THE AUSTRALIAN JOURNAL OF AGRICULTURAL ECONOMICS

VOL. 9 JUNE, 1965 NO. 1

ECONOMICS AND ECONOMISTS FOR ECONOMIC AND SOCIAL ADVANCEMENT*

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My subject arises from a recent, though limited, personal experience in economic planning in an underdeveloped country. This was as a member of the Economic Survey Mission on the Economic Development of Zambia organized jointly by the United Nations Economic Commission for Africa and the F.A.O. It confronted me with questions about the usefulness of economics and the adequacy of economists for the development of policies to enable the majority of mankind to be freed from the shackles of poverty.

Beyond Economic Necessity

Many outstanding economists have speculated about society when it will have ceased to be preoccupied with poverty and material wealth. This is true even of Marx who was a sharp critic of idealists. "In a higher phase of communist society", he wrote, "after the tyrannical subordination of individuals according to the distribution of labour and thereby also the distinction between manual and intellectual work, have disappeared, after labour has become not merely a means to live but in itself the first necessity of living, after the powers of production have also increased and all the springs of cooperative wealth are gushing more freely, together with the all-round development of the individual, then and then only can the narrow bourgeois horizon of rights be left far behind and society will inscribe on its banners: 'From each according to his capacity, to each according to his need' ".[1]

For Alfred Marshall, "every man's energies and activities will be fully developed—a condition in which men will work not less than they do now but more; only, to use a good old phrase, most of their work will be a work of love; it will be a work which whether conducted for payment, or not, will exercise and nurture their faculties. Manual work carried to such excess that it leaves little opportunity for the free growth

* Presidential Address, Ninth Annual Conference of the Australian Agricultural Economics Society, Perth, February 1965.

[1] Marx, K., *Critique of the Gotha Programme,* International Publishers, New York, 1933, p. 31.

of his higher nature, that alone will be absent; but that *will* be absent. In so far as the working class are men who have such excessive work to do, in so far will the working class have been abolished".[2] Thirty years later he wrote, "To distinguish that which is chivalrous and noble from that which is not is a task that needs care and thought and labour, and to perform that task is the first duty for economists . . ., so to guide public opinion . . . [that] . . . wealth however large, would be no passport to social success if got by chicanery, by manufactured news, by fraudulent dealing or by malignant destruction of rivals; and that business enterprise which was noble in its aims and in its methods even if it did not bring with it a large fortune, would receive its due share of public admiration and gratitude as the work of the progressive student of science, literature or art does now . . . Chivalry in work would lead to chivalry in wealth and economic chivalry on the part of the community as a whole".[3]

Keynes, in 1930, thought that in "our own life-times we may be able to perform all the operations of agriculture, mining and manufacturing with a quarter of the human effort to which we have become accustomed",[4] and he predicted that "in one hundred years hence, the standard of life in progressive countries will be between four and eight times as high as it is today and that it would not be foolish to contemplate the possibility of far greater progress still".[5] "Assuming no important wars and no important increase in population, the *economic problem* may be solved, or be at least within sight of solution, within a hundred years. This means that the economic problem is not, if we look into the future —*the permanent problem of the human race*".[6] Then, "for the first time since his creation man will be faced with his real, his permanent problem —how to use his freedom from pressing economic cares, how to occupy the leisure which science and compound interest will have won for him, to live wisely and agreeably and well".[7]

Rostow is not prepared to speculate on what lies beyond the high mass consumption stage of economic growth. This author of a "non-communist manifesto" agrees with Marx however, that it is "not compound interest for ever, it is the adventure of seeing what man can do and will do when the pressure of scarcity is substantially lifted from him".[8]

Yet some have doubts. Galbraith, writing of a society which apparently has solved its economic problem states, "More die in the United States of too much food than of too little. Where the population was once thought to press on food supply, now the food supply presses relentlessly on the population. No one can seriously suggest that the steel which comprises the extra four or five feet of purely decorative distance on our cars is of prime urgency. For many women and some men, clothing has ceased to be related to protection from exposure and has become like plumage almost exclusively erotic".[9] Yet affluence demands still more.

[2] *Memorials of Alfred Marshall,* Edited by Pigou, A. C., Macmillan, London, 1925, p. 118.

[3] *Ibid.,* pp. 342-3.

[4] Keynes, J. M., *Essays in Persuasion,* Norton, New York, 1963, p. 364.

[5] *Loc. cit.*

[6] *Loc. cit.*

[7] *Loc. cit.*

[8] Rostow, W. W., *The Stages of Economic Growth,* Cambridge University Press, 1960, p. 166.

