Summaries of Selected Articles

A. Maddison, "Growth and Fluctuation in the World Economy 1870-1960", *Banca Nazionale del Lavoro Quarterly Review*, June 1962.

This paper attempts to study the movement of world trade from 1870 to 1960. The world economy is divided into four blocs: Europe, North America, the Sino-Soviet bloc and the rest of the world.

Europe has always been the biggest group in world trade, though its role is declining, while the share of North America has grown, but at a slower rate than its share of world income, and third countries have increased their share of world trade. One-third of world trade takes place within each of the four blocs: two-thirds of the Sino-Soviet trade is internal, in Europe half of trade is internal and in both North America and the rest of the world about a third of total trade is within the bloc.

Europe sends 10 per cent of its exports to North America and takes about 28 per cent of North-American exports. Though fluctuations in European output have been milder than those of North America, European imports from North America have fluctuated more than North-American (mainly U. S.) imports from Europe.

Capital flows between Europe and America have played an important role. Prior to 1913, there were large capital flows from Europe to North America, while these flows were reversed during the 1920's. During the 1930's, European capital flowed into the U.S., while from 1946 to 1958 U.S. government aid and loans to Europe amounted to about $ 25 billion, and there was a net private U.S. investment of $ 200 million in Europe. Since then, European repayment and prepayment of debt has made the U.S. a net recipient of government aid while the flow of U. S. private capital to Europe has increased.

Underdeveloped countries have more volatile export prices, but taking the group (third countries) as a whole, the volume of their exports has been more stable than European or North-American exports since 1913.

Prior to 1913, Europe had a balance-of-trade deficit with America and third countries but by 1960 the balance-of-trade deficit had practically disappeared and there was a surplus with third countries. Over the same period, America's surplus with Europe had declined and the deficit with third countries had been eliminated. Capital receipts from Europe and America to third countries have played about the same role in 1960 as in 1913. In 1913 capital receipts accounted for 16 per cent of the export earnings of third countries, while during 1950-1960 capital receipts accounted for about 13 per cent of their export earnings.

Trade between the Sino-Soviet bloc and the third countries is largely on a barter basis. There has been a small but increasing flow of capital from the Sino-Soviet bloc to the rest of the world.

Third countries have been the most consistently dynamic group in world trade. North America has also moved faster than the world average while Europe has, over the long run, pulled it down.

From 1870 to 1913, world trade moved faster than the aggregate income of industrial countries, from 1921 to 1938 trade moved more slowly and during 1950-60 trade again moved more quickly than income. Trade grew fairly rapidly during the 1920's, but the 1929 crash brought a fall of 27 per cent in world trade. During 1930's, the volume of European and North-American trade never regained the peak achieved in 1929, and it was only in the third countries that any net advance was made.

In the 1950's, Europe's production has risen by about 4.7 per cent annually. This dynamism has not been shared by North America and the U.S. growth rate of 3.2 per cent during this period is slower than its long-run average. Third countries have also been able to expand their trade fairly during this period.

The movement of trade has always been more volatile than movements in production in most countries. Fluctuations in European imports, relative to fluctuations in output, have been larger after 1948 than those prior to 1913, but there has been a reduction in the frequency and amplitude of downturns in European exports over the same periods.

In America, after 1948, fluctuations in exports have been larger than fluctuations in either imports or GNP. although in the pre-War period fluctuations in imports were always larger. In third countries, fluctuations in the volume of exports relative to GNP have declined since 1948.

The greater sensitivity of European imports is probably due to the operation of the economies nearer full capacity, which has given entrepreneurs a greater incentive to vary stocks.

From 1913-38 the terms of trade moved against third countries because of an inelastic supply of primary products in the face of falling demand. This position was reversed during 1938-50, but between 1950 and 1960, the terms of trade of third countries have again deteriorated.

(SALMAN QURESHI)

conflicts arising out of negotiations among autonomous powers. All this is more risky in a fractional-reserves system.

The Stamp plan suggests that the IMF should issue gold certificates acceptable to members and ingenuiously combines aid to underdeveloped countries with a once-for-all increase in international reserves. While being useless for capital-movement problems, the plan is also ambiguous regarding the exchangeability of these certificates and the ensuing complexities. Inconvertibility of these certificates with gold at the Fund would create a new money of restricted use; if the certificates are convertible that would dispose of a part of the Fund's liquid assets.

The Zolotas plan recommends:

i) The reserve-currency countries should hold sufficient balances of major convertible currencies as a hedge against speculation. *ii*) All convertible currency balances held by central banks and foreign treasuries should be backed by gold guarantees of the respective countries. *iii*) All major trading countries should adopt interest and tax policies towards foreign owners of short-term balances to insulate a country's domestic policy from its international position and eliminate destabilizing profit-induced capital movements. For this plan to work, a reserve-currency country might have to be a substantial creditor. Also, it is possible that accumulation might take place at the expense of aid to underdeveloped countries. All this makes Zolotas plan dependent upon active collaboration between central banks of major trading countries.

The Bernstein plan suggests increasing total reserves through integration of members' quota at IMF; it recommends a Reserve Settlement Account through which major countries would finance the countries undergoing outflow of capital by means of notes carrying gold guarantee.

This plan stresses the strengthening of existing international monetary arrangements, and recognizes the importance of a few large trading countries. Moreover, the proposed lending arrangement is central to collaboration between central banks. But it requires the removal of conditions which give the Fund control over undisciplined countries. The most severe weakness of plan is its reliance on increases in Fund quotas which it requires to meet further liquidity needs. Fund quotas, even if they were to be counted with first line reserves as Bernstein recommends, would remain an adjunct of an international monetary system based on gold as its ultimate reserves.

