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EQUITY WITH GROWTH IN TAIWAN:

HOW "SPECIAL" IS THE "SPECIAL CASE"?

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EQUITY WITH GROWTH IN TAIWAN: HOW "SPECIAL" IS THE "SPECIAL CASE"?*

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I. Introduction

This paper is intended to review some of the principal findings of recently completed research on income distribution in Taiwan,[1] to present some of the policy conclusions which seem to emerge from that analysis, and to comment on the applicability or non-applicability of the lessons of that particular case to other presumably "less special" developing economy situations.

Although the research on Taiwan spans the entire 1953-1972 period, our major analytical focus was on the years after 1964 for which reliable family income and expenditure surveys are available. We started with the "fact" that in the early '50s Taiwan apparently experienced a distribution of income--as measured by the Gini Coefficient[2]--in the upper reaches (above .5) of contemporary LDC experience, that the Gini apparently fell substantially (to above .4) by the end of that decade, and fell much further (to near .3) by the time the superior data begin, in 1964. Secondly, we may note, and with a much greater degree of confidence, that the level of the Gini between 1964 and 1972 held more or less steady until 1968, declining further thereafter.

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[1] See John Fei, Gustav Ranis and Shirley W. Y. Kuo, Equity with Growth: The Taiwan Case, forthcoming. For a brief summary version also see our "Growth and the Family Distribution of Income by Factor Components", Quarterly Journal of Economics, (November, 1977).

[2] We recognize that there are other indicators, better for some (and worse for other) analytical purposes. Also, that absolute, rather than relative, poverty may be what moves people--and governments. But this is not the appropriate place for a discussion of these issues.

*This is a revised version of a paper presented at the World Bank's Bellagio Conference on Income Distribution, April, 1977.

Over the same two decades we may note a marked acceleration of already respectable rates of per capita income growth, from 2.7% annually in the '50s, to 5.8% annually in the '60s. There can be little doubt, in other words, that the so-called inverse U-shaped or Kuznets effect was apparently avoided in Taiwan during a period of unusually rapid growth, and it is undoubtedly this fact, running counter to the generally prevailing evidence,[3] which renders the Taiwan case of such particular interest. Presentation of one thoroughly documented counter-example should at least force the dominant school of "trade-off pessimists" to place more reliance on analytical necessities rather than circumstantial evidence.

Obviously no two countries are ever "the same"--either from the point of view of their economic or institutional structure. The analysis of a successful counter-example to the general rule in the social sciences can not carry the same power as in mathematics, but should, nevertheless, be instructive--even if only to underline the specific special features which render the particular experience non-transferable. Neither the (frequent) reaction that Taiwan is a U.S. satellite inhabited by superior cultural achievers and therefore irrelevant--nor the (less frequent) response that every LDC could imitate the Taiwan experience if it only had the will to do so--is appropriate or particularly helpful. More helpful--if also more elusive--is the attempt to differentiate between those elements of "non-transferability" which relate to obstacles "in nature" versus those relating to obstacles "in man". While we obviously cannot hope to "settle" such

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[3] Mustered cross-sectionally by S. Kuznets, "Economic Growth and Income Inequality," American Economic Review 45, no. 1, 1955, I. Adelman and C. Morris, Economic Growth and Social Equity in Developing Countries, 1973,

F. Paukert, "Income Distribution at Different Levels of Development: A Survey of Evidence," International Labour Review 108, 1973 and historically by A. Fishlow, "Brazilian size distribution of Income," American Economic Review 62, 1972, R. Weisskoff, "Income Distribution and Economic Growth in Puerto Rico, Argentina, and Mexico," Review of Income and Wealth, 1970 and A. Berry and M. Urrutia Income Distribution in Colombia, Yale University Press, 1976.

weighty questions in the context of this paper, we do intend to try to pry open the door just slightly to a fuller understanding.

Accordingly we will proceed by summarizing our analytical findings and policy conclusions for the case of Taiwan (in Section II) and conclude with a discussion of the transferability/non-transferability issue (Section III). We will endeavor to enrich the latter by reference to more "typical" LDC situations such as, for example, those of Colombia and the Philippines. Since to date no similar exhaustive analysis of such other country cases has, however, been undertaken by us, this discussion will necessarily have to remain at a more general, impressionistic level. It will nevertheless permit us to ruminate about the relevant differences, and similarities, between Taiwan and some less "deviant" LDC, call it "Colphil," and the extent to which these can, or cannot, be overcome by policy actions.

II. The Taiwan Case: Findings and Conclusions

Although this is clearly not the place to detail the analytical basis of our work a brief word on methodology is required to render such a summary of findings half-way comprehensible.[4] The data base in Taiwan permits us to differentiate between rural and urban households and among the major sources of income. Urban families are principally engaged in industry and service activities generating wage and property income; rural families, on the other hand, are engaged in both agricultural production, generating a merged "agricultural income", and non-agricultural production activities, generating wage and property incomes. Dealing with urban, rural and all families separately, the analytical device used is to establish the impact of growth on changes

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[4]The interested reader is referred to Chapter VII of Equity with Growth: The Taiwan Case, op. cit.

in the size distribution of income via a method of decomposition into additive factor Ginis, in which the distribution of each component income source and its weight in the total are essential ingredients. Changes in the overall Gini can in this way be analyzed both qualitatively and quantitatively in terms of three causal factors: a "functional distribution effect", traced to changes in the functional distribution of income, as between capital and labor; a "reallocation effect", traced to the change in the share of agricultural income in total income, signifying the extent to which a shift in the center of gravity in the two-sector economy has taken place; and a "factor Gini effect", traced to changes in the inequality of the various factor incomes (wage income, property income, agricultural income), taken separately.

The first two effects can be linked up analytically with development theory, via the impact of changes in factor proportions and the strength and bias of innovations, in the first case, and via the impact of the pace of inter-sectoral labor and output reallocation, in the second. The third effect can be linked to changes in the distribution of human and physical assets across families, which is, in turn, related to differential saving and educational expenditure behavior over time; although we also make the effort to examine the underlying causes, for example, of wage income inequality--the most important component of total family income--this area of inquiry is admittedly less firmly related to established theory at this stage of our knowledge.