There is a "myopic preoccupation with production and material investment [which] has diverted our attention from the more urgent question of how we are employing our resources and in particular from the greater need and opportunity for investing in persons".[10]

Poverty

Whilst conceding that the economic problem is beginning to disappear in the developed world, Rao points out, "There is no economic law of inevitable growth that will bring deliverance to all mankind from the tyranny of the economic problem".[11] He sees the Malthusian threat; fears that the cold war will develop into a hot war; is convinced that oases of economic prosperity cannot be maintained permanently within deserts of economic poverty and believes that peace and economic Utopia can follow from only global solutions to the problems of international poverty.

Nyerere, President of the Republic of Tanzania, considers that membership of GATT, freely convertible currency, tied loans, free importation and even aid, all of which many underdeveloped countries are required or expected to accept, operate to increase the disparities between rich and poor nations. The rules governing economic relations between nations are such, he observes, that "everywhere in the world success breeds success, development attracts development, efficiency enables the training which gives more efficiency and so on. Almost all countries recognize this as regards their internal affairs . . . And the moment they decide that the coexistence of rich and poor areas in one nation is socially unacceptable they deliberately take steps to correct the imbalance . . . Internationally, however, the theoretical rejection of the coexistence of rich and poor countries has led to aid; the voluntary gifts from the rich to the poor . . . On this basis the gap between rich and poor nations cannot fail to increase".[12]

Poverty is the barrier to improvements in the quality of life for the majority of mankind. There is agreement that it is an economic problem worth solving, now. For Rostow the present need is to "hasten the day when all can share the choices open in the stage of high mass consumption and beyond . . . Billions of human beings must live in the world if we preserve it, over the century or so until the age of high mass consumption becomes universal. They have the right to live their time in civilized settings, marked by a degree of respect for their uniqueness and their dignity, marked by policies of balance in their societies, not merely compulsive obsession with statistics of production, and with conformity to public goals defined by a cooptive elite".[13]

The problem of poverty will not solve itself and Rao calls on the economists of the Western world to "cease their preoccupation with their frontier-bound economic Utopias and ask questions about the

[9] Galbraith, J. K., *The Affluent Society,* Hamish Hamilton, London, 1958, p. 97.

[10] Rao, V. K. R. V., "Some Reflections on the Economic Utopia", *All India Congress Committee Economic Review,* August and September, 1962; August p. 19.

[11] *Ibid.,* Sept., p. 23.

[12] Nyerere, H. E. Julius, "1963 McDougall Memorial Lecture". F.A.O. Conference, Twelfth Session, 19 Nov. 1963. Cyclostyled.

[13] Rostow, *loc. cit.*

ethical foundations of the wants of affluence in the context of a world where basic wants continue to dominate and where vast numbers of human beings work and toil just in order to live".[14]

This challenge raises the question of the suitability of economics and economists for the tasks implied. Part at least of the answer requires that we examine some of the social and scientific foundations of economics.

Economic Science Culture-bound?

In precapitalist social formations economic activity is determined by tradition, and production and consumption are directly related as a household activity. By contrast, in capitalist social formations, household activity is economically subordinate to the earning of money income. Economic activity, traditional up to this time, though not without purpose, can now become rational. Calculation is possible in terms of costs, profits, income and capital, and there arise such concepts as maximization of profits, minimization of costs and optimization of resource use. Then arises the need to discover the logical and empirical conditions under which these concepts are fulfilled. This has led to the marginal calculus, linear programming and other techniques which are the basis of new courses in universities the world over in econometrics, operations research, farm management and business management. The development and perfection of such techniques so far has been for the planning needs of individual enterprises and institutions in private industry rather than for the planning of national economies. Social or national accounting on the other hand has been developed and it and associated developments are widely used for national economic policy-making in capitalist countries. Their conceptual origin is the Keynesian analysis of the great depression. The important point in this connection however is that this analysis alone and associated techniques which have emerged from it, are inadequate for full national economic planning, its basic use in policy being to maintain economic activity at an appropriate level. Input-output accounting and process analysis, on the other hand, are essential for the full application of the principles of economic rationality to be made to a national economy. But in few capitalist countries has the input-output arrangement of data yet become part of the official social statistics. Not surprising perhaps is that this originated in the U.S.S.R., where its basic concepts were first outlined by Leontief in 1925.

Thus it may be seen that developments in economic tool-making reflect the development and needs of a particular socio-economic structure. This is true also for economic theory. The cradle of modern economic theory is the private enterprise industrial economy which has been characterized by Seers[15] as having a labour force which is literate, mobile, homogeneous, highly organized and skilled; land scientifically farmed in economically sized units by farmers with secure title; capitalization of industry to excess capacity; social and economic infra-structures which are integrated and comprehensive; firm legal bases for corporations and a favourable environment for management and entrepreneurship.

[14] Rao, *op. cit.*, Sept., p. 24.

[15] Seers, D., "The Limitations of the Special Case", *Bulletin of the Oxford University Institute of Statistics*, Vol. 25, No. 2, 1963, pp. 81-83.