The Triffin plan suggests the conversion of the IMF into a genuine international central bank where members should be required to hold a

minimum of 20 per cent of their reserves on deposit with the Fund, transfering the remaining reserve holdings to the Fund. The Fund would be empowered to conduct open-market operations to assist members in balance-of-payment deficits and increase international reserves. The plan aims at replacing the gold exchange standard by a reformed International Monetary Fund to deal effectively with short-term capital movements and long-run liquidity problem. The most fundamental objection to the Triffin plan is its inability to remove the central weakness of the gold exchange standard—a weakness inherent in the freedom of holders of reserve currency to demand conversion of their holdings into gold. Instead, the problem is internationalized by referring it to the IMF. Under this plan either the problem of gold exchange standard would re-emerge in the form of diminishing liquidity of the Fund or countries would have to increasingly economize on gold by holding increasing proportions of their reserves in the form of Fund deposits. The plan is, therefore, something of a halfway between the gold exchange standard and the establishment of a genuine international currency.

The replacement of gold standard by an international credit currency seems the ultimate logical solution to the problem of providing adequate liquidity in a system of exchange rates. Such a system would not be vulnerable to liquidity crises resulting from efforts to convert credit money into scarce gold. It involves the sacrifice of the sovereignty of major countries whose domestic affairs will be scrutinized by an international central bank. Such an intervention by an international agency would not be novel; but the operation would raise the problem of losses incurred on assets held in the currency of a country that devalued. This could be solved by obliging the devaluing country to compensate the losses on its assets. Moreover, open-market operations required in this scheme should be directed towards the countries aiding the underdeveloped world.

The problem of inflation and deflation can be avoided by following the Triffin plan in binding the international bank to increase the quantity of international reserves that corresponds to steady growth of world trade at stable prices.

(M. ASHRAF JANJUA)

H. T. Oshima, "A Strategy for Asian Development" *Economic Development and Cultural Change*, April 1962.

The purpose of the present paper is to present arguments opposing the currently popular strategy for economic development which focuses on the role of public policy and State assistance in advancing industrialization

in underdeveloped economies. The main burden of the argument rests on observations relating to Asian countries in general, with frequent references to data from the Philippines, India and Ceylon.

The first section of the paper studies the reasons for (and the resulting maladjustments of) a shift of savings and investment in these countries from the rural-agricultural to the urban-industrial areas. Thus, it points up the maladjustments between the rural and urban areas that arise out of rapid industrialization in underdeveloped countries. Disparity in income per worker in agriculture relative to nonagriculture is greater for underdeveloped than for developed areas. The amount of unproductive investment in the urban areas is much too large from the point of view of both these countries' low incomes and the incentive needs such investment is supposed to meet. Unemployment appears to be widespread in both the rural and urban areas, and excessive urbanization, resulting more from the "push" of rural poverty than the "pull" of city jobs, is observable.

The national accounts statistics of Asian countries, although not highly reliable, all point to the lagging rate of growth of net product in agriculture as compared with manufacturing. It would appear that rapid growth in the urban sectors has not benefitted the rural population in many Asian countries, thus perpetuating old, and creating new distortions and maladjustments, resulting in wide unrest in the Asian country-side.

The classical models of diminishing returns and rising rents in the face of rapidly rising rural population (due mainly to declines in mortality) may be applicable here, for the Asian country-side presents an essentially static situation. Even if this did not hold, the tendency for rural savings and capital to flow into urban businesses, thus impoverishing the rural sector, is observable. Little care is accorded to investing funds in agricultural improvements such as better seeds, fertilizer, irrigation and other experimentation with the introduction of improved implements; they are too costly to be undertaken by peasants. (Completely mechanized farming is nearly impossible and also undesirable). The Lewis-classical model, linked with this tendency for saving to shift from rural to urban areas, makes plausible the maldistribution in the rural-urban pattern of distribution. The tendency is for rising profits to flow into the existing asset market or to be consumed by their owners and not to finance investment in wage and farm-goods industries, Speculation, thus, may be one cause of unemployment in these countries, though Joan Robinson and others attribute it to capital shortages instead of effective demand deficiencies.

In view of the foregoing discussion, need is felt for drafting a programme to correct some of these maladjustments. Section 2 outlines a stra-

tegy for developing Asian countries (excluding Japan and Mainland China) which strongly advocates an "Agriculture First" policy as a possible key to the take-off of first the agricultural sector and then the nonagricultural sector. The argument rests on the fact that there is not enough capital for the amount of industrialization-urbanization needed to absorb the unemployed peasants migrating to cities, since the capital-output coefficients in industrialization and urbanization are quite high. Government expenditure on building up an infra-structure for this purpose is a costly activity. The goal of economic development is not to focus only on growth rates of national income or external economies or "balance"; problems mentioned earlier deserve consideration too. The need arises for an extensive programme of agricultural research focussing on land-saving, labour-intensive techniques, improvements and culture to raise yields per acre of village development projects (including extension and education), of credit extension to cover the cost of various agricultural operations in an improved manner, and of land and tenure reforms.