Our empirical findings[5] at the aggregate level clearly indicate the

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[5]Household survey data for all of Taiwan for 1964, 1968, 1970, 1971 and 1972 are used. For 1964, it is not possible to distinguish between urban and rural families.

existence of a turning point around 1968. The Gini for all households, virtually constant before 1968 (+1.6% over four years), declines markedly after 1968 (-11.1% over four years). Virtually the same is true for the urban households, taken separately, with the relevant changes at +1.9% over two years and -14.6% over four years, respectively. On the other hand, as far as rural households are concerned, significant improvement before 1968 (-11% over two years) gives way to virtual constancy after 1968 (+.1% over four years).

These results lend powerful support to the result, independently established elsewhere[6], that Taiwan reached a significant milestone with respect to growth, near the end of the '60s. What we are, of course, referring to is the gradual ending of the labor surplus condition as demonstrated by the change in the rate of increase of unskilled wages before and after 1968, which is apparently relevant for income distribution as well as growth. Consequently our basic thesis, that income distribution is essentially a growth-sensitive phenomenon and can only be analyzed in the context of the rules of behavior relevant to the particular subphase of growth a country has reached, is strongly supported.

We may also note, at a still high level of aggregation, that the credit for the apparent overall avoidance of the "Kuznets effect", can be laid at the doorstep of the more dominant sector in each subphase, i.e., on the rural sector while the unlimited supply of labor condition persisted, and on the urban sector thereafter. The crucial part of the story is, of course, the apparent avoidance of conflict between rapid growth and equitable distribution prior to 1968. Thus, the early favorable attention accorded to the

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[6] John C.H. Fei and Gustav Ranis, "A Model of Growth and Employment in the Open Dualistic Economy: The Cases of Korea and Taiwan," Journal of Development Studies, Vol. 11, No. 2, January, 1975.

rural sector in Taiwan--dating back to the Japanese colonial period and substantially reinforced in the '60s--clearly represents a policy-relevant conclusion at this same level of generality.

The three types of "effects" presented above also permit us, however, to dig a little deeper in terms of the causes of the unusually favorable interaction between growth and income distribution observed in Taiwan. This is accomplished by "decomposing" the total change in the Gini for each of our groups for any given time period into that "due to" the change in the relative non-agricultural wage and property income shares (the "functional distribution effect"), that due to the change in the relative size of the agricultural and non-agricultural sectors (the "reallocation effect"), and that due to the change in the inequality in the distribution of a particular income component (the "factor Gini effect"). Our empirical findings at this level were:

1) that for <u>rural households</u> a dominant cause of income distribution performance, strongly favorable to equality both before and after 1968, is the reallocation effect; and
2) that for <u>urban households</u> a dominant cause, highly unfavorable before and favorable after 1968, is the functional distribution effect.

This in turn tells us that the two more narrowly growth theory-related effects are not only <u>relevant</u> but also <u>dominant</u> in terms of the income distribution outcome. Moreover, as we would expect from growth-relevant phenomena, different forces predominate in each sector. Specifically, in the urban sector, the accumulation of capital relative to labor, plus the nature and strength of technology change, constitute the essence of the industrialization effort, and it is for this reason that the fate of the distributive shares constitutes a dominant cause of income distribution equity. In contrast, for

rural households, it is the reallocation of labor from agricultural to non-agricultural activities which represents the more crucial development issue and turns out to be a dominant cause of income distribution performance.

These findings also help us to identify the proper policy focus. In the rural sector, the growth of industries and services mutually interacting with a dynamic agriculture and providing additional employment and income opportunities to members of rural households is crucial; in the urban sector, such elements as the wage rate, the adoption and adaptation of technology, plus trade and domestic factors affecting the output mix (among others determining the functional distribution of income) assume major importance. Taking this as a point of departure, we are now in a position to take a closer look at precisely how these various growth-relevant forces impacted on the distribution of income in Taiwan.

With respect, first, to the rural families, we find

3) that their agricultural income is consistently more unequally distributed than their non-agricultural income;[7]

4) that the share of non-agricultural income in their total income is both large and rising;

5) that the rural industry and service activities which are the source of this income are labor-intensive (relative to their urban counterparts), and increasingly so;[8]

and finally,

6) that their agricultural income is also becoming more equally distributed over time.

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[7]What we call a Type I income, increasing more than proportionally with total family income. Type II income increases less than proportionally with family income. Type III decreases as total family income increases.

[8]At least as measured by the relative share of labor to property income.

Result (3) indicates that in the rural areas the income from the more "traditional" agricultural pursuits is more unequally distributed than the income from the more "non-traditional" non-agricultural activities. In combination with results (4) and (5), it tells us precisely how the "reallocation effect" has operated as the dominant force in improving the distribution of income among rural families. The extent to which industrialization in Taiwan was decentralized and labor-intensive was apparently crucial in providing a large volume of additional employment opportunities to members of rural households, especially the poorer ones.

It is especially noteworthy that finding (5), reflected in a relative share of labor (within non-agricultural income) rising from .66 in 1964 to .75 in 1968, runs strongly counter to the normal, i.e., Arthur Lewis',assumption that labor's share must fall during the unlimited supply of labor phase. Instead, what happened in Taiwan is that, in spite of relatively low wage rates, the wage share could rise markedly as poor families had more members employed, working more hours per week.

With respect to the last finding (6), it is, for reasons already alluded to, more difficult to be certain of the basic causes here. It may be supposed that the three-step[9] land reform program of the early '50s had a lot to do with the lowering of the agricultural income Gini during that decade. For the period of the '60s, on which our full decomposition analysis is necessarily concentrated, the explanatory evidence is more likely to reside in the proportionately much heavier application on the smaller plots (i.e., by the relatively poorer farmers) of multiple cropping patterns and the introduction of such new, higher valued, and more labor intensive

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[9]Consisting, briefly, of a reduction in rents, sales of public lands, and a "soil to the tiller" program, with easy terms for tenants and low compensation prices for landlords.

crops as mushrooms and asparagus.