In this economy, agriculture is totally commercial, responsive to changes in price and to advances in technology. It is served by adequate credit and marketing facilities and foreign ownership is rare. Mining is in the hands of local companies. Manufacturing is diversified and is larger than the primary sector. Public revenues are mainly from direct taxation and heavy expenditures are on social security and services and agriculture rather than on public works. Exports are diversified and they are based on products for which there is a large internal market. They are sold to many countries, their costs and prices are relatively stable and their price and income elasticities of demand are high. Imports are largely primary products, and capital flows and profit remittances are of secondary importance. Savings are high and their mobilization is efficient. The rate of investment is high and its import content low. Rates of population growth and of urbanization are moderate and foreign living standards are not a cause of social discontent.

It is from this socio-economic structure that principles, so called, of economics have been abstracted. Their relevance for this structure is not in dispute. It is their universal relevance which is in doubt. Universal relevance is a quality which we expect of scientific principles and laws. But such universality as they may have flows from the praxeological elements in human behaviour rather than from economic principles of behaviour. Nor is the point at issue their relevance to economic theory; it is their usefulness in planning economic development in under-developed countries. In these countries it is a prior requirement to create institutions and to transform existing structures so that the principles of economic rationality can have ever-widening application and become increasingly productive.

The fact is the tools and theories of economics have so far been developed from and for a special case, for a specific socio-economic situation. Moreover they deal with only part of it. They centre on the individual, on rules for maximization and on the market place. They are the axioms and theorems of the formal logic of choice and they have now become the ideal against which to evaluate much of economic reality. It is their study and refinement which have become the very stuff of economics and of economic teaching. Consequently there is little the economics graduate would know from his studies about the facts and theories of poverty. In possibly what is the most widely used textbook in the world, Samuelson writing of the U.S.A. points out, "it appears that 20 per cent of the population did not ever reach . . . (the bare subsistence) . . . level of income and 30 per cent earned less than the $2,200 needed . . . for minimum health and decency" in 1948, and he suggests that this poverty is on the decline.[16] Recently it has been estimated that 40 to 50 million people in the U.S.A. have inadequate housing, medicine, food and opportunity, that their number is increasing and that they constitute a self-perpetuating culture of poverty.[17] The graduate would know little, if anything about the real world problems of economic competition and monopoly control. In the Brookings Institution study on competition and monopoly, author Massel says "relatively few economists seem to be concerned about issues of indus-

[16] Samuelson, P. A., *Economics, An Introductory Analysis,* McGraw-Hill, London, 2nd Edition, 1951, p. 65.

[17] Harrington, M., *The Other America,* Penguin Books, 1962, pp. 175-186.

trial regulation today. Many who are interested, have been occupied with extending theoretical treatments that have not been related to observation",[18] and this point has been confirmed by Karmel and Brunt in the recent first study on the structure of the Australian economy.[19] The graduate would have learned little about the changing status and locus of economic power. Despite the transfer of economic policy and decision-making powers from "passive-receptive" private property owners to its high concentration in a few large institutions, his textbooks assume a socio-economic system based on private property and individual initiative. The greatest source of capital is no longer the result of conscious savings, it is conscripted by corporations in the price of goods. "Ownership ceases to play much decision-making part in from two-thirds to three-fourths (and perhaps more) of the American economic republic. Instead, that power lies in corporation managements, in administrators of savings-gathering institutions and pension trusts, in the offices of large commercial banks, in government agencies, and in an inchoate emerging group which may be called the 'scientific community' ".[20] Nor would he know much or anything about economic growth and development of underdeveloped countries. Apart from the fact that growth theory of advanced economies is still in its embryonic phase, as is also that of underdeveloped countries, the student would have learned little or nothing about development planning and certainly would not have had to deal with planning problems in any practical work which may be included in his course.

Not only are the tools and content of economics socially determined, so are university courses in economics. Economists and economics are substantially culture-bound. And with the appointment of today's teachers from yesterday's students, we ensure we tend to remain so. Granted that even though economists are the people best fitted, though some have their doubts, to organize attacks on poverty, it must be admitted many of our tools are inappropriate, the others are pretty blunt and that our talents are severely limited by culture-bound perspectives. I propose to pursue this point further by relating it to my experience in a first stage attack on the poverty of a small new nation. At this time I became strongly aware of the inadequacies of economists for the task and of the implications of this for university teachers of economics. The fact is the political and economic aspirations of the poverty stricken are not to be denied and the services of Western economists are sought by the underdeveloped countries. I speak as one who was involved in a United Nations Economic Mission to one of them.

The Case of Zambia[21]

I propose to present in some detail the work of this Mission, partly to reinforce the point that the socio-economic structure with which we

[18] Massel, Mark S., *Competition and Monopoly,* Doubleday, New York, 1964, p. 337.

[19] Karmel, P. H., and Brunt, M., *The Structure of the Australian Economy,* F. W. Cheshire, Melbourne, 1963, pp. 142-143.