The rest of the article is mostly devoted to an elaboration of various ways of raising per-acre productivity through the introduction of different techniques. It is considered that, besides furnishing employment and raising per-acre yields, such a programme may generate rates of overall growth of the economy which are not necessarily low. The costs of agricultural improvements are much lower than those of urbanization-industrialization. It is not correct to maintain that the incremental savings-output ratio is low in the agricultural sector. In fact, rising agricultural incomes may even have a favourable impact on *i)* the propensity to save of upper income groups in both the urban and rural areas, and *ii)* the propensity to invest savings more productively. A demand-induced industrialization would result instead of a government-induced industrialization, which would be beset with the impediment of lack of effective demand due to the poverty of the population.

In conclusion, it is asserted that the chief merit of this strategy is intensive and effective utilization of the existing means of production and consumption. The government must help out in this process rather than in developing costly new industries. This strategy is also beneficial from cultural and political points of view. However, the problem of implementation is not discussed. Agruments by Professors Chenery, Mahalanobis and Hirschman, supporting industrialization as a basic policy for development in Asia, are presented and critically examined in the Appendix.

(NIGHAT SARFARAZ)

A. Zauberman, "The Soviet and Polish Quest for a Criterion of Investment Efficiency," *Economica*, August 1962.

The paper examines the official Soviet and Polish approaches to assessing the productivity of investment. It also reviews the recent attempts by econometricians in this field in both countries.

Both methodologies measure the current operational cost and the time-discounted capital outlay of alternative projects on an annual basis. Of these the one with the lowest cost per unit of output is selected. In both countries, the discount rate is based on the rate of growth of labour productivity. This discount rate does not consider the complications arising from uncertainty in economic life under the assumption that in a planned economy the uncertainty factor is zero.

The differences in the methodologies employed in the two countries hinge on the way they treat certain problems connected with *a*) the discount rate, *b*) the life-span of the capital assets, and *c*) the patterns of gestation in the project-variants.

The Soviet methodology works with differential sector discount rates. This confines the use of the coefficient of efficiency to the allocation of capital within one sector. The amount to be allocated to each sector is exogenously determined by the central planner. The Polish planners, on the other hand, use a uniform rate of time discount for the whole economy.

The Polish methodology has adopted a uniform life-span of twenty years for all projects in the economy. Two effects emerge from this arbitrary fixation of the amortization period. First, since many projects continue to be in operation benefits accrue even after the official life has ceased. Second, this gain has to be compared with the loss which is being caused by not abandoning old projects in favour of new projects with lower operating costs. The Polish formula for the investment criterion takes account of these two effects. The Soviets work with varying periods of amortization for different projects. They, therefore, ignore the impact of obsolesence and the problem of higher operating costs of old projects.

The two methodologies differ significantly in the handling of cost and output streams emerging from different project alternatives. The Soviet methodology calculates benefits foregone (costs) on the basis of project alternatives within the same sector. A compound-interest formula is used for measuring the present value of benefits and costs. The Polish methodology, on the other hand, uses a simple-interest formula and calculation of benefits foregone (costs) is based on project alternatives *anywhere* else in the economy.

Some attempts have been made to use econometric methods to solve the problem of maximizing investment productivity. Oskar Lange suggests that the national average rate of efficiency of investment can be obtained by a weighted mean of either *a*) intersector investment ratios, which indicate the increment of output in one sector attributable to a unit of output which could have been produced with the same resources in another sector, or *b*) intrasectoral investment ratios, which compare the possible increases in output in a given sector attributable to a unit of investment in that sector.

Lange's treatment of the problem is further refined in the reasoning of the new Soviet econometric school. Along with the technical data with which Lange works, shadow prices for all scarce factors of production are imputed and in this way a normal investment efficiency rate is fitted into a system of objectively conditioned valuations.

The theoretical sophistication of the solution of the problem of maximizing investment productivity should not create the impression that there are no statistical and computational difficulties in handling the individual variables. The assimilation and development of econometric methods, the growing trend towards high-speed mechanized computation and advances in interindustry analysis are gradually easing the task of quantifying critical variables in the investment efficiency criterion.

(SARFRAZ QURESHI)

J. Morgan, "The Anatomy of Income Distribution", *The Review of Economics and Statistics,* August 1962.

This paper is intended to improve the understanding of the meaning of inequality measures derived from the survey data on income in the United States.

The Lorenz measure (the area between the Lorenz curve and the diagonal as a proportion of the area under the diagonal) is commonly accepted as the best single measure of inequality. However, such estimates of inequality are affected by variations in the details of income data, coverage of the surveys and large sampling errors. Besides, the magnitude of the Lorenz measure of inequality is affected by such factors as the choice of units (whether it is based on data for individual earners' families, or spending unit), presence of extra-earners in the family, less than full-year work and differences in age. An overall measure of inequality such as the Lorenz curve may hide information about subgroups which would be more interesting and revealing.

The stability of the Lorenz measure of inequality for change of units and between subgroups of the population is investigated. The results

are as follows : the difference in the inequality index between " spending unit " and family data are small ; tabulation of income for each adult couple or unmarried individual makes the coefficient of inequality somewhat greater ; use of a ' per equivalent adult ' measure increases inequality substantially ; inequality becomes less when data of disposable income are considered. With respect to subgroup in the population, the following facts are pointed out : inequality within the north central region of the country appears no different from that for the whole country ; for spending units living in rural areas inequality is relatively small, this group also has a low average income. But another low-income group, the single person units, exhibits a high degree of inequality.

The effects of short-run income fluctuations on the measure of inequality of income may be removed by computing the index for each subgroup separately, excluding the units with recent changes in income, or by averaging income over two or three years for the same unit. Such measures indicate that the effect of short-run fluctuations on inequality is small.