The policy implications of the above are both clear and interesting. Decentralized industrialization was the by-product of both Japanese colonial emphasis on the rural sector and of conscious post-war Taiwanese policy. The former concentrated heavily on roads, irrigation and rural electrification as part of the effort to extract agricultural surpluses in the form of rice and sugar for the mother country. The latter exhibited itself in both indirect and direct government actions. In the more important indirect category must be counted the relatively mild and flexible manner in which the import substitution package of the '50s was applied, followed by early and substantial liberalization in the '58-'63 period. Specifically, between 1953 and 1958, agriculture did not suffer the "customary" severe discrimination and deterioration of its terms of trade ,while stabilization was achieved and protection was kept a reasonably "low" and interest rates at reasonably "high" levels, at least by international LDC standards; the well-known "Nineteen Points" policy reforms which followed, particularly with respect to the foreign trade sector, provided the kind of access for small- and medium-scale firms--more likely to be rural--seldom encountered elsewhere. With respect to direct actions, Taiwan early on expanded the rural infrastructure, physical and institutional, left by the Japanese, including an emphasis on rural (especially paved) roads, an expanded island-wide rail system, the construction of dispersed industrial estates, bonded factories and export processing zones within daily reach of rural households, and the maintenance of a policy of equalizing power and fuel rates throughout the island. The avoidance of the all-too-frequently found direct or

indirect incentives for concentration and agglomeration is but the other side of the same coin.

The farmers association structure also served to facilitate the inter-sectoral flow of ideas, along with capital, e.g., with respect to agriculture and processing as well as other domestic raw materials based industries; a variety of specialized applied industrial institutes and investment centers were established, avoiding in large measure, as a result of their relative greater market orientation, the frequently encountered "big breakthrough-white elephant" syndrome. Add to this the relatively wide participation of small landlords in industrial activities--achieved via the proviso that 30% of land reform compensation was to be made in the form of ex-Japanese industrial assets--and we have the main elements of a rural industrialization strategy. Samuel Ho[10] found rural industrial employment rising from 47% to 52% of the total between 1956 and 1966. The industrial censuses provide similar evidence in terms of a faster growth of the number of rural than urban establishments over the entire 1951-1971 period. While this is not true in output terms, as late as 1971 39% of Taiwan's producer goods and 61% of her consumer goods were still produced outside of her five major cities. During the 1956-66 decade, the share of rural manufacturing employment in total rural employment rose from 8% to 11% and that of commerce and services from 12% to 26%.

Small wonder that the share of rural family income derived from non-agricultural activities could rise from a respectable 33% in 1964 to 53% by 1972. Even more significant for our purposes is the fact that, for the poorest families (land area below .5 chia), the percentage of total farm

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[10]Samuel P. S. Ho, The Rural Non-Farm Sector in Taiwan, The World Bank, Studies in Employment and Rural Development No. 32, September, 1976.

family income generated outside of agriculture was close to 70%, while for the richest families (land area greater than 2 chia), the equivalent figure was around 25%. All this was accomplished in large part not by agricultural workers "leaving the soil"--only 24% of the females working in non-agriculture and 16% of the males actually migrated to urban employment;[11] instead, commuting to work (e.g., by bicycle to the export processing zones) accounted for 24% of the males and 35% of the females "reallocating", while seasonal participation was the method for 61% of the males and 41% of the females. The choice of relatively labor-intensive production functions and output mixes in both rural non-agriculture and in such urban activities as export processing zones, able to attract rural household members on a daily commuting basis, reinforced the power of the reallocation effect over time.

With respect to the contribution made via the decline over time of the high agricultural income Gini (relative to the non-agricultural income Gini), the policy implications here are somewhat less direct, just as our theory is less satisfactory. Early land reform (some very early, i.e. in 1905, during the Japanese period) undoubtedly helped--probably not so much in terms of the once-and-for-all change in the structure of assets and rental incomes as in terms of the resulting greater intensity of land use via multiple and new crops--in which the poorer farmers once again participated proportionally more heavily. One feature of land reform which often leads to a worsening of the distribution of income was clearly avoided here, i.e. that of the neglect of (sometimes even creation of new) unemployed landless workers.

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[11] According to a 1963 JCRR survey, Tsui and Lin, "A Study on Rural Labor Mobility in Relation to Industrialization and Urbanization in Taiwan", JCRR Economic Digest Series, No. 16, 1964.

The ability of the poorest farmers to be absorbed by the burgeoning new agricultural and non-agricultural rural activities was clearly the crucial causal element behind the non-Kuznetsian income distribution path followed by rural households. The experience of Taiwan thus seems to show that it takes an active balanced rural growth strategy to improve the rural household distribution of income. Early land reform was probably responsible more for the initial low level of the rural household Gini than for its favorable performance over time in the context of rapid overall and agricultural growth.

Moving on, secondly, to the urban families, we have already noted that here the functional distribution effect is most significant, and that its impact on overall equity changes from mildly unfavorable before 1968 to substantially favorable thereafter. Our more detailed empirical findings in this regard indicate that

7) property income arising out of non-agricultural activity is always more unequally distributed than wage income and that

8) labor's share decreases slightly relative to the property share before 1968 and increases relatively thereafter.

Together, these two results underline the growth sensitive nature of income distribution trends: before the exhaustion of the labor surplus condition, with labor's share falling, the functional distribution effect was unfavorable for the size distribution of income; afterwards, with labor's share rising, it became favorable. Before 1968, with real unskilled wages relatively stable due to the overhang of the reserve army of the underemployed, the urban family's labor share declined slightly--though not nearly as much as predicted by Lewis et al. Employment opportunities (and hours worked) did not expand quite as much as was the case, relatively speaking, in the more

labor-intensive rural non-agricultural activities discussed earlier. Consequently, we observe an extremely "mild" version of the Kuznets effect here. Once labor had become a scarce commodity, the marked acceleration of real wage increases combined with the related rise in capital intensity (and greater labor-saving technology bias at the margin), led to an increase in the wage share, and a consequently strongly favorable impact on urban family income distribution.