[20] Berle, A. A., *The American Economic Republic,* Harcourt, Brace & World, New York, 1963, p.75.

[21] *Report of the UN/ECA/FAO Economic Survey Mission on the Economic Development of Zambia,* Falcon Press, Ndola, 1964.

are familiar and from which our economic principles derive is a special case, partly to illustrate development planning in a poverty stricken society and partly to present it as a case study of a situation which, though unique in itself, is characteristic of the majority of mankind. The alleviation of their situation requires many more—but rather differently trained economists.

The purpose of the Mission was to establish the broad framework and policy of an integrated economic and development plan for the Government of Northern Rhodesia. Northern Rhodesia became the independent nation of Zambia in 1964 only nine months after it had been granted self-government. For 10 years before it had been a British colony federated with Southern Rhodesia and Nyasaland, and a separate colony for many decades prior to federation. It has a population of about 3·4 million growing at 3 to 3·5 per cent per year. The great majority are illiterate, unhealthy, underemployed and poor. Half of the total gross domestic product, which is about £200 million, is from copper mines owned, managed and worked by Europeans with conspicuously high standards of living. They are a small minority which holds virtually all positions of skill in industry and trade, and of seniority in government, and the most favourably located and prosperous farms. A declining number of Africans are in employment due partly to mechanization in the mines, and for the same reason until recently, the number of Europeans in employment, at about ten times the average African wage, has been increasing. The value of copper exports account for 90 per cent of all exports. Copper mining profits and royalties amount to one-third of the value of exports, and because the companies are foreign-owned these funds flow out of the country and therefore are not available for investment within it. Wages to Europeans are a substantial portion of the industry's expenditure, and these also flow out in payment for imported consumer goods and as savings for retirement. These outflows of revenue are not available for employment-increasing investment, and until self-government was obtained only one year ago, two constitutional obstacles prevented their modification. As a colony Zambia could not alter the terms of the United Kingdom's agreement with the British South Africa Company. This company owns the mineral rights of Zambia and the agreement provided for its continued enjoyment of the royalties until 1986. Secondly, as a member of the Federation, rates of income tax were decided by the Federal Government and Zambia's share of the Federal tax reimbursements was a substantially lesser proportion of Federal revenue raised there, than in Southern Rhodesia and Nyasaland. Also the Federal Government undertook responsibility for European education and agriculture and left African education and agriculture to the three territories separately. The internal common market created by Federation worked in favour of Southern Rhodesia at the expense of Zambia and Nyasaland, the bulk of Federal Government expenditures and investments being made in Southern Rhodesia. Finally, there was no real awareness within the Federal Government of its role in economic and social advancement. Its development plan for 1962-65 for instance, provided for a reduction in public investment.

Almost half a million families comprise 70 per cent of the population and subsist in agriculture. They generate about £50 worth of product per family per year. Of this about £10 is cash income which is supplemented by about £7 per year remitted by absentee male wage earners. Farms are little more than a garden. The hand hoe is the only cultivation implement except for the few thousand who have reached the oxen level of mechanization and for the few hundred who possess a tractor in working order. This rural sector is the source of low wage labour for other sectors of the economy which, with the European agricultural sector, have almost denuded the countryside of its most vigorous male labour. The staple crop is maize, and cattle are the most important livestock. Half of the grazable country is infested with tsetse. Much of the best land and land nearest market and transport facilities is Crown Land, held by Europeans or is vacant, pending selection by those with the required minimum capital of £3,500. Despite a low average density of population on agricultural land, there is rural overcrowding in many areas with the current crude techniques of production. The tribal system of land tenure provides for a high degree of security to users. However, it does not provide incentives to farm well and land deterioration and fragmentation of holdings are severe. The wasteful forest fallow system of farming is widespread, and the hand hoe and ox plough do not permit adequate and timely cultivation of sufficient area. Grazing lands are communally owned and communally managed under a system leading to overgrazing, pasture deterioration and bush encroachment. Extension services to African farmers are inadequate and ineffective, marketing arrangements weaken rather than strengthen incentives for Africans to produce for the cash economy, commercial credit is generally unobtainable by African farmers, and applied agricultural research is inadequate.

The manufacturing sector operates at about two-thirds capacity producing net output valued at about five per cent of the gross domestic product. It supplies about one-third of the domestic market for manufactures and none for export. It employs less than eight per cent of the employed labour force. There are just over 300 manufacturing establishments and in only eight of their 29 industrial categories local production supplies 50 per cent or more of the domestic market—suggesting considerable opportunities for import substitution.