Next, the nature of inequality in the patterns of life-time income is examined. It is observed that inequality clearly increases with age after an initial reverse shift. These movements are substantially due to differences in the extent of full-year work. The greatest changes in the inequality measures are concentrated among the very young and those over 55. Also, life-time incomes are probably less unequally distributed than one-year incomes. It may be noted here that, other things remaining the same, a change in the age composition of the population does not appreciably change the inequality of the distribution of income.

The most important differences found in the index of inequality are those between different age groups in the population. The major factors causing age differences in the inequality of income are the differential impact of less than full-year work and some spreading of the earning rates as differential advancement occurs. Presence of extra-earners tend to reduce inequality both within age groups and for the whole population.

Finally, if the purpose of looking at income distributions is to assess the equity of the economic system, it is necessary to collate the measures of inequality of income with other differences in the status of earning units which affect their welfare. Account should be taken of the differences in their needs, the degree of permanence of the flow of income, command over goods and services other than that represented by the money income and the extent of leisure enjoyed.

(NURUDDIN CHOWDHURY)

S.K. Nath, "The Theory of Balanced Growth", *Oxford Economic Papers*, June 1962.

The main purpose of this article is to refute the case for unbalanced growth as presented by Streeten and Hirschman. The author first explores various concepts of balanced growth as presented by Rosenstein-Rodan, Nurkse and Lewis and then gives his own version. His reformulated theory of balanced growth maintains :

a) If *social marginal products* (SMP) of some investments are different from their *private marginal products* (PMP) and there exists an authority to plan all investment proposals simultaneously, then the rate of the growth of net national product would be considerably higher.

b) Whenever an investment will lead to some—technological or pecuniary—external economy or diseconomy, its SMP will differ from its PMP.

c) There is a need for a State-planning body to try to foresee all the shortages and bottlenecks during a proposed investment period.

d) The theory of balanced growth does not support a case for autarky.

While arguing against criticism on the theory of balanced growth, he says that none of the critics has a real quarrel with the theory of balanced growth, the quarrel seems to be with their own interpretations of the concept.

The balanced-growth argument does not apply exclusively to the home market as it is interpreted by critics, but means that an industry may not be able to compete in foreign market unless other domestic industries expand and create external economies in production. The concept of balanced growth is dynamic and does not support any *a priori* argument that ' most ' industries must be expanded ' simultaneously '.

The shortage of entrepreneurs is no more an argument (against balanced growth) than the shortage of capital and land.

Balanced growth does not necessarily abolish shortages or scarcities ; it only minimizes the social and economic upheaval that they may cause. Estimates of future changes in various kinds of demands is an essential part of a programme of balanced growth and *a priori* fixing of priorities is meaningless.

The principal conclusions emerging from the study are :

1) None of the formulations of the theory of balanced growth has been entirely satisfactory but such a theory can easily be made logically consistent.

2) The theory of balanced growth demands programming approach to economic development. All the important considerations which are relevant for balanced growth can be consistently taken into account in drawing up an investment plan.

3) Such a comprehensive programming model has so far not been constructed for any underdeveloped country because it requires statistics of a kind which most underdeveloped countries lack.

4) The absence of statistics is not an argument against balanced growth concept.

5) If a country does not have *any* stable government capable of centralized planning, it cannot have balanced growth.

6) Though balanced growth requires centralized planning, it does not require the nationalization of entire natural resources.

7) If the majority of the people of a country believe that centralized planning and democracy are essential for each other's success, then the case for balanced growth is as strong as ever.

(MIAN AHMED ZIA)

A. O. Krueger, "Interrelationships between Industry and Agriculture in a Dual Economy", *The Indian Economic Journal*, July 1962.

The article examines the interrelationships between the industrial and agricultural sectors of a developing economy, and shows that different relative sectoral growth rates are important, and should be explicitly recognized in development policies, although the author does not explicitly derive an optimal investment policy.

The paper contains four models which in the end are related to Indian data. The basic proposition of Section I is that whenever the urban wage rate is higher than the rural, and the income elasticity of demand for both urban and rural goods is positive, the transfer of labour from rural to urban areas will shift the urban-rural terms of trade in favour of the rural sector, unless the supply of food is elastic. As a corollary, if the shift of labour from rural to urban area is a function of the differential in the wage rate

of the two sectors, the urban supply schedule of labour will shift downward with a decline in urban terms of trade. Section II assumes zero investment in the agricultural sector and explains the impact of a policy of industrialization. The terms of trade will turn against the industrial sector and reduce the supply of labour, and the consequent unequal rate of factor availabilities will slow down the rate of growth. Section III defines a neutral rates of growth of agricultural output as that which will permit a constant rate of growth of urban output. Section IV examines the possibility of a bias towards agricultural growth (greater than the neutral growth rate defined in Section III). Such a growth process will shift the terms of trade against the rural sector, but the migration of labour to the urban sector depends on rural real income which in turn depends upon the increase in agricultural productivity.

Because of limitations of data, it was not possible to test fully these models with Indian experience. However, the author did find a positive relationships between urban wage rates and rural real incomes, as well as a tendency toward an inverse relationships between relative rates of growth in the two sectors and their income shares. These findings are at least consistent with the models.

(MANSOOR ELAHI)

A. A. Wichmann, "Economic Development and Capital Formation in Burma", *The Review of Economics and Statistics*, August 1962.

The purpose of this paper is : *i)* to examine the rates of capital formation and of GNP growth that have prevailed in Burma in the recent past ; and *ii)* to determine the magnitude of the task of economic development required, under varying assumptions, to reach the per-capita income level of $300 per year[1].