The policy conclusions emanating from these findings seem quite straightforward as well. Apparently, while the Kuznets effect seems to be observed here, it can be rendered so weak that things, even for the urban families taken by themselves, only have to get a "little worse" before they can get "much better." The improvement of the distribution of income after labor scarcity has set in is a "natural" phenomenon, in harmony with the views of Lewis, Kuznets, etc.; the softening--and possibly complete avoidance--of any deterioration before that point is less automatic and subject to policy, including all actions directed to the reduction of existing distortions of relative prices and technology choices which favor "unwarranted" or "premature" capital intensity in both urban industrial techniques and output mixes. But, of course, the most reliable method of ensuring or improving the distribution of income for the urban families is to hasten the advent of the turning point itself--via an acceleration of a balanced intersectoral growth effort within the dualistic economy setting.[12]

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[12]Lots of further policy conclusions underlie this statement, with respect to the functioning of intersectoral commodity, financial and labor markets. But these will not be elaborated here. The interested reader is referred to Fei and Ranis, Development of the Labor Surplus Economy: Theory and Policy, Irwin, 1964.

Finally, taking all households together, we have further proof that, in the presence of a substantial rural sector, there is nothing inevitable about the appearance of a strong Kuznets effect in the course of rapid growth. Our quantitative findings indicate that

9) the factor Gini effect is dominant here.

Moreover, disaggregating further, we see that the improvement of the agricultural Gini battles the conventionally deteriorating non-agricultural Gini to a virtual stand-off before 1968, with the reallocation and functional distribution effects both helpful. The rising overall wage share--running counter to most dual economy,Marxist and dependencia theorists--is especially noteworthy. After 1968, the strong improvement via the non-agricultural Gini effect, along with the now greater help emanating from the functional distribution effect, provides the expected results.

Overcoming the tendency for markedly increased inequality when rapid growth first gets under way is, of course, the critical accomplishment. In the case of Taiwan, it was apparently achieved via the combination of a functional distribution of non-agricultural income which did not turn against labor, plus the consistent improvement in an initially badly distributed agricultural income. As we have already noted, both phenomena are related to the early rural orientation, both in agriculture and non-agriculture, of the Taiwan development effort. Once the Kuznets effect is disaggregated in this fashion, the inevitability of the implied early conflict between growth and distribution tends to disappear.

Turning to a yet more disaggregated level of our analysis of income distribution in Taiwan, we may note that

10) every wage Gini (i.e. for rural, urban or all families) lies below

its property Gini.

But, while the unequal distribution of property income contributes more than its weight to overall income inequality in each case, the overall contribution of wage income, given its weight, is still greater. Moreover,

11) every rural income Gini lies below its urban equivalent.

This indicates the existence of greater structural dualism in terms of the inequality of property income and of labor force heterogeneity in the urban areas. These inter-sectoral gaps, incidentally, are seen to erode after 1968 when such structural differences between the sectors apparently tend to lose their significance.

Additional research was undertaken to probe somewhat deeper into the causes of wage income inequality, utilizing cross-tabulated data compiled for the year 1966 only. Our framework here recognizes the importance of labor force heterogeneity-in terms of differences in education, age, sex and differences in family economic power (proxied by total income). Three levels of analysis were employed: at the first level, we attempted an explanation of the differentiated structure of wage rates as traced to the above labor force characteristics; at the second level, we tried to explain the inequality of wage income as traced to the differential rate structure plus labor force composition; at the third level, finally, we tackled the explanation of the inequality of family wage income traced, in addition, to the membership composition of the various families.

At the first (and more conventional) level, we find that

12) urban areas seem to give greater weight to such "unwarranted" causes of wage rate differences as sex and family influence than rural areas.

On the other hand,

13) premia paid for such "warranted" causes as age and education

differentials are about the same regardless of location.

The policy conclusions here are obvious--if somewhat negative: institutional discrimination against females and members of poorer families exists and should be removed, if possible--while no special effort is needed to render, say, rural labor markets, more perfect.

With respect to the second level, the analysis of wage income inequality, it is only here that we can address the issue as to the relative overall importance of the "warranted" as opposed to the "unwarranted" causes. Our finding here is that

14) sex and family influence together amount to only 33% of the total differential.

This provides us with a warning as to what can be accomplished by a, presumably not costless, policy aimed at totally eliminating this type of institutional discrimination. The differential composition of the urban labor force, apparently tends to compensate for the relatively greater scope for wage rate discrimination, i.e. females and members of poor families get a relatively larger share of the urban jobs. Gradual urbanization can thus perhaps be relied upon to achieve greater equity in the overall distribution of wage income.

At the third level, the analysis of family wage income inequality, we recognize that it is the unequal family "ownership" pattern of this heterogeneous factor--even our crude classification yields almost 40 different grades--which lies behind such inequality. Our more specific finding is that

15) it is the unequal family ownership of high grade labor (e.g., well educated, prime age males) which is the most important cause of overall family wage income inequality.

While very little can presumably be done to affect the distribution of the

family ownership of human assets with respect to age and sex, the same does not hold for education. Empirically, however, as far as the education characteristic is concerned, "the family" turns out to be insignificant as the unit of ownership, i.e., the degree of inequality of wage income among, say, 1000 workers would remain about the same, regardless of whether or not their family affiliations are taken into account. This unexpected result is undoubtedly related to the time-honored rigorous and impartial examination system at all formal educational levels in Taiwan, rendering educational opportunities relatively equal to all comers. Any conclusions for policy with an eye to achieving similar results elsewhere would have to contend with the question of whether, in the absence of a similar long-standing cultural bias, it is politically and institutionally feasible to establish such a system.