The level of African human development in Zambia is gravely low. Over 50 per cent of men and 80 per cent of the women have never been to school; 75 per cent of males and 93 per cent of females over 16 years are illiterate; less than 14,000 in the population of 3·4 million have been to secondary school, and less than 1,000 have reached Cambridge School Certificate standard. Of the 3,000 top level jobs normally requiring a degree or professional qualifications, less than 200 are held by Africans, and of the next 10,000 posts normally requiring School Certificate only 700 are held by Africans. This extreme imbalance between the number of Africans and non-Africans in high posts, particularly in the civil service, is a potential danger to political stability. There is no university in Zambia; technical education is weak and favours non-Africans; and the design of school buildings and teachers' houses is expensive. There is a shortage of students for secondary and technical levels of education and double standards of facilities and opportunities exist—one for Africans, another for non-Africans.

Financial policies have not been favourable to development. There has been a long-term export surplus in the country's balance of payments, although a controlled import surplus is rather more appropriate for a developing country. Personal income, indirect and company rates of taxation are low as are rates of progression, and exemptions are high. A personal levy is made on Africans.

Native authorities are responsible for general administrative functions, law and order, education, health and postal services, public works and the use and control of natural resources, but not minerals or forests. Financial arrangements between local authorities and central government ensured the freezing of development funds in long-term bonds for when economic conditions may be tight. Until self-government, native authorities were preoccupied with political independence rather than assisting local government to achieve economic and social advancement.

There is no central bank and the commercial banks are directed from outside the country. Their loans and advances amount to only one quarter of their deposits. Credit for housing and agriculture is made by the government direct and through its agencies, and the short-term rate of interest to agriculture is 10 per cent.

The administration of the country is in the hands of administrators appointed when self-government and independence seemed a long way ahead. These persons and those with professional skills have been recruited mainly from the United Kingdom. Political leadership has since changed and with it the objectives of policy. Never before has economic and social advancement been the prime national objective. But it is these expatriates who have a key role, for they, almost exclusively, have the requisite administrative and professional skills to give effect to the new political aims. But for many of them their heart is not in it. They believe Africans are incapable of advancement and even ought not to advance at this stage, and because of this some of these expatriates plan to leave and others will do so for other reasons. This loss of skills is likely to be a serious obstacle to advancement.

An early task of the Mission was to learn of the new Government's objectives. To this end, members maintained close contact with the Prime Minister, Cabinet and individual Ministers. The major objectives in order of priority were to increase employment, to raise standards of living, to equalize opportunities and conditions between town and country, rich and poor, European and African, to Africanize the administration and advance education on a broad front, to create a multiracial society—Africans, Europeans and Asians—to achieve social and economic goals without social disruption, and to develop Zambia with an eye to economic integration with East Central African countries in the future.

These objectives were then translated into an economic programme which involved for 1970 an additional 150,000 jobs and a rise of at least 25 per cent in average African real consumption per head. The economic structure of the country as it could be in 1970 with this programme was worked out in detail. The methods involved first establishing its input-output structure for 1961, and 1965, then projecting to 1970, taking into account planned changes in demand for and supplies of goods, income and expenditure elasticity coefficients, changes in market productivity, likely investments, profits, taxes and imports. The structure for 1961 and the projections were made so that they could absorb the statistical material available into an input-output table specially designed to reflect the unique conditions of Zambia's economy. Its dual nature, for instance, characterized by a prosperous foreign-owned copper mining enclave with little between it and the relatively vast subsistence sector, had to be shown in the table for meaningful analysis.

The changes required of the economy to fulfil the economic objectives could be readily determined only from such a table which is also the only device by which internal consistency of the programme could be assured; it was the integrating device.

The basic objective of the programme is to increase employment and the planned rise in demand should be seen from this point of view. Government consumption would rise by 50 per cent and Government investment by 75 per cent between 1965 and 1970. These could enable African cash consumption to increase by 65 per cent but with subsistence taken into account this would be 45 per cent which, after allowing for the increase in population, would amount to a 25 per cent average increase per caput. Private investment would also respond and is expected to double in this period.

The increase in overall output required to meet these rising demands is 37 per cent which is an average of six per cent per year; about twice as fast as the annual increase in population. Broken down into sectors this increased output is a composite of increases in output from 1965 to 1970 at constant prices, of 15 per cent from mining, 100 per cent from commercial agriculture, 15 per cent from subsistence agriculture, 97 per cent from manufacturing, 50 per cent from construction, 65 per cent from distribution, 50 per cent from government services, and 25 per cent from miscellaneous services.

The increase in employment is expected to be 151,000 which is an increase of 36 per cent—the same as the increase in the gross domestic product. From this it must not be inferred that there are no rises contemplated in productivity. They are expected, but they will be absorbed by changes in the occupational structure—away from mining and mechanization, towards services, which have a lesser output per head. In addition at least 20,000 more persons over the age of 16 years would still be at school as a result of increased investment in education. By 1970 there may still be some unemployment, depending on the rate of rural-urban immigration. This is expected to slow down as the agricultural programme and rural development projects become effective. The projections included an annual migration rate of one per cent of the rural population.