Economic development in Burma was greatly hampered by post-independence political dissention inside the country. The result was an absolute decline in GNP until 1951/52. It has been rising, however, since 1951/52 so that over the years 1948/49 to 1959/60 there has been an annual average increase of 4.7 per cent. Assuming a rate of growth of population of 1.8 per cent, per-capita income has increased at a rate of 2.9 per cent. The achievement in the accumulation of capital stock was no less impressive. Over the same period, it increased at an annual rate of 4.6 per cent.

1. 300 is considered to be a dividing line between developed and underdeveloped countries.

Behind this high level of achievement was the interplay of some favourable circumstances. A large amount of utilizable resources, both manpower and capital, were lying unemployed or underemployed at the time when economic development began in 1951/52. Secondly, Burma received substantial assistance from abroad for her economic development.

In spite of these favourable circumstances, it will not be possible for Burma to reach the goal of $300 per-capita income in the near future. Even with growth at the rapid pace of the recent past and a population growth rate at the minimum assumption of 1.8 per cent, it would take about 62 years for Burma to reach that goal. However, the task is becoming increasingly difficult due to a rise in the rate of population growth as a result of a rapid decline in mortality. With a rate of growth of population of 2.4 (the rate estimated for Burma by the U.N. for 1960-70) and with the same capital-output ratio, it will take 81 years to reach that goal.

The above calculations are based on the favourable assumption that the present set of circumstances concerning availability of resources and foreign assistance will continue in future. In the absence of this assumption, the magnitude of the task assumes even more formidable proportions.

(A. N. M. AZIZUR REHMAN)

R. J. Ball, "Capital Imports and Economic Development: Paradoxy or Orthodoxy?" *Kyklos*, Fasc. 3, 1962.

As against the orthodox position that a net inflow of foreign capital can improve the rate of growth of the recipient countries, a few people in recent years have maintained an opposite view that sees such a net inflow as positively inimical to growth. In an article in *Economic Journal*, Rosenberg argued against foreign capital and referred to the undesirable growth of New Zealand's external debt caused by the need to finance interest payments due on old debt. The persistent import surplus of Canada stemming from heavy inflow of U. S. capital was considered by Coyne as the main cause of Canada's chronic or structural unemployment.

This paper refutes this unconventional view and confirms the orthodox position. The analysis is based on the simple Harrod-Domar model in the context of an open economy with an outstanding foreign debt. But the new assumption of a foreign-investment accelerator is introduced in the model. It is assumed that foreign-capital inflow bears a constant positive ratio to the increment of income. This implies that the balance of trade adjusts itself smoothly to the supply of foreign capital. It is shown

that given the propensity to save, a net inflow of foreign capital will lead to a higher rate of growth than in the case of a balanced current account. This proposition holds irrespective of whether the trade balance is positive, negative or zero. In this model the state of the trade balance is solely determined by the average yield on the foreign debt and the rate of growth of income. It is positive when the average yield exceeds the growth rate, is negative in the reverse case and is zero when the two are equal. A net capital inflow permits a higher growth rate even when interest and dividend payments exceed the capital inflow, or when new foreign debt is incurred to meet service charges on old debt.

It is shown that the growth rate is higher with a net capital inflow also on the reverse assumption that the supply of foreign capital adjusts itself to the current account balance.

It is held that an import surplus generated by a genuine long-term capital inflow represents a healthy state of affairs. It is not implied, however, that an unlimited generation of debt is desirable. As long as foreign-capital inflow increases with the increase in income, or adjusts itself to the needs of the current account there is always likely to be a continued gain. But a sudden reduction of the rate of inflow may require a severe deflation to meet the servicing cost of the outstanding debt. While the developed countries must consider these problems in deciding the desirable extent of foreign indebtedness, many underdeveloped countries initially have little choice in the matter if they are to establish a reasonable rate of growth.

It is maintained that in a world of sticky relative prices and wages, a rapid increase in capital stock and income may be associated with a considerable volume of unemployed labour. But the direct association between unemployment and foreign lending is spurious.

(SWADESH R. BOSE)

M. G. Reid, "Consumption, Savings and Windfall Gains", *American Economic Review*, September 1962.

This article examines the impact of windfall gains on consumption and saving. Its findings are consistent with the Friedman's hypothesis of zero correlation between consumption and transitory income. Windfall gains are represented by money receipts (other than regular money income) such as inheritances, gifts, net receipts from fire and accident policies, and soldiers' bonuses. The sample on which the study is based consists of consumer units (household) whose heads were wage or salary workers. Average disposable income (Y) and other money receipts (O) are the principal explanatory variables. In addition owner-occupancy (H), recent pur-

chase of dwelling unit (N) and age of the head of the family (A) are included as possible explanatory variables. In isolating the effect of windfall gains three components of consumption expenditure are examined : The first two components, expenditure for furnishings and equipments (C_f) and expenditure for the purchase of automobiles (C_a) are included explicitly in the model because they are expected to be positively correlated with O. Residual consumption expenditure $(C_o) = C-(C_f+C_a)$ is used as the third dependent variable. For each one of these dependent variables, a linear multiple regression model was used in order to determine the possible effects of windfall gains on each one of these components of consumption. The distribution of Y and O in the household account is tested further by examining their relationship with variations in savings, represented by two indicators : personal insurance (S_1) and net change in assests (S_2).

