Economic Growth and Income Inequality in Korea

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ECONOMIC GROWTH AND INCOME INEQUALITY IN KOREA

Since the early 'sixties the Korean economy has performed remarkably well by international standards. Did this rapid growth affect the distribution of income negatively? An extensive review and analysis of the information available for the period 1959-1970 indicates that: (1) income inequality in Korea compares very well with that found in other developing and/or developed countries, (2) the variety of evidence based on tax data, income surveys, national accounts data, consumer expenditure surveys and wage surveys leads to the findings that no serious deterioration of the income distribution on a nation wide basis took place during this period of very rapid growth, (3) institutional factors specific to Korea may explain this apparent lack of conflict between rapid aggregate economic growth and income equality so often present in LDCs. In conclusion the paper looks for clues as to whether this performance will continue during the seventies.

Prepared by:
Bertrand Renaud
Urban and Regional Economics Division
Development Economics Department
Development Policy Staff
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ECONOMIC GROWTH AND INCOME INEQUALITY IN KOREA

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1. INTRODUCTION

The Korean society is undergoing deep and rapid changes in every one of its aspects and the objective of this paper is to present and analyze the evidence concerning economic growth and income distribution since 1960. It focuses on economic inequality and levels of welfare as an important aspect of societal change, while the problem of inequality encompasses all dimensions of a society.

The analysis submitted here gives us the opportunity to answer for Korea some of the questions raised in current discussions of economic development. In recent years, there has been a rising concern with poverty and inequality during the process of economic growth. Following what Hirschman has called "development disasters" in several countries, social scientists and planners have begun questioning the value of economic growth for a rapid eradication of poverty. This new pessimism is definable by a series of propositions which should be scrutinized for Korea, such as:

1. "Underdeveloped countries show markedly greater relative inequality than the developed countries", "...In the developing countries inequalities in income distribution are greater than they were in the industrialized countries before the trend toward growth inequalities was reversed... and...they have become more pronounced in most though perhaps not all countries" ([17], p. 330).

2. "...In a number of countries in which the national average per capita income has reached a level substantially above the benchmark of say, $100,..., a substantial proportion still has a per capita income below [the] international poverty line" ([1], p. 330).
3. "Higher growth rates generate greater inequality" and "...in the great majority of developing countries the benefits of economic development accrue chiefly to the upper income groups--the highest 20% or 40% of the population--and...in some countries the poorest 20% or even a larger percentile do not participate in the process of economic development at all" [1].

4. "Economic growth by itself may not solve or even alleviate the problem of poverty within a reasonable period of time" [2].

The evidence presented covers mostly the period 1960-1970 and is too short to provide a test for the famous Kuznets hypothesis that "one might... assume a long swing in the inequality characterizing the secular structure; widening in the early phases of economic growth when the transition from the preindustrial to the industrial civilization is most rapid; becoming stabilized for a while; and then narrowing in the later phases" ([18], p. 18).

In the first part of the discussion we present the empirical evidence concerning economic inequalities on a nationwide basis. We discuss the sources of evidence, their strength and their limitations, and we provide results of similar analyses for other countries as a basis for international comparisons. Having presented the aggregate evidence we discuss the sources of inequality in Korea and their contribution to the national situation.

We have avoided references to status differentiation and inequality, changing status ideology, occupational structure and social mobility which should be the subject of another paper. Neither shall we make references to the aspects of political development which have such an extensive bearing on the exact nature of inequality, such as political ideologies, the process of power distribution and political participation; they should be the subject of a third discussion.
2. THE EMPIRICAL EVIDENCE ON A NATIONWIDE BASIS

The evidence on nationwide patterns of income distribution in Korea is not very extensive nor systematically collected. A variety of survey and non-survey analyses have been made; they are presented here in summary form. The span of time covered by the studies presently available is 1959-1970. In this section we discuss earlier results; additional analyses limited to specific sectors such as the EPB urban surveys and the farm household survey are presented in later sections.

2.1 The Industrial Development Committee Survey for 1958

The first survey of income distribution for Korea was done in 1959 for the Industrial Development Committee of the Ministry of Reconstruction. The survey was taken in June-July 1959 using a three-stage random sample of 2,822 households from urban areas with populations of 20,000 or more. Information was collected only on total personal income in 1958 for each income earner, each respondent indicating the bracket he belonged in among 20 possible choices. No expenditure information was collected to verify the selection of income bracket. The type of question asked, the sampling procedures and most particularly the exclusion of farm households greatly diminish the significance of the results. Only a Lorenz curve was estimated and the value of the Gini coefficient deducted from it is $G = .359$ (see Table 1).

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1 The following discussion is heavily indebted to the paper by Chae, Mun-kyoo, *Income Size Distribution in Korea* (9).
2.2 Chae's Analyses of Income Tax Data for 1958, 1960, 1961

Using wage and salary income data together with business income data from the Office of National Tax Administration, Chae has analyzed the distribution of income based on income earners rather than households. He converted tax brackets into income brackets on the basis of the tax rates. He also had to develop adjustment procedures to estimate the actual number of tax-payers. Chae estimated Lorenz curves, Gini coefficients, Pareto distributions, and Gini functions for four different populations: (1) the national data, (2) business income, (3) wages and salaries, (4) agricultural income. While the tax data is comprehensive and has a large statistical base it suffers from a problem of representativity and underreporting given the efficiency of tax collection in that period. Nonetheless the results are quite informative.

Using the usual form of the Pareto distribution:

$$\log N = \log A - \alpha \log X$$

Chae obtains the following results for the nationwide data:

1958: $\log N = 21.5198 - 2.73 \log X$
1960: $\log N = 19.6381 - 2.39 \log X$
1961: $\log N = 19.5928 - 2.35 \log X$

The slight decreases of the value of $\alpha$ suggests a deterioration toward greater income inequality over these three years.\(^2\) The corresponding

# TABLE 1. GINI COEFFICIENTS OF INCOME CONCENTRATION

<table>
<thead>
<tr>
<th>Year</th>
<th>Methodology</th>
<th>National Income</th>
<th>Wages and Salaries</th>
<th>Business Income</th>
<th>Farm Income</th>
<th>Urban Income</th>
<th>Data Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>1958</td>
<td>(I.D.C. Survey)</td>
<td>.359</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>Urban sample of 2,822 households</td>
</tr>
<tr>
<td>1958</td>
<td>(Chae)</td>
<td>.464</td>
<td>.446</td>
<td>.551</td>
<td>.371</td>
<td>----</td>
<td>National Income Tax Returns</td>
</tr>
<tr>
<td>1960</td>
<td>(Chae)</td>
<td>.448</td>
<td>.450</td>
<td>.548</td>
<td>.387</td>
<td>----</td>
<td>National Income Tax Returns</td>
</tr>
<tr>
<td>1961</td>
<td>(Chae)</td>
<td>.438</td>
<td>.429</td>
<td>.553</td>
<td>.393</td>
<td>----</td>
<td>National Income Tax Returns</td>
</tr>
<tr>
<td>1958-61</td>
<td>Av. (Chae)</td>
<td>.450</td>
<td>.442</td>
<td>.550</td>
<td>.384</td>
<td>----</td>
<td>National Income Tax Returns</td>
</tr>
<tr>
<td>1966</td>
<td>(Chung-Ang)</td>
<td>.335</td>
<td>.296</td>
<td>.278</td>
<td>.299</td>
<td>.315</td>
<td>799 Urban + 971 Rural Households</td>
</tr>
<tr>
<td>1968</td>
<td>(E.P.B.)</td>
<td>.363</td>
<td>.241</td>
<td>.523</td>
<td>.310</td>
<td>.367</td>
<td>10,000 Urban + 10,000 Rural Households</td>
</tr>
<tr>
<td>1970</td>
<td>(Chae)</td>
<td>.375</td>
<td>.380</td>
<td>.625</td>
<td>.309</td>
<td>----</td>
<td>National Income Tax Data</td>
</tr>
<tr>
<td>1970</td>
<td>(Renaud)</td>
<td>----</td>
<td>.250</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>1970 Census Data + Wage Survey</td>
</tr>
<tr>
<td>1972</td>
<td>(E.P.B.)</td>
<td>Unreleased</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
values of the Theil inequality index are:

1958 : $T = .120$
- 1960 : $T = .137$
- 1961 : $T = .187$

In terms of Gini coefficients, Chae obtains the opposite results of a mildly improving income distribution (see Table 1). The possible explanation of the contradiction appears to lie in the poor fit of the Pareto distribution for his three samples as suggested by his graphical representation (see [9], p. 6).

The most solid result of his analysis is the expected finding that inequality within group is the highest for business income, then come wages and salaries, and finally agricultural income. The national Gini coefficient is closest to that of wages and salaries.

2.3 The Chung-Ang University Income and Expenditures Survey of 1966

This survey was designed for the analysis of income distribution and consumption patterns by income brackets, involving a total of 799 households in urban areas and 971 households in rural areas, using interview and bookkeeping methods for the two months of January and March 1966. Lorenz curves, Gini coefficients and Pareto coefficients were estimated for four separate groups: wage and salary earners, trade and business households, farm households and non-farm households.