Finally, other parts of our more disaggregate analysis permit us to derive a number of conclusions relevant to the relationship between taxation and the distribution of income. Our most important empirical finding here is that

16) the taxation system in Taiwan is approximately neutral with respect to income distribution, i.e., the degree of inequality is about the same before and after taxes.

A second, related, conclusion is that

17) the quantitatively more important and regressive indirect tax payments about cancel the quantitatively less important and more progressive direct tax payments.

The policy implication of this particular set of findings lends additional support to our overall conclusion at the aggregate level, namely, that LDC family income distribution performance is mainly a function of an appropriate

"primary," i.e., growth-related, strategy and is difficult to achieve via a "secondary"or after-the-fact redistribution strategy. The possibility of shifting from indirect to direct taxes, for example, runs up against a number of other practical considerations in a system which relies heavily on business saving and reinvestment. Even when a government's political and fiscal capacity is relatively strong, as is the case in Taiwan, relatively little can be expected from fiscal redistribution. This conclusion is further supported by the finding that

18) family transfer income in Taiwan contributes to overall family income inequality rather than equality.[13]

However, since its weight is small (less than 5% of total family income) its contribution, on either side, is likely to remain negligible in the absence of major fiscal reforms.

III. On Transferability

We are, of course, interested in the Taiwan case for its own sake. Nevertheless, a basic purpose of an examination of a particular system's experience should be to attempt to distill conclusions that may be relevant to other developing societies as well as to determine which features are so "special" to Taiwan that they are likely to be irrelevant elsewhere. The fact that most available cross-sectional and LDC time series evidence points in the direction of a seemingly inevitable and rather severe conflict between conventional measures of equity and growth is well known. Moreover, in human affairs the demonstration of the existence of an exception to a general rule admittedly does not have the power of a counter-example in mathematics. What analysts and policymakers

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[13] I.e., it is a type II rather than a type III income, with richer families receiving abosolutely more transfer income than poorer families.

would therefore presumably like to know is to what extent the elements of the growth pattern which apparently led to a lower level and more favorable time trend of the Gini coefficient in Taiwan are present in more "typical" developing countries and to what extent they are not. An important dimension of this question is the extent to which the obstacles found to obstruct the achievement of a similar outcome in other contexts are a function of important differences in the kindness of nature and to what extent of differences in institutional choices and/or political will.

There exists, of course, no such animal as a "typical" developing economy. Nor, in the present state of our knowledge, can we really expect to achieve scientific comparability by examining the contrasts and similarities between performance in Taiwan and any other specific developing society. Finally, and at least equally telling, we have not had the opportunity to date to subject any other country situation to a similar kind of analysis. We do, however, have more than cursory knowledge of two other developing societies, Colombia and the Philippines, which not only happen to have many similarities with respect to each other but are also, to the extent such a statement is at all meaningful, closer to the "typical" LDC case.[14] With respect to the basic trade-off issue, both have experienced a respectable growth performance over the past quarter century, in excess of 6% annually on the average, but combined with an outspokenly poor record on income distribution, with Gini's in the range above .5 and probably rising. In what follows we shall attempt to examine the transferability of Taiwan's experience with reference to "Colphil," an amalgam of these two systems, in a necessarily rather loose and impressionistic fashion. To the extent possible, we shall of course try

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[14] Even then it is undoubtedly easier to get agreement that Taiwan is "atypical".

to relate our observations specifically to the main conclusions reached in the examination of the Taiwan case.

Beginning again at the most aggregative level, we know that Taiwan and Colphil have in common the decision to pursue an import substitution strategy in the immediate post-World War II era. Yet, while primary, or consumer goods, import substitution had begun somewhat earlier in Colphil, especially in Latin America, this subphase was pretty much exhausted by the end of the '50s in both cases. Emerging out of a somewhat milder version of that particular package of resource flows and policies, Taiwan then--not, incidentally, without some filling and backing in the late '50s--determined to move into export substitution, i.e., focussing mainly on the participation of its labor-intensive industrial consumer goods in international export markets. Colphil, on the other hand, more or less stayed with the import substitution package, but one focussed increasingly on previously imported durable consumer goods, capital goods and the raw materials processing industries; in more recent years, this policy syndrome has, moreover, been complemented by a strategy of export promotion which, recognizing the importance of industrial exports, subsidizes same via special fiscal, interest rate and other measures. The obvious relative advantage of this Colphil strategy is that it requires relatively little basic policy reform; as long as the "fuel" which drives the system--essentially traditional, land-based exports--lasts (or can be supplemented by the discovery of new variants), politically painful decisions associated with, for example, exchange rate, tariff and interest rate reform can be avoided.

Our job here, it seems to me, is not to detail the by now well-known elements of the Taiwan policy reforms of the '58-'63 period, or the elements of the necessary intensification of the secondary import substitution

hothouse temperature in Colphil,[15] but to discuss the effects of this divergence--along with others--on the growth/distribution nexus while trying to differentiate among its avoidable and unavoidable causes.

Let us begin with the rural sector and rural households. We have seen above that the dominant cause of the relatively favorable income distribution performance in Taiwan throughout the period was the so-called reallocation effect which relates to the massive shift of rural households from agricultural to non-agricultural activities in the presence of a dynamic agriculture and in the absence of massive rural/urban migration. In Taiwan, agricultural output grew at an annual rate of 5.6% between 1953 and 1973; in Colphil, the rate was 3% to 4%; moreover, in Taiwan, as we have seen, rural industry and services capable of absorbing especially the poorest of the thus "freed" agricultural labor force grew at rates at least equal to their urban counterparts. In Colphil, industrial activity is heavily concentrated; Manila contains more than 80% of all industry and only the states containing Colombia's five major cities have shown any growth in industrial employment over the past decade. The effect has been a relatively high total rural income Gini in Colphil which has, at best, not worsened further over two decades of growth.