The findings :

Virtually none of the windfall gains goes to the consumption of items not commonly classed as consumer capital (C_o). A significant part of it goes to savings in the form of an increase in net assets apart from personal insurance. With Y (regular income) and O (windfall gains) as the sole explanatory variables, expenditure for furnishing and equipment (C_f) and expenditure for automobiles (C_a) per dollar of money receipts is shown to be lower for regular income (Y) than for windfall gains (O). The marginal propensity to spend windfall gains is greater for expenditure on automobiles (C_a) than that for expenditure on furnishing and equipment (C_f). The marginal propensity to spend regular income (Y) for other consumer expenditure (C_o) is much greater than the marginal propensity to spend windfall gains (O) for other consumer expenditure (C_o). There is also a marked difference between Y and O in their relation to change in net assets (S_2). As should be expected the marginal propensity to save out of windfall gains is much greater than that out of regular income.

The addition of H, owner-occupancy, reduces the marginal propensity to spend windfall gains (O) for furnishing and equipments (C_f), for automobiles (C_a) and change in net assets (S_2), and increases it for other consumer expenditure (C_o). It also increases somewhat the marginal propensity to spend Y for C_o. H has a marked positive relation to C_f, C_a and S_2 and a negative relation to C_o.

The addition of N (recent purchase of a dwelling unit) brings a further decrease in the marginal propensity to spend O (windfall gains) for C_f (expenditure on furnishing and equipment) and C_a (expenditure for automobiles). The effect is sufficient to suggest that, with N held constant, O has no tendency to increase expenditure for C_f. However, even with N con-

stant, O is positively correlated with C_a. Holding N constant tends to increase the marginal propensity to spend O for S_a (change in net assets) from .59 to .72.

The addition of A (age of the head of the family) does not alter these conclusions significantly.

The principal finding is the fact that there exists a strong tendency for windfall gains (O) to increase savings other than insurance policies. A secondary finding of considerable importance is the role of H (owner-occupancy) with respect to tendencies observed for C_f (expenditure for furnishing and equipments), C_a (expenditure for automobiles), and S_a (change in net assets), and hence the need, in any study of saving and expenditure for durable goods, for differentiating consumers by tenure and by year of purchases of their dwelling unit.

(MD. IRSHAD KHAN)

J. W. Mellor, "The Process of Agricultural Development in Low-Income Countries," *Journal of Farm Economics*, August 1962.

The role of agriculture is crucial in providing new capital in the process of development through more effective use of low opportunity-cost resources existing in that sector. An effort is made here to analyse this possibility in low-income countries and to study : *i)* qualities of agriculture which make its development a high-return process; *ii)* features which characterize the allocation process in programmes of agricultural development; and, *iii)* advantages of developing an existing agriculture as compared to new land programmes.

A progressive agriculture is distinguished from a traditional one by the use it makes of scarce complementary inputs of technical, institutional, educational type in relation to abundant inputs. Any agricultural development programme must, therefore, identify specifically the various abundant and scarce resources and the nature of their relationship pertaining to each geographic area.

Labour, land and agricultural capital are abundant resources in the sense that they have low marginal productivities. Use of complementary resources can raise their productivities and may even lead to their greater scarce utilization.

Scarce resources can be grouped as follows :

In the first phase, changes in attitudes and institutions necessary to later technological advance may begin to be built in. Better incentives to farmers and land tenure changes must occur.

In the crucial second phase, agriculture is a significant proportion of the economy with rising demand for its products. Labour-capital supply relationships do not permit the enlargement of average acreage per farm. Similarly, labour-capital cost relationships preclude the use of labour-saving machinery. Besides, there will be inequalities in asset distribution but this provides scope for uncertainty-bearing and capital formation.

Initially, production in this phase is likely to be achieved through the wider use of technological improvements and " large return" innovations. Later on provision of better incentives and facilities like research and servicing will make for continuing expansion. Critical to the continuation of the process is a research programme made effective through an extension education programme providing a steady stream of innovations of a yield-increasing nature.

The third phase is characterized by high, rising opportunity-costs of agricultural inputs and falling man-land ratios. There is an increasing use of labour-saving machinery, and a rising trend in farm use of urban-produced inputs.

(IRSHAD AHMED)

R. M. Stern and E. Zupnick, " The Theory and Measurement of Elasticity of Substitution in International Trade", *Kyklos,* Fasc. 3, 1962.

This paper raises some important questions about the theoretical weakness of the quantitative estimates of the elasticity of substitution in international trade. Particular reference has been made to the studies made by R. E. Zelder and MacDougall.

To estimate the elasticity of substitution between United States and United Kingdom exports of 39 manufactured commodities for 1921-1938, Zelder fits the following equation : $\log (q_1/q_2) = A + B \log (p_1/p_2)$ to time series data, where the relative export quantities, q_1/q_2, are explained by relative export prices (unit values), p_1/p_2. The regression coefficient, B, which is interpreted as the estimate of the relevant elasticity of substitution is negative (ranging from —0.08 and —5.52) for all but 2 of the 39 commodities considered.

MacDougall took a relatively large sample of American and British manufactured goods exports and fitted linear regressions of the logarithms of relative export quantities and relative export prices (unit values) for individual commodity cross-sections for 1913, 1922-1938 and 1948. If the regression coefficient is interpreted as an estimate of elasticity of substitution, his results would imply that relative prices played an important role in determining the export performance of the competing countries.