Because of its small sample size, of excessively narrow income intervals of 2,000 Wons for annual income ($7.41 of 1966) and inappropriate compilation, the results are weak. The degree of income dispersion is quite small according to the Gini coefficient calculated for each of the four groups. The survey did not include a Gini coefficient for the entire
sample; in his paper, Chae estimates it to be equal to .335. The values of parameter \( \alpha \) for the Pareto distributions fitted on the four income groups must have been misreported since they fall below the minimum theoretical value of one.

2.4 The Unpublished Survey of 1968

The first survey without problems with respect to sampling procedures or the definition of the measurement unit has been performed in December 1968 to cover the income of the 12 months from December 1967 to November 1968. It provides the first truly reliable benchmark for the analysis of the evolution of income distribution in Korea. However, as of this date its content has not been released officially.

According to Chae, it consisted of a stratified sample of 20,000 households equally divided between rural and urban areas. On the income side various income sources were surveyed in detail. On the expenditures side, five major categories were established: food and beverages, housing, fuel and light, clothing and miscellaneous expenditures. The five Gini coefficients which Chae reports from this survey show that the degree of income inequality in Korea was low in 1968 with the greatest degree of inequality to be found for business income and the smallest for wage and salary earners (see Table 2).

2.5 Chae's Estimates for 1970 Based on Tax Data

With such heterogenous attempts at measuring income inequality Chae performed the same analysis on the 1970 tax data which he had performed
TABLE 2. LORENZ CURVES BY SECTORS
(Share of Total Income for Each Population Decile)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Deciles</th>
<th>D1</th>
<th>D2</th>
<th>D3</th>
<th>D4</th>
<th>D5</th>
<th>D6</th>
<th>D7</th>
<th>D8</th>
<th>D9</th>
<th>D10</th>
<th>Total</th>
<th>Decile Inequality</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1958 (I.D.C.)</td>
<td></td>
<td>2.7</td>
<td>4.1</td>
<td>5.2</td>
<td>6.5</td>
<td>7.5</td>
<td>8.5</td>
<td>9.5</td>
<td>12.0</td>
<td>14.0</td>
<td>30.0</td>
<td>100.0</td>
<td>.289</td>
</tr>
<tr>
<td>1960 (Chae)</td>
<td></td>
<td>1.8</td>
<td>2.7</td>
<td>3.8</td>
<td>5.2</td>
<td>6.8</td>
<td>8.7</td>
<td>11.0</td>
<td>13.5</td>
<td>16.5</td>
<td>30.0</td>
<td>100.0</td>
<td>.344</td>
</tr>
<tr>
<td>1966 (Chung-Ang)</td>
<td></td>
<td>2.5</td>
<td>3.5</td>
<td>5.3</td>
<td>7.2</td>
<td>8.0</td>
<td>9.5</td>
<td>10.7</td>
<td>13.0</td>
<td>15.6</td>
<td>24.7</td>
<td>100.0</td>
<td>.267</td>
</tr>
<tr>
<td>1968 (E.P.B.)</td>
<td></td>
<td>2.7</td>
<td>4.3</td>
<td>5.1</td>
<td>6.4</td>
<td>6.8</td>
<td>8.9</td>
<td>9.3</td>
<td>11.8</td>
<td>14.7</td>
<td>30.0</td>
<td>100.0</td>
<td>.294</td>
</tr>
<tr>
<td>1970 (Chae)</td>
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<td>2.5</td>
<td>4.0</td>
<td>5.0</td>
<td>6.5</td>
<td>6.5</td>
<td>8.0</td>
<td>9.8</td>
<td>12.7</td>
<td>15.5</td>
<td>29.5</td>
<td>100.0</td>
<td>.308</td>
</tr>
<tr>
<td>Urban</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1966 (Chung-Ang)</td>
<td></td>
<td>2.0</td>
<td>4.0</td>
<td>6.5</td>
<td>7.5</td>
<td>8.5</td>
<td>9.5</td>
<td>10.5</td>
<td>12.5</td>
<td>15.0</td>
<td>24.0</td>
<td>100.0</td>
<td>.244</td>
</tr>
<tr>
<td>1968 (E.P.B.)</td>
<td></td>
<td>2.5</td>
<td>3.9</td>
<td>5.6</td>
<td>6.8</td>
<td>6.9</td>
<td>7.7</td>
<td>9.6</td>
<td>11.3</td>
<td>15.2</td>
<td>30.5</td>
<td>100.0</td>
<td>.300</td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960 (Chae)</td>
<td></td>
<td>2.0</td>
<td>4.0</td>
<td>5.0</td>
<td>7.0</td>
<td>8.0</td>
<td>9.5</td>
<td>11.0</td>
<td>12.5</td>
<td>18.0</td>
<td>23.0</td>
<td>100.0</td>
<td>.272</td>
</tr>
<tr>
<td>1966 (Chung-Ang)</td>
<td></td>
<td>3.0</td>
<td>4.3</td>
<td>5.7</td>
<td>7.0</td>
<td>8.5</td>
<td>9.5</td>
<td>11.0</td>
<td>13.0</td>
<td>16.6</td>
<td>21.5</td>
<td>100.0</td>
<td>.244</td>
</tr>
<tr>
<td>1968 (E.P.B.)</td>
<td></td>
<td>3.0</td>
<td>4.8</td>
<td>6.4</td>
<td>6.8</td>
<td>7.5</td>
<td>9.3</td>
<td>9.9</td>
<td>12.4</td>
<td>14.6</td>
<td>25.3</td>
<td>100.0</td>
<td>.248</td>
</tr>
<tr>
<td>1970 (Chae)</td>
<td></td>
<td>3.0</td>
<td>4.3</td>
<td>5.7</td>
<td>7.0</td>
<td>8.0</td>
<td>9.5</td>
<td>10.5</td>
<td>13.0</td>
<td>16.5</td>
<td>22.5</td>
<td>100.0</td>
<td>.248</td>
</tr>
<tr>
<td>Wage &amp; Salaries</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960 (Chae)</td>
<td></td>
<td>2.0</td>
<td>3.0</td>
<td>5.0</td>
<td>6.0</td>
<td>8.0</td>
<td>9.0</td>
<td>10.5</td>
<td>12.0</td>
<td>16.5</td>
<td>28.0</td>
<td>100.0</td>
<td>.300</td>
</tr>
<tr>
<td>1968 (E.P.B.)</td>
<td></td>
<td>3.1</td>
<td>4.9</td>
<td>6.9</td>
<td>7.8</td>
<td>9.5</td>
<td>10.3</td>
<td>12.2</td>
<td>13.6</td>
<td>14.9</td>
<td>16.8</td>
<td>100.0</td>
<td>.198</td>
</tr>
<tr>
<td>1970 (Chae)</td>
<td></td>
<td>2.0</td>
<td>3.5</td>
<td>5.0</td>
<td>6.0</td>
<td>7.0</td>
<td>9.0</td>
<td>9.8</td>
<td>13.2</td>
<td>16.0</td>
<td>28.5</td>
<td>100.0</td>
<td>.308</td>
</tr>
<tr>
<td>All Occupations</td>
<td></td>
<td>5.6</td>
<td>6.7</td>
<td>7.7</td>
<td>7.2</td>
<td>7.5</td>
<td>7.7</td>
<td>7.8</td>
<td>9.4</td>
<td>16.5</td>
<td>24.1</td>
<td>100.0</td>
<td>.227</td>
</tr>
<tr>
<td>Business Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960 (Chae)</td>
<td></td>
<td>1.0</td>
<td>2.3</td>
<td>3.2</td>
<td>3.5</td>
<td>4.8</td>
<td>5.7</td>
<td>8.5</td>
<td>10.3</td>
<td>13.7</td>
<td>48.0</td>
<td>100.0</td>
<td>.461</td>
</tr>
<tr>
<td>1968 (E.P.B.)</td>
<td></td>
<td>1.2</td>
<td>2.6</td>
<td>3.3</td>
<td>4.2</td>
<td>5.0</td>
<td>6.9</td>
<td>7.3</td>
<td>9.6</td>
<td>15.1</td>
<td>44.8</td>
<td>100.0</td>
<td>.444</td>
</tr>
<tr>
<td>1970 (Chae)</td>
<td></td>
<td>0.5</td>
<td>1.5</td>
<td>2.0</td>
<td>3.0</td>
<td>3.0</td>
<td>4.5</td>
<td>6.5</td>
<td>10.0</td>
<td>16.5</td>
<td>52.5</td>
<td>100.0</td>
<td>.544</td>
</tr>
</tbody>
</table>

(Source: Chae [9], Table 1)
earlier for 1958, 1960 and 1961. Compared to the average of these three years, Chae found a much improved income distribution in 1970 for the entire country and agricultural income. The degree of inequality for wage and salary earners was found improved. He found a deterioration of income distribution only within the business income group. The decline in the national Gini coefficient was from an average value of .450 for the three early years down to .375 a decade later in 1970.\(^3\)

2.6 Degree of Inequality in Korea and International Comparisons

In his 1972 paper Chae has reported the share of total income for each decile for five different years between 1958 and 1970. The results for the comprehensive national income distribution are very consistent except for the Chung-Ang survey which seems to underestimate strongly the shares of upper deciles. There is no clear trend apparent from the four other observations; if anything the Chae results show an improvement during the 1960's for the low income groups, and the overall distribution (see Table 2).