The reasons for the failure of balanced agricultural/non-agricultural rural growth to make its appearance in Colphil are, of course, central to our purpose. Taiwan clearly had the advantages of a compact island, a

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[15] Much more could, of course, be said at this level, but, since it already has been, ad nauseum, the temptation is resisted.

relatively homogeneous population and the strong heritage of Japanese colonial physical and institutional infrastructure investments in the rural areas. Not only the extensive road, irrigation and railway networks (one of the highest densities, either per square kilometer or per 1000 population) but also the network of farmers' associations and extension services were ready for a conversion to a more diversified national development-oriented post-colonial use. In Colphil, both nature and colonial policies were much less favorable. The Philippines represents a country of many heterogeneous islands only weakly tied together by inland transport; Colombia is a country severely regionalized by the branching of the Andes with internal transport notoriously inadequate. In both cases, colonial policy was more exclusively oriented towards the expansion and export of the major cash crops. Food producing agriculture (which happened to be the "colonial crop" in Taiwan) was virtually neglected. In both Taiwan and Colphil, however, colonial policy had discouraged domestic industry, certainly that owned by domestic entrepreneurs, and much indigenous small-scale rural industrial activity of the artisan type was, in fact, destroyed by imported factory-made goods.[16] But the initial conditions for post-colonial balanced rural growth were obviously very different--especially when we add educational and cultural differences to the gap in rural preparedness already referred to.

But what is perhaps most remarkable is the contrast in the actions taken by the post-independence governments in the two cases. Taiwan continued to invest heavily in its decentralized infrastructure: its

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[16] See S. Resnick, "Colonial Development in Southeast Asia: A Comparison Among Burma, Philippines and Thailand, 1870 to 1938", Journal of Economic History, 1970 (for the Philippines) and W. P. McGreevey, An Economic History of Colombia, 1971 (for Colombia).

rural highways remained at over 60% of the total and the percentage paved rose from 7% to 50%; the farmers' association structure was converted and strengthened; and, perhaps most important, agriculture's terms of trade were not permitted to deteriorate even during the import substitution subphase. In Colphil, on the other hand, little effort was made to make up for this colonial deficit in the rural areas; the attention instead was heavily focussed on the urban-industrial complexes. In 1960, to cite but one example, Taiwan had 79 research workers per 100,000 population in agriculture, in contrast to 1.6 in the Philippines. Agriculture continued to be discriminated against, directly and indirectly in Colphil. In Taiwan, rural industry still produced 60% of all consumer goods and provided 50% of total manufacturing employment in the early '70s, in contrast to figures in the vicinity of 10% in Colphil. In addition to a more favorable overall policy environment, e.g., an interest rate and import allocation policy which favors the relatively smaller, rural enterprises, Taiwan also encouraged rural industry directly via a rural electrification grid, the maintenance of equality in power and fuel rates as between rural and urban locations, and the establishment of rural-industrial estates, bonded factories and processing zones located with an eye to rural labor location and mobility. Colphil's energy distribution and rate structure, along with that governing the many other directly allocated inputs and favors, is clearly biased in favor of the urban large-scale sector.[17] In the absence of a more equally distributed non-agricultural income to shift to,this

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[17]The Philippine Secretary of Industries told me several years ago that he is prepared to grant the usual fiscal incentives to all origins and sizes of industrialists "as long as they can open a branch office in Manila."

important source of income distribution amelioration under growth was largely inoperative. We may thus conclude that, while geographic, cultural and historical antecedents undoubtedly gave Taiwan an initial relative advantage with respect to the development of rural industries and services in a balanced growth context, it is also clear that relative post-colonial government policies exacerbated rather than diminished this gap in the initial conditions.

Closely related, of course, is the issue of the relative labor intensity over time of existing rural industry and services. This, it will be recalled, affected favorably the distribution of income of rural families in Taiwan via the functional distribution effect, as non-agricultural incomes rose in importance relative to agricultural incomes. The relative share of labor, a reflection of labor intensity under conventional assumptions within rural non-agriculture, was at approximately .6 in 1964 and rose to a remarkable .7 plus by 1968. It was this increase in jobs for members of the poorest rural families, along with the increase in hours of employment demanded per person, which yielded the unexpected increase in labor's relative share during a time of labor surplus. In Colphil, the level of capital intensity, a function of technology and output mixes combined, for this relatively small rural non-agricultural subsector, was much higher, yielding a relative share of labor between .3 and .4. There is no evidence here, in other words, of the gradual shift from relatively more capital-intensive food-based industries, such as sugar, to the more labor-intensive imported raw materials-based industries, such as garments. Nor, given the overall policy environment, is there the same pressure for the adoption, and adaptation, of more labor-using kinds of technology within given industries.

A third factor favorable to the observed level and trend of rural household income distribution in Taiwan, while not showing up as quantitatively dominant in our decomposition results, is, as noted earlier, embodied in the continuously improving agricultural Gini effect. The initially low (by international standards) level of the agricultural income Gini is undoubtedly largely a function of the two land reforms consummated on the island, the colonial reform of 1905 and the independent three-step reforms of 1949-53. Together they virtually eliminated large holdings, placed ceilings on rents and lowered the relative evaluation of landed versus industrial assets. Colphil to date has no comparable record of successful land reform to point to--though some initial serious efforts were made in Colombia in the late '60s and are currently under way in the Philippines.[18] Taiwan's ability to carry through with a rather thorough-going set of land reforms can, of course, be explained in terms of the relative (political) ease with which a non-indigenous ruling elite (Japan in the first instance, the migrant Mainland government in the second) could impose land reform on others. But it should also be recalled that what really motivated the reforms of '49-'53 was the recent history of social inequity followed by disintegration and revolution on the Mainland. In any case, the reforms left only 17% of the land in tenant hands, with 60% owner-farmers and the rest at least partially in that category. Undoubtedly, both the agricultural growth

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[18] Colombia's land ownership Gini is around .8 and probably worsening again. But even if the announced goals were to be reached, Colphil's land reform program is much more modest than Taiwan's in terms of retention limits, compensation schemes, etc.

performance which followed as well as the favorable level of the Gini owe much to this initial structural reform.

