892	0.0623	88.71	11.29		
	1975	0.3074	0.2697	0.0377	87.75	12.25	0.6451	0.6079	0.0372	94.23	5.77		
	1981	0.3188	0.2938	0.0250	92.15	7.85	0.7141	0.6810	0.0331	95.36	4.64		
Northeast	1969	0.2350	0.2145	0.0206	91.25	8.75	0.5109	0.4938	0.0172	96.64	3.36		
	1975	0.2636	0.2396	0.0240	90.90	9.10	0.5318	0.5076	0.0242	95.46	4.54		
	1981	0.2974	0.2821	0.0153	94.86	5.14	0.6318	0.6156	0.0161	97.44	2.56		
South	1969	0.3098	0.2221	0.0878	71.68	28.32	0.5410	0.4556	0.0854	84.22	15.78		
	1975	0.3159	0.2760	0.0399	87.36	12.64	0.6858	0.6343	0.0515	92.49	7.51		
	1981	0.3184	0.2948	0.0236	92.60	7.40	0.6846	0.6525	0.0321	95.31	4.69		
Whole kingdom	1969	0.3674	0.2868	0.0806	78.05	21.85	0.6563	0.5721	0.0842	87.17	12.83		
	1975	0.3241	0.2720	0.0522	83.91	16.09	0.6854	0.6149	0.0706	89.70	10.30		
	1981	0.3495	0.2958	0.0536	84.66	15.34	0.7478	0.6720	0.0758	89.86	10.14		

Sources: Calculated from [14] for 1969 and *Socio-Economic Survey* data tapes for 1975 and 1981.

Note: Income concept is the total income.

TABLE XII
THE SKEWNESS OF THE LORENZ CURVE

Country	Year	α/β	Country	Year	α/β
Asia			Developed Countries		
Indonesia	1971	1.725	Netherlands	1967	0.987
India	1964/65	1.352	France	1962	0.939
Pakistan	1970/71	1.152	Australia	1967/68	0.933
Malaysia	1970	1.123	Denmark	1963	0.932
Sri Lanka	1969/70	1.121	West Germany	1969	0.930
Hong Kong	1971	1.118	Canada	1965	0.924
R.O.K.	1971	1.088	Japan	1968	0.921
Taiwan	1964	1.084	Sweden	1963	0.918
Philippines	1971	1.020	Finland	1962	0.899
			New Zealand	1970/71	0.867
			Norway	1963	0.838

Source: [7, Tables 17.1 and 17.2].

TABLE XIII
SKEWNESS OF THE LORENZ CURVE

Region	1969	1975	1981
A. Overall area			
Bangkok	1.1267	1.0691	1.0306
Center	1.1058	1.0530	1.0199
North	1.1389	1.0259	1.0516
Northeast	1.0693	1.0703	1.1070
South	1.1156	1.0626	1.1141
Whole kingdom	1.1137	1.0474	1.0652
B. Rural area			
Bangkok	1.1341	1.0406	1.0018
Center	1.1014	1.0456	1.0416
North	1.0972	1.0222	1.0479
Northeast	1.0431	1.0628	1.1031
South	1.0608	1.0566	1.1038
Whole kingdom	1.0899	1.0347	1.0682
C. Urban area			
Bangkok	1.1329	1.0854	1.0388
Center	1.1248	1.0739	0.9751
North	1.2551	1.1796	1.0525
Northeast	1.1833	1.0722	1.0871
South	1.1211	1.0800	1.1489
Whole kingdom	1.1234	1.0843	1.0418

Sources: Calculated from [14] for 1969 and *Socio-Economic Survey* data tapes for 1975 and 1981.

Note: Income concept is the total income.

VI. CONCLUSION

The results of this study reveal that income inequality in Thailand was stable until 1975 after which it increased significantly and also that regional disparity and disparity between areas declined during the 1960s and 1970s. These results are consistent with both Meesook and Krongkaew who, however, made seemingly opposite conclusions. Meesook concluded that there has been no trade-off between economic growth and income inequality while Krongkaew concluded that Thailand experienced an increase in income inequality. Both scholars came to their diverging results because they were discussing different aspects of inequality. Meesook looked at regional disparity while Krongkaew studied inequality of income distribution. However regional disparity can decrease while income inequality increase as this study has revealed.

We have also shown that Thailand is experiencing a change in the skewness of the Lorenz curve in a manner like that discovered by Kuznets and Kakwani. This change implies that the share of the middle-income classes is increasing, a phenomenon which can be seen in the developed countries. Thus the distribution of income in Thailand is moving in the direction of that now existing in developed countries.

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