While it is hazardous to make international comparisons of surveys which do not rely on strictly identical procedures and definitions, the international evidence indicates that Korea ranks among the countries with the smallest degree of income inequality in Asia. Oshima has shown that Korea, Taiwan, Japan as well as Malaya have a moderate degree of

\(^3\)A reporting problem with these comparisons is that Chae provides in his text, page 5, the four values of .448, .450, .548 and .387 for all Korea, wages and salaries, business income and agricultural income, while he reports for the same year of 1960 the values of .418, .378, .557 and .338 in his Table 1. We report the first series of results in Table 2.
income inequality, compared to other countries in South-East Asia and less inequality than the United States [25]. We are using for the present comparison the results of the 1968 survey which is the most reliable for Korea and the 1963 and 1968 U.S. results compiled by Budd [7] because they are the most comprehensive. The conclusions of the Oshima comparisons still hold: the lowest forty percent of the population in the three East-Asian countries enjoy a greater share of national income than the corresponding group in the United States. However, the share of the top two deciles ($D_9 + D_{10}$) is slightly less for the U.S. in 1968 (43.1%) than for Korea the same year (44.7%), indicating that middle-class groups are stronger in the United States than in Korea.

It is clearly arbitrary to use the United States as a reference point, but it remains that Korea does not seem to have more inequality than that country. It would have even less, if one chooses to emphasize the most disadvantaged low income groups. Since the American income distribution has changed very little between 1960 and 1970 the choice of year is not crucial (see [7] for time series analyses). Alternative methods of international comparisons used by Chenery et al. covering sixty-six countries agree with this finding that Korea is one of the countries enjoying the least degree of income inequality ([10], Table 1).

3. THE SOURCES OF INEQUALITY IN KOREA

3.1 Further Results on the Dispersion of Earnings by Occupation in 1970

Among all the estimates discussed in the previous section, the results obtained by Chae are the most informative because they are based on the same data source and the same analytical procedures. However, they are very dependent upon the quality of tax collections and on the definition of income-receiving units. The most reliable picture of the Korean income distribution remains the 1968 survey and until a new survey is
<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>D1</th>
<th>D2</th>
<th>D3</th>
<th>D4</th>
<th>D5</th>
<th>D6</th>
<th>D7</th>
<th>D8</th>
<th>D9</th>
<th>D10</th>
<th>Total</th>
<th>Gini Coeff.</th>
<th>Decile Inequality</th>
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<td>United States*</td>
<td>1963</td>
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<td>4.4</td>
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<td>9.6</td>
<td>11.5</td>
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<td>16.0</td>
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<td>9.3</td>
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<td>9.0</td>
<td>11.6</td>
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<td>4.1</td>
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<td>Malaya</td>
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<td>3.9</td>
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<td>5.1</td>
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<td>16.1</td>
<td>27.8</td>
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<td>0.29</td>
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<td>6.3</td>
<td>7.5</td>
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<td>15.5</td>
<td>36.6</td>
<td>100</td>
<td>.45</td>
<td>0.37</td>
</tr>
</tbody>
</table>

Sources:

* (U.S.) Edward C. Budd [7], pp. 251 and 255.
** (S. Korea) Chae [9], Table 1.
Others Harry T. Oshima [25], p. 13.
made available (or at least its summary statistics like the Gini coefficients) it is difficult to cross-check the findings of a seemingly improving income distribution during the last decade provided by the four annual observations obtained by Chae.

At the present time, we can also examine the distribution of wages and earnings according to occupation for wage and salary earners in 1970 by combining the information of the 1970 Population Census with the results of the comprehensive wage survey of 1971 covering all occupations. The 1970 census results give the distribution of the employed population on the basis of the 80 two-digit occupational categories on October 1, 1970. The 1970 comprehensive wage survey gives average national earnings (regular wages, additional wages and bonuses) up to a three-digit occupational classification six months later on April 1, 1971. While it is well established that wage levels are not the same in different provinces, it is still possible to estimate the degree of inequality nationwide and for each province under the acceptable assumption that relative wage differentials between occupations at the provincial level are consistent with the national rankings of these occupations according to wages.  

The results are reported for Korea, all Sis, all Eups and Myons, as well as for the 11 provinces in Table 4. These new estimates based on reliable and comprehensive sources are very close to the best information available earlier in the 1968 survey. The increase of the Gini coefficient

---

4 Note that this assumption is not as limiting as it would appear at first sight, because we are focusing on inequality within each area separately; then we compare relative inequality using the Gini coefficients at different locations.

5 In Korea, Sis have population places above 50,000, the Eups range is 20-50,000, Myons are rural places.
TABLE 4. GINI COEFFICIENTS FOR WAGE AND SALARIES
BY OCCUPATIONS - KOREA 1970

<table>
<thead>
<tr>
<th>Population Covered</th>
<th>Gini Coefficient</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Korea</td>
<td>.250</td>
<td></td>
</tr>
<tr>
<td>Sis</td>
<td>.307</td>
<td></td>
</tr>
<tr>
<td>Eups</td>
<td>.261</td>
<td></td>
</tr>
<tr>
<td>Myons</td>
<td>.124</td>
<td></td>
</tr>
<tr>
<td>Seoul</td>
<td>.313</td>
<td>11</td>
</tr>
<tr>
<td>Pusan</td>
<td>.302</td>
<td>10</td>
</tr>
<tr>
<td>Kyonggi</td>
<td>.241</td>
<td>9</td>
</tr>
<tr>
<td>Kangwon</td>
<td>.198</td>
<td>5</td>
</tr>
<tr>
<td>Choongbug</td>
<td>.173</td>
<td>1</td>
</tr>
<tr>
<td>Choongnam</td>
<td>.204</td>
<td>7</td>
</tr>
<tr>
<td>Chonbuk</td>
<td>.187</td>
<td>3</td>
</tr>
<tr>
<td>Chon nam</td>
<td>.180</td>
<td>2</td>
</tr>
<tr>
<td>Kyongbug</td>
<td>.226</td>
<td>8</td>
</tr>
<tr>
<td>Kyongnam</td>
<td>.190</td>
<td>4</td>
</tr>
<tr>
<td>Cheju</td>
<td>.195</td>
<td>6</td>
</tr>
</tbody>
</table>
for nationwide wages and salaries from .241 in 1968 to .250 suggests a significant deterioration in the direction of greater inequality, because the synthetic estimate that we have calculated cannot account for interprovincial variations in wage levels.

3.2 Regional Differences in Earnings Inequality

One of the advantages of using census returns on the distribution of occupations is that it allows us to explore the degree of inequality by level of urbanization and by province. The Gini coefficients are presented in Table 4, which show that inequality is associated with the degree of urbanization when the G-coefficients rise from .124 Yoons to .307 for Sis. It must be noted, however, that the low value for Yoons reflects the small number of occupations present in these rural places and the fact that the computations are based on observed mean values for each population. Thus, the Gini coefficients calculated reflect variations between occupations with no dispersion within occupation. This lack of dispersion within occupation does not have a significant influence on inequality rankings at the provincial level where dispersion between occupation dominates because of the relative uniformity of farm earnings at a low level compared to other occupations. The results of Table 4 show very significant variations in the degree of earnings inequality among province with Choongbug scoring best and Seoul worst.

To test the sources of inequality across provinces we hypothesize that earnings dispersion within each province is a function of the level of urbanization, the level of education of its population and its industrial structure:

---

6 It must be noted that in other respects the estimate of the Gini coefficient is very close to its true value because of the use of 80 income classes. It is well known that G is underestimated when the number of income classes is small. Chae does not report the procedures used in the 1968 survey.
$G_i = f(U_i, E_i, M_i)$

where:

$U_i$ = the relative share of the Si population in the total population of province i.

$E_i$ = the share of population with secondary education or better.

$M_i$ = the share of mining and manufacturing employment.

The results are remarkably good; we have:

$G = .116 - .092 U + .299 E + .324 M$

(-2.23) (4.74) (4.11)

with $R^2 = .980$ and the level of significance of the t-value $t_{.05} = 1.895$ and $t_{.005} = 3.49$ for the present degrees of freedom. The value of the intercept .116 is very close to that found for Myons which represent the lowest level of income inequality.

The elasticities of the Gini coefficient with respect to these three factors are:

$\eta_u = -.1537$

$\eta_E = .4268$

$\eta_M = .1938$

They indicate that both the level of education and the industrial structure contribute to an increase in inequality with education having the stronger effect. This result is not surprising considering the stage of development where Korea was in 1970. What is more striking is the fact that urbanization per se contributes to more equality not less, a fact hidden by the strong collinearity typically observed between urbanization, education and industrialization and the dominant influence of the latter two factors. The partial correlation coefficients between $G$ and each factor net of the influence of the two others are:
The beneficial impact of urbanization per se on earnings inequality obtained in this analysis is consistent with the repeated findings of Lee and Barringer that the distribution of rural-urban migrants according to status improves after migration to cities (see for instance [20], particularly Figures 1, 2, 3).