Investment required for the planned increase in employment amounts to £450 million from 1965 to 1970 which is about four times as great as the rise in the gross domestic product. Of this sum about one-third would be required by the mines alone; the manufacturing sector, private investment in agriculture, and electric power, would absorb most of the investment in the private sector. The Government sector would account for one-third of the total investment and be spent mainly on housing, education, roads, resettlement and other schemes in agriculture.

The foregoing programme depends upon the right decisions being made on a number of controversial and basic issues. Firstly, a steadily increasing output of copper is essential. Government policy will need to induce the copper companies to expand output, also to appoint Africans to higher positions and to continue job training and education for mining operations. The government could nationalize the mines, or tax them at penalty rates, or it could ensure safe and growing profits and enter into a formal agreement of co-operation.

Secondly, foreign exchange requires to be conserved. The projection of the balance of payments indicates that foreign exchange is likely to be in surplus for the first few years but by 1970 there could be a large deficit. Prudence strongly suggests that the Government should conserve foreign exchange now whilst the price of copper is firm, by reducing the flow of profits and royalties. The mining companies are taxed less heavily than American copper companies and the private foreign company which owns the mining rights of Zambia currently obtains royalties of about £5 million per annum, net of tax. By 1970 this could be £8 million. It is unlikely an independent government would long tolerate this. From the copper industry it appears an additional £12 to £15 million could be obtained by the Government and savings in foreign exchange would follow. It is considered taxes should be raised to reduce personal consumption and thus imports of non-essential consumer goods. The programme was finalized with a planned gap of £10 million in the balance of payments in 1970, though the surpluses of earlier years would offset the subsequent deficits without net borrowing even with the large development plan. Moreover this gap expected in 1970 is judged to be not so large as to endanger Zambia's overseas credit rating.

Thirdly, wage increases must be restrained. The pressures for substantial increases are strong and must be resisted if the planned level of new employment is to be reached. The conspicuously high levels of consumption of European employees in private companies and by European officials in Government service are the source of envy by Africans. There has been little incentive in the past for the copper companies to resist African wage demands. These have been paid, but they also induced further mechanization resulting in reduced African employment. Nor is there a national wages policy on the part of either government, employers or unionists. Unless there is wage and price stability, sufficient investment for employment and education will not be forthcoming.

Fourthly, the tendency for expatriates to leave the country, the pressure for Africanization and the increased demand for persons with skill and higher educational qualifications which a programme of economic expansion requires, makes high level man-power planning almost inevitable. Not all foreign offers of scholarships can be afforded by Zambia to be accepted. Education needs to be accelerated and new consideration must be given to standards of entry into jobs and educational courses. These standards are based on overseas conventions rather than on local requirements with the result that in education, for instance, there is the paradoxical situation of too many resources for the few students who can achieve what are for Zambia inappropriate entrance standards.

Fifthly, continued presence of the Europeans is necessary. Projections of high level manpower requirements and of the out-turn from educational institutions indicate that at least as many Europeans will be required by 1970 as are in Zambia at present. Salary schemes will be devised to keep the expatriates and recruitment from overseas will be necessary. Many hundreds of skilled persons have been physically and financially budgeted for in the projections. These include economists for detailed planning, school teachers and agricultural specialists for whom recruitment is already under way.

Finally, trade links with other countries will need to be changed. A first step will be to raise tariffs against Southern Rhodesia and a second will be to ensure that preferential treatment is granted only on the basis of adequate reciprocity.

With specific reference to agriculture the development plan consists of several distinct elements. Earlier sowing and heavier seeding of maize and the use of artificial fertilizers would result in a widespread lift in yields of the crop with which the peasant farmers have long experience. Two immediate requirements for this are instruction and fertilizer. This element of the plan recognizes that thousands of farm families have to be influenced simultaneously to achieve the nation's objectives. It does not initially involve villagers in far reaching changes; it could be immediately profitable on a national basis, though at the outset there would be a net cost to the Government; and the skilled manpower needed for the instruction is low-level.

A second element is tractor mechanization of cultivation. The need for this arises from the limited area which can be cultivated by hand hoe or ox plough between the times when the soil is too dry and hard, and too wet, in readiness for the optimal time of seeding. Tractors would also enable settlement to penetrate the tsetse infested areas and land to be cultivated which the fly denies the ox. Replacement of oxen by tractors would also increase the quantity and quality of beef production. The first phase of mechanization—namely the tractorization of cultivation —would increase rather than reduce rural employment through the additional areas seeded and harvested.

A third element is the establishment of cattle ranching units for which the initial physical requirements are fencing and water. The administrative requirements are initiative and sanctions of local authorities supported by the expertise of the technical extension service.