The authors contend that these estimates are not quite meaningful since they are based on observed prices (unit values) which do not accurately reflect the disequilibrating or " ex ante " price differences. The latter are in fact responsible for the differences in the export market shares. It is diagrammatically shown that under the assumptions of free trade, costless exchange and perfect competition the ' ex ante' price differences will not be reflected into observed prices, and at equilibrium the ratio of the observed prices of homogeneous goods will be unity. The authors also prove that the same conclusion holds for nonhomogeneous goods.

In view of the importance of the concept of elasticity of substitution in matters of policy, the authors stress the need for alternative methods of estimation which can meaningfully relate the disequilibrating 'ex ante' prices to the observed volumes of relative exports.

(AMINUL ISLAM)

G. E. Mingay, " The Size of Farms in the Eighteenth Century", *The Economic History Review*, April 1962.

This paper examines the hypothesis that there was a tendency for farms to grow in size and for small farms to become less numerous in the process of economic development. The study is based on the British experience in the field of agriculture in the eighteenth century.

The tendency for farms to grow in size was the product of a wide variety of forces. Population growth, industrial development and the discovery of improved methods of agricultural production were strong enough in the long run to effect the size of the farming units. Landlords generally pursued a policy by which large farms were occupied by tenants who owned adequate capital. The big farmer was thus in a position to take up new methods and produce on a large scale; he was an innovating entrepreneur and had greater staying power.

A farmer commanding ample resources could easily extend his scale of operation but it was very difficult for a cottager to become even a small

farmer due to lack of adequate capital. The fortunes of marriage and inheritance were probably of greater consequence than the desire of landlords to favour large units. In any case, the conservative attitude of landlords operated as a brake upon the growth of bigger farms. The Enclosure's Act had its effects, but it was not the prime cause of engrossing. It intended only to accelerate the operation of forces which had long been creating greater inequality in the rural sector.

The data available on the size of farms are not conclusive regarding the extent to which farms grew in size during the eighteenth century. Farms of big size had increased in number, but this should not be exaggerated. There were many areas where small farms grew in number, or where there was no significant change either way. It is true that certain factors gave rise to large farms, yet there were some other considerations which operated in the opposite direction.

In the beginning of the nineteenth century, England was still a country of small farms. But, on balance, the economic factors operating in favour of a larger and more efficient unit of cultivation had definitely accomplished some effect and produced results which were extremely important for the economy.

The social results were less happy. The fall of small farms, although slow and gradual, may have had social repercussions of greater magnitude than the nineteenth-century statistics would suggest. There is sufficient evidence which shows that it had always been difficult and painful for a labourer to rise to the position of a farmer and for small farmers to become large and prosperous.

(RAFIQ AHMAD KHAN)

S. Chandrasekhar, "Population Problems in a Developing Economy", *Population Review*, July 1962.

Of all the problems man is confronting to-day none is graver than the rapid population growth viewed in the long run. World's population has been increasing now at a faster rate than ever before. Numerically, world population was 250 million at the time of birth of Christ, 500 million in 1650 A.D., 695 million in 1750 A.D., 1,091 million in 1850 A.D., 1,500 million in 1900 A.D. and over 3,000 million in 1960. Thus until 1900 A.D., it took thousands of years for the world population to increase to 1.5 billion whereas in the last sixty years it doubled itself. According to UN estimates world population might reach 6.2 billion by the end of this century.

Population of India has followed more or less the same world pattern of growth. According to some " guesstimates", it was about 100 million in 1600 A.D., rose to 214 million in 1871, 248 million in19 21, 357 million in 1951 and 434 million in 1961. Thus, the population of India has been increasing steadily with the largest rate of increase during the last decade. The explanation of India's population growth lies, however, in her birth and death rates.

The average birth rate of India in 1941-50 as estimated from incomplete statistics was about 34 per 1000. " Universality of married state," early marriage, increase in widow re-marriage, and the absence of family-planning practice among the vast majority of India's population are the major reasons for her high birth rate in the recent era. The decisive factor behind the growth of India's population is, however, the decline in her death rate. Estimated death rate shows a steady decline from 43 per 1000 in 1901 to 27 in 1951 and 22 in 1961. Infant mortality rate dropped from 232 in 1901 to only 98 in 1960. The last decade has witnessed a greater decline in death rate than in the entire preceding fifty years.

Population problem can be examined from either the quantitative or the qualitative point of view, or both. Quality is important, but under present circumstances the question of sheer quantity will continue to be the major problem in India. The question is what should be the optimum size of population, *i.e.*, the quantity of population that can attain highest standard of living for India. Standard of living can be defined as " the level of consumption of the basic requisites of civilized human existence in terms of food, clothing, housing, educational opportunities, health facilities, leisure and certain cultural amenities". Accurate statistics on all these components of standard of living are not available, but judging from the " basic minimum of goods and services needed for healthy and purposeful living", it can be safely said that level of living of great majority of the population of India is low. The per-capita daily consumption of calories in India is about 1800 as against an estimated minimum requirement of 2500. If the levels of consumption recommended by nutrition experts are taken into consideration, at least 50 million of India's population suffer from serious malnutrition. About 70 per cent of India's population is illiterate. The present per-capita annual income in India is about Rs. 300.00 which puts her at the bottom of the list of the world's major countries.