The association between inequality in a region and its level of education exists for two reasons. First, there is the obvious fact that the more developed provinces offer more diversified occupations and a larger share of better educated people corresponding to the larger share of higher occupations. Second, the effect of education is also consistent with the recent findings of Chiswick who has investigated the relationship between earnings inequality and economic development. He shows that the dispersion of earnings measured by the variance of their log value increases with the number of years of education and the rate of return to that education. He found that "relative earnings inequality is larger, the larger the absolute inequality of schooling and the larger the level and inequality of rates of return for schooling" ([1], p.38).

The inequality introduced by new manufacturing industries is due to the introduction of new technologies, larger levels of capital per worker and higher levels of productivity per worker, which tend to increase the

---

7 It is important to recall that in Korea with compulsory, free and universal education actually realized we are not referring to varying provincial rules of illiteracy but with variations in the level of schooling in the sense used by Chiswick.
gap between the earnings of new modern occupations and those of the more traditional activities.

3.3 The Significance of Rural-Urban Inequality

Lacking the detailed information available in genuine income distribution surveys we cannot use the Theil index of inequality to measure the separate contribution of rural-urban inequality to the value of the comprehensive national coefficients. But the evolution of rural-urban inequalities is easy to document with the help of the quarterly income and expenditures surveys performed by the Economic Planning Board since 1963. While these surveys are somewhat too small for income distribution analysis and cannot be disaggregated, they can still be used to trace the evolution of consumer expenditures in urban areas. Similarly the annual Farm Household Surveys performed by the Ministry of Agriculture and Forestry document the situation of the rural sector in a very detailed fashion.

In Table 5 we report the level of total consumption expenditures per household and their allocation among major categories for farm and non-farm households. The data show that the level of consumption expenditures in real terms has practically doubled over the last ten years for city households while it has progressed very slowly for farm households. Per capita expenditures which adjust for the declining average household size are not significantly different. In Table 6 we have calculated countrywide per capita consumption expenditures between 1953 and 1971 on the basis of total personal income reported in the national accounts. This series

There is no contradiction between the existence of a rural-urban income gap and the previous finding that the partial effect of urbanization is toward income equality, other factors like education and industrial composition being equal. As we know, higher education and industry are found in cities and other things are not equal.
TABLE 5. ANNUAL CONSUMPTION EXPENDITURES PER HOUSEHOLD
(A) In All Cities, (B) For Farm Households

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Expenditures (Current W)</th>
<th>Total Expenditures (1970 W)</th>
<th>Household Size</th>
<th>Per Capita Expenditures (1970 W)</th>
<th>Food (% of total)</th>
<th>Housing (%)</th>
<th>Fuel &amp; Light (%)</th>
<th>Clothing (%)</th>
<th>Education (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
<td>(8)</td>
<td>(9)</td>
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<tr>
<td>(A)</td>
<td>All Cities</td>
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<td></td>
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<td>201,245</td>
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<td>359,400</td>
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<td>(B)</td>
<td>Farm Households</td>
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<td>28,776</td>
<td>47</td>
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<td>193,203</td>
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<tr>
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<td>207,766</td>
<td>6.07</td>
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<td>8</td>
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<td>36,710</td>
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<td>5.99</td>
<td>41,259</td>
<td>48</td>
<td>6</td>
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<td>253,076</td>
<td>5.98</td>
<td>42,320</td>
<td>47</td>
<td>7</td>
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</table>

(2.B) Deflated by the average index of prices paid for farm household goods.
(3.A) E.P.B. Statistical Yearbook.
(3.B) Farm Household Surveys.

*The 1970 Agricultural Census reports a household size of only 5.80.

Source: Bank of Korea, Statistical Yearbooks.
<table>
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<td>809.52</td>
<td>21,502</td>
<td>4,663.75</td>
<td>36,618.59</td>
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<td>840.36</td>
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<td>7,211.64</td>
<td>37,373.68</td>
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<td>882.43</td>
<td>23,611</td>
<td>7,232.65</td>
<td>38,068.42</td>
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<td>924.72</td>
<td>24,291</td>
<td>7,471.49</td>
<td>37,774.30</td>
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<td>942.62</td>
<td>24,954</td>
<td>8,305.68</td>
<td>37,283.31</td>
<td>117.99</td>
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<td>950.65</td>
<td>25,498</td>
<td>9,625.85</td>
<td>38,798.74</td>
<td>122.78</td>
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</tr>
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<td>1,017.73</td>
<td>26,231</td>
<td>11,200.10</td>
<td>39,111.79</td>
<td>123.77</td>
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<tr>
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<td>14,944.90</td>
<td>40,617.09</td>
<td>128.54</td>
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<tr>
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<td>1,124.20</td>
<td>27,678</td>
<td>21,183.25</td>
<td>42,401.94</td>
<td>134.18</td>
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<td>28,327</td>
<td>23,592.33</td>
<td>43,977.02</td>
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<td>27,612.48</td>
<td>47,285.80</td>
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<tr>
<td>1966</td>
<td>805.18</td>
<td>1,396.87</td>
<td>29,541</td>
<td>33,376.32</td>
<td>51,226.34</td>
<td>152.11</td>
<td></td>
</tr>
<tr>
<td>1967</td>
<td>985.97</td>
<td>1,542.55</td>
<td>30,171</td>
<td>39,920.45</td>
<td>55,489.29</td>
<td>175.60</td>
<td></td>
</tr>
<tr>
<td>1968</td>
<td>1,204.44</td>
<td>1,705.63</td>
<td>30,738</td>
<td>48,592.94</td>
<td>59,941.14</td>
<td>189.69</td>
<td></td>
</tr>
<tr>
<td>1969</td>
<td>1,493.65</td>
<td>1,884.25</td>
<td>31,435</td>
<td>59,941.14</td>
<td>65,355.05</td>
<td>206.82</td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>1,884.25</td>
<td>2,080.12</td>
<td>31,828</td>
<td>73,435.96</td>
<td>68,789.55</td>
<td>217.69</td>
<td></td>
</tr>
<tr>
<td>1971</td>
<td>2,337.32</td>
<td>2,226.03</td>
<td>32,360</td>
<td>87,900.18</td>
<td>73,418.02</td>
<td>232.34</td>
<td></td>
</tr>
</tbody>
</table>

covers groups which are typically not reached by household surveys such as various non-profit institutions, persons living in military housing, hospitals, factory dormitories and other similar types of institutions. A blow-up of income survey data typically gives a level of total income and expenditures 70 to 80% of the national accounts data (see Oshima [25]), the bias is heavier on the urban side than on the farm side.

The rural-urban gap in terms of consumption expenditures can be evaluated by taking the ratio of farm to non-farm consumption, either on the basis of the urban surveys or by comparing per capital urban consumption to the national per capita consumption levels reported in the national accounts (which are biased downward for that comparison since they include farm households). The two series of ratios are as follows:

<table>
<thead>
<tr>
<th></th>
<th>Survey Ratio</th>
<th>National Account Ratio</th>
<th>Farm Price Parity Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>.98</td>
<td>.84</td>
<td>112.1</td>
</tr>
<tr>
<td>1965</td>
<td>.86</td>
<td>.76</td>
<td>100.8</td>
</tr>
<tr>
<td>1966</td>
<td>.68</td>
<td>.60</td>
<td>95.4</td>
</tr>
<tr>
<td>1967</td>
<td>.52</td>
<td>.47</td>
<td>96.5</td>
</tr>
<tr>
<td>1968</td>
<td>.51</td>
<td>.47</td>
<td>94.3</td>
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<td>1969</td>
<td>.55</td>
<td>.51</td>
<td>97.7</td>
</tr>
<tr>
<td>1970</td>
<td>.58</td>
<td>.54</td>
<td>100.0</td>
</tr>
<tr>
<td>1971</td>
<td>.58</td>
<td>.53</td>
<td>106.1</td>
</tr>
</tbody>
</table>

These two ratios show that since 1964 the rural sector has been losing ground and that rural-urban inequalities have increased. In 1964 the degree of equality was fairly good but the situation has deteriorated rapidly, differences being at their worst in 1967-68 partly due to government pricing policies of low farm prices which favor the urban population and of discriminatory low levels of investments in agriculture compared to other sectors. With more favorable policies as indicated by
the Farm Price Parity Ratio—which measures the relative movements of prices received and prices paid by farmers—the rural sector has been regaining ground. The contribution of rural-urban migration to this upturn is also very significant.

Because of the bias involved in the use of the rural-urban ratio based on national average consumption according to the national accounts we have adjusted this ratio in Table 7. There is evidence that the farm household consumption and expenditures surveys reflect accurately the level of consumption of farm households. Based on the survey figures we have estimated total farm consumption (Table 7, Column 3) and deducted it from total national consumption, leaving urban consumption as the balance (Table 7, Column 5). Then it is easy to derive the new estimate of per capita urban consumption (Table 7, Column 7) and the adjusted rural-urban ratio.

The time pattern of rural-urban inequality remains the same but its variation is less strong than in the two earlier ratios (with the exception of 1964-65). The standard of living in terms of consumption in the rural sector is significantly below the urban sector and has fluctuated between .40 and .45 of the urban sector between 1965 and 1973 (see Table 7). A by-product of this calculation is the estimate of the downward bias of the urban income and expenditures surveys. Comparing Table 5, Column 4-A with Table 7, Column 7, we can see that the downward bias for urban expenditures in the first three years is quite high (the 1965 figure is very questionable). Later on, there appears to be a downward bias between 20 and 30% in the reported survey figures.