A fourth element is resettlement. In the scheme proposed, individual holdings are laid out in a manner that permits their cultivation and sowing to be done without regard to farm boundaries, so that each farm unit has the same land use in similar proportions. This permits mechanization and highly effective use of capital, scarce managerial skills and technical know-how. It also combines the advantages of large scale operation with the incentives of individual tenure. It can be replicated as often as needs arise and resources permit; it enables resettlement to be made on a village unit basis thus maintaining, initially, the original village social structure. Moreover, previous limited experience of this in Zambia is promising.

A fifth element is reorganization of settled village agriculture in accord with the technical requirements of more efficient production. The major reorganizations required are to consolidate fragmented holdings and the registration of individual titles.

Planning from the Local Socio-economic Situation

It should be apparent that this development plan for Zambia, in all of its elements, grew out of the socio-economic situation of that country. In this respect it contrasts sharply with the first five-year plan framed for

India which, from its very nature, relied on what the national output-capital ratio was thought to be. This ratio, much used by theorists, seems to have no meaningful use in actual planning and whatever the achievements of India's plan, it cannot be said they stem logically from its explicit theoretical foundation. Moreover a basic purpose of development and planning is to improve the output-capital ratio by whatever means are possible.

Secondly there was no conscious observance of planning for the balanced economic growth of Zambia, nor for agricultural development or industrial development to receive priority. In this connection Nicholls has summarized recent controversy. Some economists "argue that efforts to increase food supply should receive top priority because of the high demand and great need for additional food or because the highest marginal productivity of capital lies in agriculture; . . . others, while recognizing the need for raising agricultural productivity conclude that it can be accomplished only by giving a 'big push' industrialization programme top priority".[22] Nicholls' own thesis is that "until under-developed countries succeed in achieving and sustaining (either through domestic production or imports) a reliable food surplus, they have not fulfilled the fundamental precondition for economic development".[23] The Mission in Zambia was not faced with this issue because its planning procedures did not start at the macro-level. This is the point at which so many development theorists have started and inevitably they are forced to decide between sectors without examining them. In the case of Zambia it is possible to calculate from the plan indices of emphasis given to industry, to agriculture, to education, and the national output-capital ratio could also be calculated. But these would be results, not targets, tool or guides.

Thirdly there was no conscious decision as to whether capital intensive or capital extensive methods of production should be planned for. There seemed no choice. A project by project survey of industrial opportunities in Zambia suggested that the capital intensity for a given product, under existing and likely market conditions, using the available labour and skills, is highly specific, and the major decision is whether to produce a particular product.

Fourthly there was no conscious adherence to doctrines on ownership of the means of production, on free markets or on private or public enterprise. At every turn the test was whether the mode of ownership, whether the organization of productive services and of enterprises and units of production facilitated or obstructed the physical and technical requirements for the planned production, and whether they promoted or destroyed incentives. On the spot investigations and judgments resulted in suggesting the expropriation of the private royalty company, not nationalizing the mines, Government control over the Industrial Development Corporation, granting and registering individual property rights in farm land but subject to conditions and methods of its use, abandonment of extension on an individual farm basis and adoption of the village as the extension unit, lowering entrance requirements for educational

[22] Nicholls, W. H., "The Place of Agriculture in Economic Development", in Eicher, C., and Witt, L., Editors, *Agriculture in Economic Development,* McGraw-Hill, New York, 1964, pp. 15-16.

[23] *Ibid.,* p. 40.

courses and high jobs, invoking social pressures and legal sanctions as incentives in some phases of agricultural development, instead of market pressures.

The origin of the development plan for Zambia, I repeat, was Zambia itself. Just how much industry is needed and how much agriculture, were estimated from the planned rate of increase in gross product, of growth of exports and expected changes in the balance of payments. No direct references of a meaningful nature could be made to the experience of other countries and there was no discussion as to what or whose theory should be used. Even so, theorists do advise, and worse still, their advice is sometimes taken, and as already suggested the theorists would be effective even if they withheld their advice, for they are the teachers of the planners. Not so bad are the reports of foreign experts which appear to have come straight out of a textbook or are a copy of the situation in the expert's home country. In the archives of the Government of Zambia there are such reports on credit, extension, marketing, education and town planning. These are nearly worthless, though they have the merit of having worked somewhere in the world.

Of course this sort of thing is not specific to economists. The agriculturalists too do not have an unblemished record. A UNESCO study observes, "In Burma deep ploughing introduced by European agricultural experts broke up the hard pan that held water in the rice fields. The weeding of rubber plantations reduced the sap. The new tomato which the Burmese were persuaded to grow because it was more productive, had a flavour they did not like. In Turkey, experts trained abroad persuaded some of the younger peasants to remove the stones from their tilled land. When the grain sprouted, the fields of the older men had a better crop, since, in that dry climate, the stones served the function of preserving moisture. In Greece, the wheat in fertilized fields did not resist drought so well as the wheat in other fields, and the experts realized that earlier-opening varieties should be planted if the fields were to be fertilized".[24]

As Nicholls has concluded, ". . . in matters of food and agricultural policy in the overpopulated countries, too many Western economists, (and one could appropriately add, agriculturalists and others) have done a serious disservice to a majority of mankind".[25] For economists at least, this is a most serious charge.