In order to understand the decline of the agricultural Gini during the post-1953 period under observation, however, we have already referred to the increasing importance of double cropping and new, more labor-intensive and higher valued crops, such as mushrooms and asparagus, for labor absorption, especially among the poorer families. Colphil's record is radically different in this regard. Not only is labor used much less intensively per unit of land even in the labor surplus islands (or regions)--partly due to the less equal distribution of the land[19]--but the more limited volume of diversification has favored the relatively more capital-intensive crops.[20] In Colombia, for example, labor's share in agricultural income was .38 in 1950 and .24 in 1970. This low level and worsening trend are partly due to the distorted relative price signals and other policies favoring early indiscriminate mechanization--and partly due to the continued overall government concentration on export markets for old and new cash crops. In any case, the possibility of lower income families, and especially landless workers, being absorbed in rural employment, agricultural as well as non-agricultural, is much lower in Colphil. While the group of landless,or virtually landless, agricultural workers was virtually non-existent in post-reform Taiwan,

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[19] See the work of Albert Berry, for instance (Colombian Agriculture, to be published).

[20] The current coffee stampede in Colombia represents something of a, probably temporary, exception.

in Colombia it constituted almost 48% of the total agricultural population in 1938, approximately 56% in the early '50s and still above 50% today. Similarly in the Philippines, the land reform has increased the number, and worsened the situation, of the landless agricultural workers. As Berry has pointed out, unemployment among such workers, if land reform is not accompanied by an increase in labor absorbing activities, may well be a major cause of a worsening rural distribution of income.

The combined effect of the policies of relative agricultural neglect and of the neglect of rural non-agricultural activities in Colphil has thus been to deny members of the poorer rural families a chance to become productively absorbed in relatively labor-intensive activities away from big cities. But aside from the specific direct and indirect dimensions of public sector policy already referred to, designed to elicit such very different private sector responses, there is also the question of the different ways in which the public sector organizes itself for action in the rural areas of the mixed economy. In Taiwan, while the central government was certainly strong, a good deal of decentralization was achieved, most markedly by means of the conversion of the farmers' associations to "bottoms up" instruments of rural development. With line departments and the JCRR (Joint Commission on Rural Reconstruction) providing the technical and credit inputs, the decisions as to what infrastructure was required and where were thoroughly local ones. In Colphil, by contrast, decision-making with respect to both the allocation and the character of public sector overhead facilities is thoroughly centralized. The disdain for local public sector capacities at the barrio or sub-municipio level runs deep. Even the age-old refrain of the "stupid peasant" has surprising survival value and is supplemented by the

dim view generally taken of the existence of requisite entrepreneurial and technical capacities among would-be medium and small-scale rural industrialists. To the extent rural infrastructural investments are informed by the "felt needs" of private individuals, these are more likely to reflect the needs of the elite for additional windfall profits, as, for example, in the case of the 17 major irrigation projects in Colombia or the penetration highways in the Philippines. Such urban-oriented elitist attitudes and actions are, of course, subject to change, for example, via a restructuring of government careers which makes rural service an obligation and via the devolution of fiscal, planning and some investment functions to the appropriate local level.

Moving on to the urban family distribution of income, we should quickly recall that the main reason for the observed virtual elimination of the Kuznets effect in Taiwan was the functional distribution effect, specifically the maintenance of a surprisingly high labor share in urban industrial cum service activities, even before the end of labor surplus. The maintenance of a labor-intensive output mix and technologies is, of course, intimately tied up with the relative mildness of primary import substitution combined with the thorough liberalization efforts which followed. In Colphil, the situation is quite different. Relative product and factor price distortions have a tendency to become more severe with time as the distance between endowments and deployments widens. Capital intensity is thus likely to be initially much higher and rising, with labor's relative share lower and falling. While Taiwan's non-agricultural labor share was at .57 in 1964 and 1968, rising further (to .63), as we would expect,by 1972, Colphil's labor share is generally around .4 and falling. Although the unlimited supply of labor condition

generally obtains here as well, e.g., real wages have observed virtual constancy if not a slight decline over the past two decades, employment opportunities as a function of technology choices exercised and technology change induced (at the margin) lagged increasingly behind output growth. This result springs from a long list of policies, already referred to in the rural industry context, distorting production techniques and output mixes against the use of labor. A good example is the contrast between the employment creating features of labor-intensive export substitution, in which medium- and small-scale industry participates actively, as in Taiwan, and the capital-intensive large firm-oriented nature of the export promotion efforts, as in Colphil.[21] An instructive example which serves to underline the contrast is the difference between the Bataan Export Processing Zone in the Philippines--with the Ford Motor Company as one typical tenant--and the electronics assembly activities in the Kaohsiung Export Processing Zone in Taiwan.

Taking the urban families separately, the Taiwan experience demonstrates that any early deterioration in the distribution of income can be substantially softened, if not totally avoided. However, the only sure method of achieving a sustained improvement in equity lies in hastening the advent of commercialization, i.e., the end of the labor surplus condition. In the case of Taiwan, moving from land-intensive import to labor-intensive export substitution, this target was achieved, via less than two decades of balanced growth. In the case of Colphil, which continues to pursue a basically land-intensive import substitution strategy, it is not at all

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[21]See, for example, the work of Carlos Diaz-Alejandro with respect to the promotion of minor exports in post-1967 Colombia, (Foreign Trade Regimes and Economic Development in Colombia, NBER, 1976).

clear that the rate of non-agricultural labor absorption is gaining on the population or labor force growth rate; if it is, it is not by a sufficient margin to give promise of an early successful mopping up of the existing pool of underemployed and unemployed labor.