As shown in Table 7, almost 1.4 million people moved to cities between 1967 and 1971 and the farm population declined by exactly 8.5 percent in four years; this is an uncommonly high rate of rural-urban migration.
## Table 7. Adjusted Rural-Urban Consumption Expenditures Ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>Per Capita Farm Consumption (in Wons)</th>
<th>Farm Population (1,000)</th>
<th>Total Farm Consumption (in billions)</th>
<th>Total National Consumption (in billions)</th>
<th>Total Urban Consumption (4) - (3) (in billions)</th>
<th>Urban Population (1,000)</th>
<th>Urban Per Capita Consumption (5) ÷ (6) (in Wons)</th>
<th>Farm-Urban Ratio (1) ÷ (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>30,980</td>
<td>15,553</td>
<td>481.83</td>
<td>1,124.20</td>
<td>642.37</td>
<td>12,125</td>
<td>52,980</td>
<td>.5847</td>
</tr>
<tr>
<td>1965</td>
<td>27,270</td>
<td>15,812</td>
<td>431.20</td>
<td>1,201.12</td>
<td>769.92</td>
<td>12,515</td>
<td>61,520</td>
<td>.4432</td>
</tr>
<tr>
<td>1966</td>
<td>27,050</td>
<td>15,781</td>
<td>426.88</td>
<td>1,287.37</td>
<td>860.49</td>
<td>13,379</td>
<td>64,316</td>
<td>.4206</td>
</tr>
<tr>
<td>1967</td>
<td>28,310</td>
<td>16,078</td>
<td>462.66</td>
<td>1,396.87</td>
<td>934.21</td>
<td>13,463</td>
<td>69,391</td>
<td>.4079</td>
</tr>
<tr>
<td>1968</td>
<td>28,776</td>
<td>15,908</td>
<td>457.77</td>
<td>1,545.55</td>
<td>1,087.78</td>
<td>14,263</td>
<td>76,266</td>
<td>.3773</td>
</tr>
<tr>
<td>1969</td>
<td>31,570</td>
<td>15,589</td>
<td>492.15</td>
<td>1,705.63</td>
<td>1,213.48</td>
<td>17,003</td>
<td>80,103</td>
<td>.3941</td>
</tr>
<tr>
<td>1970</td>
<td>35,095</td>
<td>14,432</td>
<td>506.67</td>
<td>1,884.25</td>
<td>1,377.58</td>
<td>17,003</td>
<td>81,020</td>
<td>.4332</td>
</tr>
<tr>
<td>1971</td>
<td>36,710</td>
<td>14,712</td>
<td>540.08</td>
<td>2,080.12</td>
<td>1,540.04</td>
<td>17,116</td>
<td>89,977</td>
<td>.4080</td>
</tr>
<tr>
<td>1972</td>
<td>41,259</td>
<td>14,677</td>
<td>605.56</td>
<td>2,226.03</td>
<td>1,620.47</td>
<td>17,683</td>
<td>91,640</td>
<td>.4502</td>
</tr>
<tr>
<td>1973</td>
<td>42,320</td>
<td>14,645</td>
<td>619.78</td>
<td>2,415.82</td>
<td>1,796.04</td>
<td>18,260</td>
<td>98,359</td>
<td>.4303</td>
</tr>
</tbody>
</table>

Source: (1) Table 5, Column 4-B  
(2) and (6) July 1, Annual Estimates  
(4) Table 6, Column 2  
(All data in constant 1970 Wons)
3.4 Inequality Within the Agricultural Sector

While the gap between the farm and non-farm level of consumption expenditures is an important source of inequality, inequality within the rural sector is very low as indicated by the Gini coefficients in all surveys (see Table 1, Column 4). In addition, these coefficients indicate an improvement of inequality within the sector.

The reasons for this situation are two-fold. First, the land reform from 1947 to 1949 has limited the ownership of agricultural land to three chongbo (or hectares), thus preventing large inequality of rural income in the upper-tail of the distribution. To quote Brown: "Land reform in Korea came in two stages, distribution of land formally owned by Japanese landlords in 1947 during the period of military government, and holdings by individual owners of more than 7.5 acres (3 chongbos, or approximately 3 hectares) in 1949. Approximately 970,000 tenant farmers and landless farm laborers became landowners, and approximately 570,000 small farmers were able to extend the size of their holdings. Thus about 62 percent of Korea's then 2.5 million farm families benefited from the land reform ([5], pp. 38-39).

Second, on the lower-tail of the income distribution rural-urban migration is rapidly depleting the ranks of landowners with extremely small landholdings and larger holdings (by Korean standards) have increased slightly. The annual farm household surveys show very clearly the strong relationship between the size of land holding and income received. The heavy concentration of landowners between 0.3 and 1.5 chongbos explains the very egalitarian nature of the Korean society at low levels of income. In 1970, the farm household owning 0.5 to 1.0 chongbos has 5.66 family

Off-farm work does not compensate very significantly for the influence of land ownership in the comparison of farm household incomes.
members (half of them only working on the farm) with a total combined income of 211,730 wons per year which is equivalent to about 120 U.S. dollars per capita.

3.5 Inequality Within the Urban Sector

We have already shown in Section 3.2 that on a cross-sectional basis inequality in wages and salaries increases with the degree of urbanization of a population place. We have noted that this happens because of the correlation between city size, the average level of education of the residents and the greater share of modern activities with high wages and salaries. Following John Friedmann one could make an attempt to implement empirically the concept of "core-periphery" to describe relationships of inequality and economic dependence within the urban hierarchy. One could try to see the extent to which larger cities have dominant relationships with their hinterland and whether Seoul really benefits from excessive transfers from provincial areas. Unfortunately, the format of our analysis does not permit the discussion of the internal structure of the urban system defined by the Shis.

Looking at the urban sector at the aggregate level we can take advantage of the quarterly surveys of income and expenditures by urban households which have been collected since 1963 by the Bureau of Statistics of the Economic Planning Board across all cities with samples of approximately 1,500 households. The results are presented in Table 8, where we report alternative indices of inequalities for all the surveys which we could

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A complete description of these surveys can be found in the annual reports published by EPI-BOS. Their critical evaluation has been made by Choo, Hak-Chun in a paper contemporary with this study, but already published in 1975. (36)
analyze. They are rather striking because they do not agree with the conventional wisdom of sharply rising inequality within the urban sector over time. While the inequality status of different cities varies, the situation across all city sizes does not seem to have changed. In any case, our calculations of the Gini coefficients show an unmistakable and very significant downward trend from 1963 to 1972. This result is confirmed by the coefficient of variation. The third moment around the mean which describes the skewness of a frequency distribution is positive as one should expect; it does not show a significant trend over the entire period: first it declines then it returns to its previous level.

Admittedly, this result is somewhat surprising but the length of time covered and the homogeneity of the information base does not leave much choice: one has to conclude that the urban distribution of income has improved during the past decade. If one questions the survey procedures underlying the data he is still left with the weaker but still very unexpected finding of non-increasing income inequality in the urban households of Korea. In our opinion the Income and Expenditures Surveys are weak in quality and we are left for the time being with the lesser finding of non-deterioration of income distribution.

3.6 The Functional Distribution of Income

The evidence discussed so far suggests that there has been no worsening of the size distribution of income in Korea during the last decade of rapid economic growth, and, possibly, a mild improvement; since the data base for this interpretation is heterogenous and the results go against expectations we must introduce as much indirect evidence as possible. For that purpose, it is useful to
TABLE 8. INEQUALITY IN THE INCOME DISTRIBUTION OF URBAN HOUSEHOLD 1963-1972

<table>
<thead>
<tr>
<th>Year</th>
<th>Current Average Income</th>
<th>Standard Deviation</th>
<th>Coefficient of Variation</th>
<th>Gini Coefficient</th>
<th>Skewness</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>6,000</td>
<td>3,899</td>
<td>.649</td>
<td>.2682</td>
<td>1.178</td>
<td>355</td>
</tr>
<tr>
<td>1964</td>
<td>7,340</td>
<td>4,338</td>
<td>.591</td>
<td>---</td>
<td>1.092</td>
<td>---</td>
</tr>
<tr>
<td>1965</td>
<td>8,450</td>
<td>4,659</td>
<td>.551</td>
<td>---</td>
<td>1.034</td>
<td>---</td>
</tr>
<tr>
<td>1966</td>
<td>11,750</td>
<td>6,322</td>
<td>.538</td>
<td>.2583</td>
<td>.938</td>
<td>1,005</td>
</tr>
<tr>
<td>1967</td>
<td>18,180</td>
<td>11,315</td>
<td>.622</td>
<td>.2563</td>
<td>1.168</td>
<td>996</td>
</tr>
<tr>
<td>1968</td>
<td>21,270</td>
<td>12,447</td>
<td>.585</td>
<td>.2549</td>
<td>1.148</td>
<td>1,272</td>
</tr>
<tr>
<td>1969</td>
<td>24,650</td>
<td>13,216</td>
<td>.536</td>
<td>.2515</td>
<td>1.174</td>
<td>1,079</td>
</tr>
<tr>
<td>1970</td>
<td>28,180</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1971</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1972</td>
<td>38,080</td>
<td>---</td>
<td>---</td>
<td>.2304</td>
<td>---</td>
<td>881</td>
</tr>
</tbody>
</table>

investigate the functional distribution of income for the period. There
has been a running argument that during periods of rapid growth there
might be a redistribution of income from labor to capital. However, there
is nothing necessary about this situation in a structural sense when
looking at the long-term. When looking at the short-term, it has been the
experience of advanced industrialized countries that the share of wages
tends to rise during recession and to lose grounds to profits during
booms. But it is not possible to generalize results concerning these labor
markets to the case of Korea which has a completely different labor market
structure.