Grand Theory No Help

It is appropriate to ask what drives some of us, almost to the point of being what Wright Mills calls "grand theorists" whose "initial choice of a level of thinking (is) so general that its practitioners cannot logically get down . . . from the higher generalities to problems in their historical and structural contexts".[26] We are still influenced, though not so strongly as 25 years ago, by the natural and physical sciences. In a final sense their concern is with matter and the universal qualities it is assumed to possess. Economic behaviour, on the other hand, whatever its universal elements discovered or assumed by the praxeologists, is a function also

[24] *Cultural Patterns and Technical Change,* UNESCO, Paris, 1953, p. 203.
[25] *Ibid.,* p. 44.
[26] Mills, Wright C., *The Sociological Imagination,* Oxford University Press, New York, 1959, p. 33.

of social relations between people as determined by and reflected in each society's property and institutional structure. Whatever value our economic generalizations may have, those which attempt to cut across cultural boundaries, and the boundaries between different social formations, are yet of little or no use for solving the problems of the poverty of the underdeveloped nations.

Secondly, our own theorizing and work in economics is within a social framework we normally take for granted. As a result, institutional changes seldom come within our purview, until they are imminent or until after they have been made. A current example in Australia is the proposed reserve price scheme for wool. The elements of this scheme have been presented by farmers for decades and a decision is about to be made by the Government. The agricultural economists who have become involved have restricted themselves to the likely costs and benefits of such a scheme. But there is yet no published research into the marketing reforms both within, and without if need be, the existing marketing organization to fulfil the needs of growers and users. The Philp Committee sensed political danger when it considered marketing reforms which required institutional changes. It reported that "sections of the wool trade including brokers, wool buyers and merchants could also be expected to be antagonistic (to a central marketing authority) for the perfectly valid reason that the scheme would supplant or adversely affect them".[27] The marketing needs of growers and users are much wider than those which, according to the present state of expert opinion, may not be met by a reserve price scheme. The Philp Committee saw that preservation of the wool-broker-creditor-supplier-to-farmer relationship is more important to brokers than are improvements in wool marketing. But it displayed no willingness to research further in this direction. A contrary example is the research and statements of the agricultural economists to the Dairy Industry Committee of Enquiry, when profound structural changes were recommended. Because we assume the institutional structure we do not see it. In underdeveloped countries where the need is for institutional changes before new technology and the principles of our economic rationality can be applied, we are either impotent or harmful. In our own developed countries institutional change and institutional innovation tend to be left to others, so that economists tend to become involved after the event and then only to comment.

Thirdly, a substantially large part of the content of university courses in economics is devoted to who said what; so much is discussion and learning about the arguments between economists on fine points of theory. So much teaching is also devoted to mathematical economics and statistics that students develop a preference for the quantitative to which processes of economic development are not amenable, and they tend unconsciously to cling to ignorance about the non-quantitative and non-statistical. Seers, and there are many others, points out that statistical methods as usually taught, trains the student in how to "manipulate rather than to interpret", they do not show him how to appraise and use material, and suggests they teach him to "think in the wrong way".[28]

[27] *Report of the Wool Marketing Committee of Enquiry,* Commonwealth of Australia, Canberra, 1962, p. 76.

[28] Seers, *op. cit.,* pp. 94-95.

Conclusion

Despite these criticisms, and many more which others have made and could make, there are many economists who have resisted the temptation to be "grand theorists", for the academic awards to grand theorists are considerable, or to be unduly influenced by them. These are the economists who instead of writing the generalities of textbooks are writing the specificities of plans for the social and economic advancement of individual economies and are creating them out of local situations. Our failure as university economists is that our students who are helping under-developed countries in this way are doing it partly in spite of what they were taught and those who have been singled out by Nicholls, as harmful, are harmful partly because of what they were taught.

The basic methodology of the attack on poverty is to formulate social and economic goals for the specific political unit, specify needs, analyse the present situation in terms of obstacles, to create ways and means, and to determine manpower and finance requirements. This methodology underlies the work of the Mission in Zambia at the level of each sector and for the whole. This is of course the methodology of development planning. We instead train our students to answer the question "What would happen to the economy if . . .?" rather than the question "How could the economy attain a particular goal?" If this latter question had been a long-standing element in our thinking I suggest that the work of economists which is now just beginning in Australia in the economics of education, of research and development and of the advancement of the aborigines for instance, would have preceded rather than followed public awareness.

In concluding, I have come down to what is after all merely one point. For this I make no apology, for there is a close connection between the rate and success of the alleviation of poverty in underdeveloped countries and what goes on in the economics classrooms in Western universities. And I think I have sustained my thesis that we who are in charge of these classrooms have not done as well as we should.