Although there has been impressive improvements in agricultural and industrial production, neither the real income nor the level of consumption of the average Indian has increased significantly because population continues to increase by about 8 million every year. This increase in population defies or nullifies most programmes for improvement in education,

public health, sanitation or rural reconstruction. Thus, the basic problem of economic development is demographic and hence there is a need for a national population policy based on India's present and potential population and balance between the basic needs of people, and available and latent resources including technological developments. Such a population policy must be democratic and positive and free from coercion and force. As pointed out, while quality of a people is important, the size of India's population should be the immediate and major concern. The need for manpower will continue to be large in view of the absence of mechanization in agriculture and industry. But from the point of view of low level of productivity and low level of consumption, India is certainly overpopulated. So it seems reasonable to assume that the population policy of India should be directed towards the maintenance of population size at a fairly constant level, in preference to either rapid increase or decrease. This appears to be realistic from modern political economic and social points of view.

Population is related to production. But production does not necessarily increase with the increase in population. Therefore, in the present circumstances, India cannot raise her people's standard of living unless birth rate is drastically cut. Five solutions are advocated to meet the problems of overpopulation in India. They are *i)* scientific agricultural development, *ii)* large-scale industrialization, *iii)* internal migration to ease regional pressure, *iv)* emigration to foreign countries, and last and perhaps the most important *v)* birth control and family planning.

(MASIHUR REHMAN KHAN)

J. S. Aird, "Population Policy in Mainland China," *Population Studies*, July 1962.

The writer finds population policy of Communist China to be of little demographic significance. It is of interest only insofar as it reveals Peking's political considerations in policy-decisions. From the maze of often ambiguous evidences, he traces out the trend of these processes through six distinct phases of population policy since 1949.

During the first phase, *i.e.*, prior to 1953 population growth was regarded as displaying "beneficience of socialism." Birth control was taken as "anti-humanitarian." Population problem was looked upon as a problem of unemployment which socialism takes care of. The phase was marked by a categoric denial of the situation as a matter of any concern.

During the second phase ending somewhere in August 1956, following the results of 1953 census attitude towards birth control softened. The government directed themselves to help masses exercise birth control. Two views prevailed : *a)* large population is to be related to an " environment beset with difficulties"; *b)* large population " was a very good thing.....a great resources for domestic construction and national defence". In this phase the problem was realized but there was indecision on the part of policy-makers.

In the third phase lasting for a year up to the end of 1957, the period of indecision ceased. Firm birth-control compaign was launched through government's support. The government encouraged debates on the issue : " Let a hundred flowers bloom and let a hundred schools of thought contend". Wu concluded in his treatise : "..therefore control of excessive population increase is vital." Ma argued : ".. China faced a serious contradiction between the rates of increase of the population and the rate of accumulation of capital." Fei anticipated : Because of low rate of capital accumulation, socialism would not be able to develop immediately in China. The population problem was fully realized during this phase but these writers were regarded as " bourgeois rightists".

The fourth phase ending in late 1958 is marked by the slackening of efforts. The birth-control campaign was abandoned. The reason was to divert public from the passimism of rightists and create confidence in them of the miracles of socialistic economic transformation. The other important reason might be the impracticability of putting the campaign across. However, during the conclusion of this phase, there again appeared increasing realization that problem of population and economic development "..could be dissipated more quickly if birth rates were lowered. Chou En-Lai said : ".. too many people on too little land". Li cautioned : " China was a big, over-populated country." Yang and Tai warned : Overpopulation is the " basic difficulty".

There appeared increasing concern with the specific population problem. The delay of China's transition from backward to developed nation was feared. Unemployment problem haunted policy-makers. Provision of basic social amenities, *i.e.*, housing, schools, communications, hospitals *etc.*, taxed government revenues. Although food problem was dismissed as a transitional one arising out of war and previous administration, there was random comments. Wu found ".. Food production lagged behind increasing needs." Hsiang warned that because of rapid population growth, life of the people not only cannot be raised but also it can decline. The " leap forward " movement was launched with great force to improve the situation.

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The fifth phase is marked by " leap forward " programme which promised big harvests. But the " rash advances " of " leap forward " was disputed by academicians and press. Although against the passimism of Fei, Wu and Ma was the optimism of Mao, Wang Chu, Hu and Shu, but even the latter insisted on the necessity of planned parenthood. State authorities remained optimists. Liu accusing passimists of going counter to Marxism and Leninism regarded large population to be an " asset to production." Mao Tse Tung believed it to be an " asset to creativity" and saw even " poverty as a positive resource." Thus, officially, the population problem ceased to exist once again during the fifth phase.

During the sixth phase in 1959, the " great leap forward " weakened and communes disorganized. Mao Tse Tung surrendered the supreme executive post in the government. Voices of Chinese poverty echoed. Consequently in August 1959, the " leap forward " figures were re-examined and agricultural claims were radically revised. Food production became the foundation of agricultural economy and the major objective of communist regime. The national policy was geared to " take the country as a coordinated chess game." The population policy followed the former optimistic's approach. Passimist Ma, who held population growth of China to be deterrent to national investment, was charged with neoMalthusianism, "murderer of Marxism" and was dismissed from the Presidentship of Peking University. However, notwithstanding birth control not receiving active support of the government, it was not entirely repudiated. The subject of population problem figured with concern in certain conversations at a higher level in Chinese hierarchy.

To conclude, in Communist China the population policy changed from a complete denial of the problem to an acceptance of birth control and back to rejection again. Birth control was recognized due to fears of overpopulation. It was abandoned during the " leap forward " due to belief of Communist leaders in miraculous economic expedients. The recent absence of policy reflects both a disillusionment with the " leap " and reluctance to resume birth-control compaign openly. The leaders of Communist China are presently awaiting good news from the agricultural sector. If the news is not encouraging, the results will be of great international significance.

(S. A. A. BAHADUR RIZVI)