Empirically, we can establish the direction of trends in functional
distribution by considering the share of wages in value-added based on
information collected by the Bank of Korea for 10 major sectors of the
economy between 1953 which marks the end of the Korean War and 1966. The
basic model is very simple:

$$\log E = \alpha + \beta \log VA$$

when $E$ represents total earnings in the sector and $VA$ the total value
added in the same sector during the same year. The values of the elasticity
coefficients $\beta$ for the 10 sectors are all smaller than one except for
services with the degree of deviation being closely related to the capital
intensity of the sector. The aggregate value for all sectors is exactly
equal to one, indicating that changes in the share of earnings are exactly
proportional to changes in value added. These findings are consistent with
a stable functional income distribution of income during the period irres-
pective of internal changes in industrial structure. It is regrettable in
view of the accelerating growth of the economy after this period that this
series is not available beyond 1966. Using different sources for the
<table>
<thead>
<tr>
<th>Sector</th>
<th>Elasticity</th>
<th>Standard Error</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Agriculture</td>
<td>.9397</td>
<td>.0405</td>
<td>.9782</td>
</tr>
<tr>
<td>2. Mining Quarrying</td>
<td>.9289</td>
<td>.0168</td>
<td>.9961</td>
</tr>
<tr>
<td>3. Manufacturing</td>
<td>.9573</td>
<td>.0083</td>
<td>.9991</td>
</tr>
<tr>
<td>4. Construction</td>
<td>.9355</td>
<td>.0208</td>
<td>.9941</td>
</tr>
<tr>
<td>5. Electricity, Water, Sanitation</td>
<td>.8517</td>
<td>.0427</td>
<td>.9707</td>
</tr>
<tr>
<td>6. Transportation, Storage, Communications</td>
<td>.9387</td>
<td>.0136</td>
<td>.9975</td>
</tr>
<tr>
<td>7. Wholesale and Retail Trade</td>
<td>.9415</td>
<td>.0667</td>
<td>.9430</td>
</tr>
<tr>
<td>8. Banking, Insurance, Real Estate</td>
<td>.9605</td>
<td>.0185</td>
<td>.9956</td>
</tr>
<tr>
<td>9. Services</td>
<td>1.0440</td>
<td>.0175</td>
<td>.9963</td>
</tr>
<tr>
<td>10. Foreign Sector</td>
<td>.9972</td>
<td>.0225</td>
<td>.9939</td>
</tr>
<tr>
<td>ALL SECTORS</td>
<td>1.0004</td>
<td>.0324</td>
<td>.9876</td>
</tr>
<tr>
<td>3.a Manufacturing (1957-1972)(Lim[28])</td>
<td>.88</td>
<td>.07</td>
<td>.92</td>
</tr>
</tbody>
</table>
manufacturing sector between 1957 and 1972 Lim [21] finds a significantly lower elasticity coefficient of .88. If similar results were obtained for the other 9 sectors they would indicate a redistribution away from wages to profits and business owners in the later part of the period.

These results are once again consistent with a non-deteriorating income distribution during the period 1960-1968. After 1968 as Lim shows, there has been a rapid increase of the wage level in the mining and manufacturing sector which is likely to have increased wage disparities between modern manufacturing activities and the more traditional ones. This would be consistent with the increase in dispersion in wages and salaries (G = .241) reported for 1968 and in wages and salaries by occupation estimated for 1970 (G = .250).

One possible way to corroborate these findings at the industry level and the unit elasticity of total earnings with respect to total value added for all sectors is to look at the changing composition of National Income and at the share of compensation for employees over time. The Korean data show that the share of compensation for employees has been increasing steadily since 1953 from 25% to 39% of National Income in 1972. But this apparently favorable result for labor has more to do with structural changes in business organization and the rapid growth of large corporations than to a favorable redistribution of income from profits to wages. One must also note that a great deal of profits may be underreported and, on the other hand, that employers have incentives to overstate the amount of wages paid to their employees.
3.7 Dispersion of Wages in Mining and Manufacturing

The first extensive survey of wages and salaries has been done by the Bank of Korea in 1967. In 1970 a comprehensive survey covering activities other than mining and manufacturing was sponsored by EPB [31]. Their results confirm our earlier expectations that a rapid increase in manufacturing would be accompanied by greater dispersion of compensation because of industrial diversification. The comparison of the two surveys shows that during the period mining and manufacturing wages have increased much faster than the price index and labor productivity. "However the gains were not uniform, the wage level of low and average wage earners rose less rapidly than for the top wage earners. The proportion of employees found below the average wage increased from 53.5 to 73.2 percent between 1967 and 1970 in mining and from 65.2 to 66.9 percent in manufacturing industries" ([31], p. 121).

The surveys documents these shifts according to sex, type of job, industry, size of firm, length of experience, educational level and region. It is interesting to note that across all industries the wage level for non-supervisory workers increased faster than for supervisory workers. On the other hand, the gap in wages between male and female workers increased during the period (see Table 10). The shifts in wage levels by size of firm and educational levels were such that the groups with lower levels of education in total gained at least as much or more than the better educated groups. The average wage level for employees with a college and university education was 3.15 times that of employees with primary education or less in 1967. The same ratio declined to 2.91 in 1970. (See Table 11). It is of course an almost impossible task to summarize so briefly the changes in
<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Supervisory</th>
<th>Non-supervisory</th>
<th>Supervisory</th>
<th>Non-supervisory</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mining and Manufacturing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1967 wage</td>
<td>8.3</td>
<td>7.1</td>
<td>8.4</td>
<td>4.3</td>
<td>13.8</td>
<td>21.9</td>
<td>11.1</td>
<td></td>
<td>6.8</td>
</tr>
<tr>
<td>1970 wage</td>
<td>21.6</td>
<td>18.4</td>
<td>21.2</td>
<td>9.7</td>
<td>30.6</td>
<td>44.0</td>
<td>26.3</td>
<td>18.0</td>
<td>14.6</td>
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<tr>
<td>Annual average increasing rate</td>
<td>37.6</td>
<td>37.4</td>
<td>36.2</td>
<td>31.2</td>
<td>36.6</td>
<td>26.2</td>
<td>33.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mining</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1967 wage</td>
<td>10.2</td>
<td>9.3</td>
<td>9.5</td>
<td>4.2</td>
<td>14.9</td>
<td>23.5</td>
<td>12.2</td>
<td></td>
<td>8.0</td>
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<tr>
<td>1970 wage</td>
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<td>25.5</td>
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<td>44.1</td>
<td>26.3</td>
<td></td>
<td>15.4</td>
</tr>
<tr>
<td>Annual average increasing rate</td>
<td>37.0</td>
<td>40.0</td>
<td>40.6</td>
<td>41.9</td>
<td>22.2</td>
<td>23.4</td>
<td>29.2</td>
<td></td>
<td>24.4</td>
</tr>
<tr>
<td><strong>Manufacturing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1967 wage</td>
<td>8.1</td>
<td>6.8</td>
<td>8.1</td>
<td>4.3</td>
<td>13.7</td>
<td>21.7</td>
<td>11.0</td>
<td></td>
<td>6.7</td>
</tr>
<tr>
<td>1970 wage</td>
<td>21.5</td>
<td>18.3</td>
<td>21.0</td>
<td>9.7</td>
<td>30.8</td>
<td>44.0</td>
<td>26.3</td>
<td>18.0</td>
<td>14.5</td>
</tr>
<tr>
<td>Annual average increasing rate</td>
<td>38.5</td>
<td>39.1</td>
<td>37.4</td>
<td>31.2</td>
<td>31.0</td>
<td>26.6</td>
<td>33.7</td>
<td></td>
<td>29.4</td>
</tr>
</tbody>
</table>