The groundwork has, in this fashion, hopefully also been laid for a judgment concerning the overall relevance of the Taiwanese experience for Colphil, with the income distribution of all families in mind. Success in this general sense was clearly based on the combination of three key ingredients: the presence of a substantial and increasing volume of non-agricultural employment opportunities in the rural areas; a functional distribution of non-agricultural income which did not turn against labor in the presence of persistently low wage rates; and a consistently improving distribution of agricultural income. The requisite policies underlying the achievement of these results have been spelled out equally clearly: early attention to agriculture in terms of both asset redistribution and the encouragement of productivity increase even during a period generally focussed on import substituting industrialization; a decentralized rural social overhead and industrialization strategy; an overall economic policy environment which increasingly forced output mixes and technology choices into greater harmony with changing endowment conditions.

At the more disaggregate levels of the analysis carried out for Taiwan, only a few points require our attention here. For example, with respect to the analysis of the causes of wage income inequality, it is a priori doubtful that the premia paid for its "unwarranted" causes, e.g., family connection and sex, are as relatively unimportant in Colphil as they turned out to be in Taiwan; certainly where educational access

depends less on competitive examinations and more on family finance and influence, there should be substantially more scope for government action to redress the situation. Given public education with access based on merit, and skill demands related to output demand patterns--rather than independent screening requirements--an education cum science budget which rose from 8% of the total in 1953 to 15% in 1968, as in Taiwan, can be very helpful in ensuring greater wage income equality across families. However, where educational expenditures (public plus private) are large but educational access is related to family position and the ability to pay, and where the educational product is used to facilitate selection procedures for functionally unrelated positions, as in Colphil, income inequities are likely to be thereby maintained and accentuated across the generations. The policy conclusions relevant to Colphil are at the same time obvious and difficult to implement, given the political and socio-economic structure of society.

Similarly, the impact of early unionization on the wage structure and hence on income distribution, irrelevant to the case of Taiwan, is relevant in Colphil. Artificially higher industrial wages for the employed elite, as long as labor surplus persists, is but one manifestation of the import substitution policy nexus already referred to; it renders capital intensity and labor-saving innovations more attractive and income distribution outcomes less favorable, by virtue of the weakening of the functional distribution effect, on the one hand, and the postponement of the advent of general labor scarcity, on the other.

With respect, finally, to the impact of taxes on the distribution of income, the evidence for Colphil is similar to that for Taiwan, i.e., the effects of progressive direct and regressive indirect taxes more or

less cancel out leaving after tax distribution essentially unaffected. Moreover, transfer payments in both cases, though small, contribute to income inequality, rather than equality, i.e., the relatively richer families obtain absolutely more than the relatively poorer families.[22]

These findings thus lend further support to our basic notion that, at least in the mixed developing economy, easing the conflict between growth and distribution can be accomplished mainly through the kind of growth path which is pursued in the first place. Patching up, after the (production) fact, even if the intentions are good, is not likely to work. Income distribution policies cannot be divorced from growth policies, and this means, in turn, that any conflict can be eased, if not eliminated, within every subphase of the transition process. Since good growth theory, hence distribution theory, must be typologically sensitive, different types of LDC's, e.g., of the large, or the labor-short,or the oil-rich type, would undoubtedly require a different policy focus. But for the garden variety of LDC, the Colphils of this world, critical elements of the Taiwan experience are substantially relevant.

Taiwan undoubtedly had some unique advantages, in terms of its initial geographic and cultural homogeneity, its high quality human infrastructure

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[22]Notice that we are not concerned here with the possible redistributive effects of government expenditures on health, education, housing, etc. Impressions gained in both the Philippines and Colombia would, however, lead us to share Bardhan's view (in Chenery et al Redistribution with Growth), on the basis of Indian experience, that it is generally the middle class, not the poor, which benefits from such efforts.

and the "good luck" to have had a rurally oriented colonial master. But, it should also be recalled that she started out with some rather unique disadvantages as well, not shared by many other contemporary LDC's. These include a very unfavorable initial natural resources endowment and man/land ratio, and the need to overcome two traumatic political/economic events, retrocession to China and separation from the Mainland, almost at birth. Those who insist on the irrelevance of Taiwan as a heavily aided U.S. satellite should be reminded of at least three additional facts: One, the quantity of foreign capital inflows, first aid, then private investment, in the course of the two-decade transition was, in fact, modest, amounting to only 6% of the total cumulative investment; while such flows were undoubtedly qualitatively helpful at critical points in time, such as for the stabilization effort in the early '50s and the transition to export substitution in the early '60s, not every heavily aided LDC has used equivalent flows equally wisely. Two, the proportion of total resources Taiwan felt it had to spend on national defense--a distinct disadvantage--was roughly equal to the proportion of foreign capital inflows. Finally, its position as a "U.S. satellite" has not exempted it from the imposition of tough quota restrictions in the areas of its greatest export substitution successes, e.g., textiles.

Much of what has been accomplished in Taiwan resulted, in fact, from her own efforts. Favorable initial conditions were further fortified; early asset redistribution was followed by the timely use of the market mechanism--both unpopular measures--to achieve given social goals. If the argument is made that it was easier to achieve a social consensus given a strong government acting on Japanese or politically weak indigenous

interests, the point is well taken; but being able to dispose over a much better natural resource base as lubricant, as in the Colphil case, should also make it easier to pick the right moment to persuade vested interests (both landed and industrial) that a change in policy is in their own longer run interest. What has been happening instead is that these traditional flows have been used as a tranquilizer permitting Colphil governments to put off the day of reckoning. While Taiwan was undoubtedly "up against it" and could not enjoy the same luxury, how long current Colphil strategy, which continues to emphasize (by its actions, if not its rhetoric) the traditional method of generating growth, can last is anybody's (but not an economist's) guess. It is one thing to understand the political economy reasons for not offending vested interests if there seems to be no imminent need to do so--certainly not within the lifetime of a given administration; it is quite another to quickly embrace the convenient judgement that an alternative set of societal decisions is technically and/or politically, irrelevant.