Source: [31], p. 139.
<table>
<thead>
<tr>
<th>Level of Education</th>
<th>1967</th>
<th>1970</th>
<th>5-9</th>
<th>10-29(^1)</th>
<th>30-99(^2)</th>
<th>100-199</th>
<th>200-499</th>
<th>500 &amp; over</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>1967</td>
<td>6.1</td>
<td>5.1</td>
<td>6.2</td>
<td>5.5</td>
<td>5.7</td>
<td>6.7</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>1970</td>
<td>13.9</td>
<td>11.2</td>
<td>11.8</td>
<td>13.9</td>
<td>14.0</td>
<td>16.6</td>
<td>18.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Annual average increasing rate</td>
<td>31.6</td>
<td>30.0</td>
<td>31.4</td>
</tr>
<tr>
<td>Middle</td>
<td>1967</td>
<td>7.6</td>
<td>6.4</td>
<td>6.8</td>
<td>7.0</td>
<td>7.3</td>
<td>8.3</td>
<td>8.7</td>
</tr>
<tr>
<td></td>
<td>1970</td>
<td>17.4</td>
<td>14.2</td>
<td>14.8</td>
<td>18.0</td>
<td>17.5</td>
<td>18.6</td>
<td>20.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Annual average increasing rate</td>
<td>31.8</td>
<td>30.4</td>
<td>29.6</td>
</tr>
<tr>
<td>High School</td>
<td>1967</td>
<td>10.9</td>
<td>7.9</td>
<td>9.3</td>
<td>10.5</td>
<td>10.3</td>
<td>12.3</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td>1970</td>
<td>24.7</td>
<td>15.5</td>
<td>20.5</td>
<td>25.7</td>
<td>24.7</td>
<td>26.1</td>
<td>28.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Annual average increasing rate</td>
<td>31.4</td>
<td>25.2</td>
<td>30.1</td>
</tr>
<tr>
<td>College &amp; University</td>
<td>1967</td>
<td>19.2</td>
<td>11.2</td>
<td>14.6</td>
<td>17.0</td>
<td>19.3</td>
<td>21.6</td>
<td>23.0</td>
</tr>
<tr>
<td></td>
<td>1970</td>
<td>40.5</td>
<td>21.0</td>
<td>31.5</td>
<td>37.3</td>
<td>41.2</td>
<td>42.0</td>
<td>47.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Annual average increasing rate</td>
<td>28.3</td>
<td>23.3</td>
<td>29.2</td>
</tr>
</tbody>
</table>

\(^1\) 10-49 Employees in 1970.  
\(^2\) 50-99 Employees in 1970.  

Source: [31], p. 140.
such a complex system as the wage structure of an economy. Once again, however, we are observing shifts in factor payments which reflect the relative scarcity of certain skills or the relative productivity of different jobs but we cannot report a significant deterioration of the situation of the less privileged compared to the most privileged. The only notable exception being female workers (see Table 10).

3.8 The Role of Savings and Wealth

A major source of inequality in the long run is the unequal distribution of wealth and the different levels of savings according to current income. The evidence on the distribution of wealth in Korea was collected by the Bank of Korea for 1968 but its results have not been released even in summary tables. We are left to speculate both on the extent of inequality in the control of wealth and on its evolution over time.

In terms of savings, we present in Table 12 the results of the 1969 Urban Survey by the Bureau of Statistics of EPB and of the 1970 Farm Household Survey. The details of the 1970 Urban Survey were not available to us but we believe that the comparison of the two sectors one year apart is not too distorted for our purpose. Two facts emerge from Table 12. First, on a per capita basis the level of consumption of all farm households is below the average level of consumption in the urban sector a year earlier (figures undeflated). This confirms our earlier findings on rural-urban inequality. Second, we find that a substantial share of the population is dissaving in any given year: approximately 30% of the urban households were dissaving and getting into debt. About 26% of the farm households were also dissaving.

A substantial amount of dissavings in lower income brackets is the general finding in income distribution surveys in a large variety of countries. It reflects a variety of factors such as poverty, young households dependent on their relatives.
### TABLE 12. HOUSEHOLD CONSUMPTION EXPENDITURE SURVEYS OF 1969 AND 1970

<table>
<thead>
<tr>
<th>Monthly Income</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average Consumption</td>
<td>Number of Household</td>
<td>Size of Household</td>
<td>Per Capita Expenditures**</td>
<td>Percentage of Sample</td>
<td>Cumulative Distribution</td>
<td>Annual Savings</td>
<td>Monthly Savings</td>
<td>Per Capita Monthly Savings</td>
</tr>
<tr>
<td>A. URBAN HOUSEHOLD (1969 MONTHLY)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 7,999</td>
<td>7,920*</td>
<td>32</td>
<td>4.04</td>
<td>1,960</td>
<td>2.96</td>
<td>2.96</td>
<td>-2,000</td>
<td>-495</td>
<td></td>
</tr>
<tr>
<td>8,000 to 11,999</td>
<td>10,640*</td>
<td>112</td>
<td>4.75</td>
<td>2,240</td>
<td>10.38</td>
<td>13.34</td>
<td>- 970</td>
<td>-204</td>
<td></td>
</tr>
<tr>
<td>12,000 to 15,999</td>
<td>13,780*</td>
<td>178</td>
<td>4.92</td>
<td>2,800</td>
<td>16.50</td>
<td>29.39</td>
<td>- 380</td>
<td>- 77</td>
<td></td>
</tr>
<tr>
<td>16,000 to 19,999</td>
<td>17,020</td>
<td>163</td>
<td>5.24</td>
<td>3,248</td>
<td>15.10</td>
<td>44.94</td>
<td>120</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>20,000 to 23,999</td>
<td>19,750</td>
<td>152</td>
<td>5.47</td>
<td>3,611</td>
<td>14.09</td>
<td>59.03</td>
<td>570</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td>24,000 to 27,999</td>
<td>23,710</td>
<td>105</td>
<td>5.65</td>
<td>4,020</td>
<td>9.73</td>
<td>68.76</td>
<td>840</td>
<td>149</td>
<td></td>
</tr>
<tr>
<td>28,000 to 31,999</td>
<td>26,610</td>
<td>107</td>
<td>5.60</td>
<td>4,752</td>
<td>9.92</td>
<td>78.68</td>
<td>1,350</td>
<td>241</td>
<td></td>
</tr>
<tr>
<td>32,000 to 35,999</td>
<td>29,720</td>
<td>51</td>
<td>5.77</td>
<td>5,150</td>
<td>4.73</td>
<td>83.41</td>
<td>1,720</td>
<td>298</td>
<td></td>
</tr>
<tr>
<td>36,000 to 39,999</td>
<td>32,880</td>
<td>31</td>
<td>5.81</td>
<td>5,660</td>
<td>2.87</td>
<td>86.28</td>
<td>1,970</td>
<td>339</td>
<td></td>
</tr>
<tr>
<td>40,000 and over</td>
<td>43,510</td>
<td>148</td>
<td>6.52</td>
<td>6,674</td>
<td>13.72</td>
<td>100.00</td>
<td>3,900</td>
<td>3,906</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>22,110</td>
<td>1,079</td>
<td>5.42</td>
<td>4,079</td>
<td>100.00</td>
<td>100.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| B. FARM HOUSEHOLD (1970) |     |     |     |     |     |     |     |     |     |
| Less than 8,000          | 117,667* | 31  | 3.65 | 2,686 | 3.20 | 3.20 | -85,016 | -7,084 | -1,941 |
| 8 - 12,000               | 122,631* | 76  | 4.25 | 2,404 | 7.84 | 11.04 | -19,267 | -1,606 | -378 |
| 12 - 16,000              | 143,193* | 142 | 5.46 | 2,185 | 14.65 | 25.69 | - 2,174 | 181 | 34 |
| 16 - 20,000              | 161,088 | 146 | 5.53 | 2,427 | 15.07 | 40.76 | 20,539 | 1,711 | 309 |
| 20 - 24,000              | 174,045 | 135 | 5.87 | 2,470 | 13.93 | 54.69 | 42,744 | 3,562 | 607 |
| 24 - 28,000              | 212,033 | 96  | 6.14 | 2,878 | 9.91  | 64.60 | 45,369 | 3,780 | 616 |
| 28 - 32,000              | 232,915 | 89  | 6.72 | 2,888 | 9.18  | 73.78 | 66,595 | 5,549 | 826 |
| 32 - 36,000              | 273,011 | 51  | 6.47 | 3,516 | 5.26  | 79.04 | 67,965 | 5,633 | 877 |
| 36 - 40,000              | 285,573 | 53  | 6.90 | 3,449 | 5.47  | 84.51 | 92,439 | 7,703 | 1,116 |
| 40,000 and over          | 338,156 | 150 | 7.09 | 3,974 | 15.49 | 100.00 | 210,743 | 17,562 | 2,477 |

*Expenditures higher than income, annual total.
**Per capita expenditures on a monthly basis.

Sources: [8], p. 35; [23], p. 57.
Obviously this situation is not a permanent one for any given household and one should not assume that the same 30 percent of the population find themselves dissaving year after year. This dissaving is possible because households rely on loans and transfers from their relatives or on their assets after migration to the city to maintain their level of expenditures. In Korea, as in any other country, the distribution of expenditures is more equal than that of savings.

In the long run, inequality in the savings rate by level of income can be expected to have cumulative effects and lead to an increasing concentration of income-yielding assets in the hands of the upper-income groups. However, there are counteracting forces correcting for the concentration of savings in the hands of a smaller upper income group. First, inflation reduced the value of wealth accumulated in the form of "fixed price securities or properties not fully responsive to price changes; or by legal restrictions of the yield of accumulated property in the form of rent controls ..." ([18], p.9). In Korea, inflation has been serious but not too severe (by international standards) during the last decade and the government has regulated the land market to a very great extent: it has tried to recapture much of the appreciation of land values in urban areas, one of the more traditional forms of wealth which keeps up with inflation.

Technological change has been extremely rapid and property assets in the older industries have had less and less weight in the economy. In addition, many of the new industries have been closely controlled by the government, directly and indirectly. This certainly has and will continue to have a strong impact on the use and allocation of corporate savings and

13 Also, there are marked fluctuations in the reported proportion of dissavers among the annual surveys.
on the distribution of wealth,

Some of the other forces which Kuznets indicates have a counteracting effect to the role of savings on the secular distribution of income, do not have much significance for the period of time we are considering. One possible exception is demographic change which can have an immediate bearing on per capita consumption and the level of welfare of lower income households, if young low income households are able to keep their size small.

3.9 Demographic Factors Influencing Economic Inequality

We find in Korea important differentials in fertility and family planning behavior according to age, area of residence, socio-economic status and level of education. As elsewhere the poor have higher levels of fertility which contribute to lower per capita income levels for a given household income. However, the results reported in Table 13 show that in 1970 awareness of the significance of family planning for the long-term welfare of each household had already reached the greatest majority of the population with no difference according to area of residences and very little according to social status except for the lowest status group which still registered 78% of awareness of the problem. Fertility differentials still influence per capita income inequality and the ability to save of low income households. It can be stated that success in bringing down the population growth rate since 1960 is a positive force in favor of income equality, because a smaller household size will improve the chances a poor family has to raise itself out of the trap of bare subsistence living.
<table>
<thead>
<tr>
<th>A. Socio-Economic Status</th>
<th>Number of Pregnancies</th>
<th>Number of Live Births</th>
<th>Age at First Marriage</th>
<th>Heard of at Least One F.P. Method (percent)</th>
<th>Ever Used Contraception or Abortion (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-Upper &amp; Upper-Middle</td>
<td>4.3</td>
<td>3.0</td>
<td>22.1</td>
<td>94</td>
<td>62</td>
</tr>
<tr>
<td>Low-Middle</td>
<td>3.8</td>
<td>3.0</td>
<td>21.3</td>
<td>90</td>
<td>46</td>
</tr>
<tr>
<td>Upper-Low</td>
<td>4.2</td>
<td>3.5</td>
<td>20.2</td>
<td>87</td>
<td>47</td>
</tr>
<tr>
<td>Low-Low</td>
<td>4.7</td>
<td>4.3</td>
<td>18.9</td>
<td>78</td>
<td>39</td>
</tr>
</tbody>
</table>

| B. Residence                     |                       |                       |                       |                                            |                                             |
| Seoul                            | 3.8                   | 2.7                   | 21.6                  | 85                                         | 51                                          |
| Other Cities                     | 4.1                   | 3.2                   | 20.6                  | 84                                         | 45                                          |
| Rural                            | 4.5                   | 4.2                   | 19.5                  | 85                                         | 44                                          |

Source: Chung et al. [12], Tables 5-1, 5-3, 5-7, 5-9.
CONCLUSIONS

When we began our research for the preparation of this paper we were open to believing that income distribution had seriously deteriorated during the last decade of extremely rapid growth in Korea. We have presented an extensive amount of evidence which gives cause for somewhat more optimism in the current debate on growth versus income equality. We have found the following for Korea:

1. Income inequality in Korea does not appear to be greater than in developed countries; in fact inequality appears to be less. Compared to countries with similar levels of per capita income Korea has certainly much less inequality.

2. We tried to produce as much evidence as we could to show that inequalities during this period of rapid growth became more pronounced but except for the deterioration of the distribution of wages we found that all major indicators within sectors were, if anything, moving in the direction of more equality.

3. As is the case in every country, the extent of poverty is much greater in Korea among the rural population than in the cities. The comparison of the urban and farm households surveys in Table 12 shows that all farm households had expenditures per capita below the mean value for urban households. The question then becomes one of defining the income floor below which nobody should be found. On the basis of the surveys summarized in the same Table, one can estimate that approximately 30% of the non-farm population and 55% of the farm population yields the approximate total of 13.04 million of individuals (7.94 farm and 5.10 non-farm) or 41% of the total population.

While this crude choice of a desirable level of income is informative it cannot be expected to lead to selective policies for the group which has not yet reached that level because it encompasses too large a share
of the total population. In their international comparisons of poverty, Chenery et al. have used the two somewhat arbitrary figures of 50 and 75 U.S. dollars of income per capita per year (10). Applying these figures to 1970 expenditures data in Korea we find that less than 3 percent of the total population would fall below this level of destitution. This is less than 943,050 for the 1970 population, the true size of this group can only be conjectured considering the limitations of the survey information.

4. There is no necessary relationship between higher growth rate and greater inequality nationwide as is often assumed. Since 1963, Korea has been one of the top economic performers with Taiwan and both countries rank well in terms of inequality. For Korea, the available data does not provide any evidence that serious deterioration of income distribution has taken place on a nationwide basis.

The major reasons for the low level of inequality observed for Korea may be difficult to reproduce in other areas. First, Korea is not very well endowed in natural resources and the very thorough land reform of 1947-49 has been a major element of equality before the rapid growth of the 1960's.

Second, the demand and the supply of educational services are at very high level in Korea. The expenditures surveys confirm what is otherwise well known: the share of expenditures on education is both significant and rising for all segments of the population rural or urban. Through the extensive use of competitive examinations in all phases of life, individuals have greater chances of rising on their own merits.

Third, the rapid growth of employment in urban areas has contributed significantly to the increase of the real wage level and the rapid reduction of absolute poverty during the decade, especially when compared with the end of the war in 1953. During the sixties wage gains have been fairly distributed according to educational levels and job status.
Fourth, the demographic threat of high population growth rates has been significantly reduced during the decade, but not yet eliminated. A reduction of household size can only help low income families escape self-perpetuating poverty.

It seems important to restate at this stage what has been said throughout the paper; the data base available is not of the best quality and every individual piece of evidence taken in isolation cannot permit a conclusion as to the direction of change in income distribution. However, one has to accept the fact that the various times series with supposedly similar biases from year to year, collected in different ways by different agencies or researchers do not give any strong support for a belief in a rapid deterioration of the income distribution over the decade of the sixties. Despite the fact that some of the indicators have even moved in the direction of greater equality we have chosen to say that the variety of evidence based on tax data, income surveys, national accounts data, consumer expenditures surveys, wage surveys, leads to a finding of non-deterioration of the Korean income distribution for the period.

We have been able to identify two significant sources of inequality: rural-urban disparities and the growing dispersion of manufacturing wages. The net result is a strong tendency for inequality in Korea to be related to the place of residence. Inequality between farm and non-farm income has been rising early in the sixties and appeared to be moderating by the end of the decade. The reason why its effect has not been more conspicuous on nationwide inequality is the very heavy rural out-migration at the end of the decade when 8.5 percent of the farm population moved to cities in four years. While the richer urban sector was gaining ground rapidly the size of the farm sector was decreasing in absolute numbers. As we have seen
in Table 8, the EPB data shows a trend towards greater equality within the urban sector; on the other hand the cross-sectional analysis for provincial data in 1970 shows that income distribution is more unequal in Shis than in other areas that year. While the cross-sectional results for 1970 are based on much firmer data they cannot negate the time series outright; another cross-sectional analysis would be needed to show that the interprovincial situation was better before 1970.

The same pattern of employment mobility and migration appears to explain the mild impact of rising wage differentials between traditional and modern manufacturing activities on total income distribution at the same time that the dispersion of capital per worker has been increasing.

Alternative measures have been used in the paper; they are techniques which have been used so far in all studies of income distribution everywhere and one must note their common characteristics of focusing on large sections of population: none measures the absolute gap between the poorest individual and the richest. The question is, how rich any single individual would have to be to affect significantly the value of a Gini coefficient. To what extent would a small number of very wealthy people make a difference. One should keep in mind also that data coverage ends in 1970. Extremely high annual growth rates above 10 percent have been experienced since that time and it becomes very important to know whether the current experience in 1975 and 1976, fresh in the mind of observers, is significantly different from the experience of the 1960s. In addition, it is possible to observe a stable value of Gini coefficients while the share of the lowest decile declines, because the upper decile is losing ground to the nearest income groups on top of the scale. We do not know whether this is the case for Korea since 1970. One must note, however, that the "Saemaul movement"
is reported to have generated very significant relative gains for the rural population. Under these conditions the income distribution may be remaining stable until the present.

The evidence gathered raises a number of very significant issues which could only be answered by systematic analysis. There remains one meaningful data base which could not be analyzed here. A comprehensive decomposition analysis of the 20,000 observations contained in the 1968 survey based on Theil's index of inequality would provide invaluable information on the contribution to inequality of the different factors which we could analyze only in a piecemeal fashion. This, however, would leave unanswered the question of whether income inequality had indeed not deteriorated in the 1960s as the present evidence indicates. It can only be hoped that the questions raised in this review paper will not be left unaddressed by Korean economists, nor casually dismissed.

Such an analysis would not close the door on the unending debate on the nature and sources of inequality. As Streeter has pointed out recently: "Inequality of income distribution touches only a small portion of the vast multidimensional problem of inequality. There is inequality of assets, of access to earning opportunities, of satisfaction from work, of recognition, of ability to enjoy consumption, of power, of participation in decision-making. The call for greater equality, for a genuine community of equals cannot be answered simply by measures that reduce to the Gini coefficient or any other simple measure of inequality. It is possible to envisage a technocratic society, where decisions are highly centralized and in which a few enjoy the satisfaction from power and creativity while the many carry out boring and disagreeable tasks in a hierarchic structure and in which the Gini coefficient was zero" ([32], p. 48).
REFERENCES


