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ECONOMIC DEVELOPMENT

Chairman: Dr. M. N. Alexander

"CONTRIBUTION OF AGRICULTURE TO ECONOMIC DEVELOPMENT"A Case-Study of the West Indies*: 1950-1963.

by

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U.W.I., St. Augustine.Introduction

In the last few years the volume of literature on "Contribution of Agriculture to Economic Development" has assumed enormous proportions. While some of this literature represents real advancement of knowledge¹, a substantially large part of it is of only secondary importance being repetitive in content and excessively laden with well worn phrases. It is now commonplace that Agriculture, by increasing its product, by transferring resources and by trading with other sectors of the economy and the outside world, can make a product, a factor and market contribution, respectively, to economic development. But yet, in recent years several variations of the general theme have been appearing.

It might perhaps be unjust to censure the literature too harshly, for in the first place, progress in the direction of more specific studies has been rendered almost impossible because of a lack of adequate and reliable statistical data. In the second place agricultural economists are only now extricating themselves from the involvement with those development economists and politicians who had equated and identified economic growth with industrial development and would sacrifice agriculture for steel mills and prestige factories. The defensive attitude developed among agricultural economists was inimical of progress. Fortunately, industrial versus agricultural development had become a false issue, and the concern now is rather with the inter-relationships between Industry and Agriculture and the contribution that each can make to the other.

*Reference is only for the former Federated British West Indies.

¹ See for example: Johnson, B.F. & Mellor, J.W., "The Role of Agriculture in Economic Development", The American Economic Review, Vol. LI, No. 4, September 1961.

Today there is clearly no need to convince anyone that Agriculture can make a contribution to economic growth. Because of this, I shall neither attempt to review any of the several articles on the subject, nor attempt to add to the already long list of variations. Instead, I shall examine the contribution of Agriculture to the economic growth of the West Indies. And for the purpose of this exercise I shall confine myself to the years, 1950 - 1963.

The period 1950 - 1963 is both a logical and practical choice for the exercise; logical, because it represents a period of rapid economic development of increasing governmental assistance to Agriculture, and practical because the time span is short enough to allow a fairly detailed study, and long enough for shifts and trends to be detected. In addition this is the period for which the most reliable and adequate data for the region is available.

And now a word about the scope of the exercise.

The comprehensive scope of the study seems to defy reality for the islands do not form a single economic unit. Moreover, they are dependent on Agriculture to varying degrees, and not only at different stages of economic development but are also experiencing different rates of growth. But, in spite of these limitations, the marked similarities of their agricultural patterns and problems seem to facilitate a wide ground to be covered simultaneously and, moreover, with profit.

Finally, it might be well to remind you of a certain ambiguity in speaking about the contribution of Agriculture (or any other sector for that matter) to economic development. As Kuznets² points out in an inter-dependent system, what a sector does (or possibly fails to do) is not fully attributable or credited to it, but is contingent upon what happens in other sectors (and perhaps also the outside world). The truth of this is emphasised whenever we examine the input-output matrix for a country.

With those introductory comments let us now examine the growth of the West Indian economy and Agriculture's contribution to that growth.

Growth of the Economies

Regardless of the measure employed - Gross Domestic Product at current or constant prices, per capita income or per capita product - the conclusions remain the same that, since the 1950's there has been a marked acceleration in the rate of growth of the West Indian economies. This, however, is not to say that the rate of increase has followed the path of a straight line, nor that the increases achieved among the individual economies were uniform. In fact quite the contrary was true. There were, as the growth structure of the Trinidad and Tobago economy demonstrates, important annual variations in the growth rate.

Table I

Annual Variations in Rate of Growth for Trinidad and Tobago:
1950 - 1961

1951-1952	3.0%	1955-1956	15.4%	1959-1960	10.2%
1952-1953	1.3%	1956-1957	11.5%	1960-1961	9.4%
1953-1954	3.6%	1957-1958	4.9%		
1954-1955	13.7%	1958-1959	7.7%		

Source: Rampersad, F., Growth and Structural Change in the Economy of Trinidad and Tobago 1951-1961.
I.S.E.R., U.W.I., Jamaica.

There were also important differences between rates achieved among the islands or rather groups of islands. Thus, a significant disparity obtains between the rates of growth achieved between Jamaica, Trinidad and Tobago, and Antigua on the one hand, and Barbados, St. Kitts, Montserrat and the Windward Islands on the other. In the former group whereas the Gross Domestic Product (current prices) increased by an average annual rate which was in excess of 8% in the latter group (i.e. Barbados and the Windward and Leeward Islands*) the rate of increase was more modest, averaging some 4% per annum. Admittedly, estimates based on current prices are likely to distort a picture; but even if adjustments are made for differential price changes between the islands, it could reasonably be expected that the difference in the 'real' rate of growth would still be significant.

*Antigua omitted.

Interestingly, much of the differences in the rate of growth, as we shall see later, arose from differences in the rate of industrial and tourist expansion. There was a marked similarity in the rate of agricultural increase. This latter is not, however, surprising for the agriculture of the region is based on the almost same narrow range of export crops, and is affected by much the same external marked forces.

Structural Changes

The increase in Gross Domestic Product, already noted, was accompanied by certain structural changes in the economies. Perhaps not unexpectedly, the leading growth impulse came from the non-agricultural sector. There was a significant expansion in mining, manufacturing, tourism and this stimulated ancillary expansion of trade, transport, construction and communication services. In contrast, agriculture declined in importance. In the West Indies as a whole, the percentage of Gross Domestic Product from agriculture (see Table II) declined from a high of 25% in 1950, to a low of 15% in 1961. This was the upshot of the uneven rates of growth of the component sectors of the economy. For while the agricultural product increased in absolute terms the rate of increase was far less than that obtaining in the non-agricultural sectors.

Table II

Percentage Contribution of Agriculture to Gross Domestic Product:
West Indies, 1950 - 1961.

<u>Year-</u>	<u>Percentage Contribution</u>
1950	25.0
1952	23.3
1954	20.5
1956	18.5
1961	15.0

Sources: 1950-56 National Income Statistics, No. 1, The West Indies Federal Statistical Office, Trinidad, 1960.
1961 A Digest of West Indian Agricultural Statistics, U.W.I., St. Augustine, Trinidad. 1965.

The factors in the structural changes which occurred are of particular interest to us, and need to be clearly understood. Quite apart from accounting for the changes which have occurred, they have vital implications for agriculture's development strategy.

In a dynamic economy structural changes are always taking place; some sectors emerge while others decline. The relative decline of the sector becomes inevitable when productive resources have to be released to facilitate the emergence of more productive sectors. Not infrequently this decline takes place in Agriculture. At least two reasons can be suggested for this. Firstly, the lower demand elasticities of agricultural commodities mean that farm incomes rise less rapidly than non-farm incomes and this acts both as an incentive to leave Agriculture and a disincentive to enter it; and secondly, because returns on capital in industry tend not only to be higher but more certain. As economic development creates new investment opportunities, capital tends to flow from agriculture into industry. The combination of these forces produces the strong tendency for Agriculture to decline as economic development proceeds. And in fact, there are those who would speed up the process, for it is often cited that a relative decline of Agriculture is a necessary condition for cumulative and self-sustaining growth.

In structural characteristics, at least, the changes noted for the islands seem to conform to the general transformation model of rapid economic growth accompanied by relative decline in Agriculture. There was not only a general decline in the agricultural sector, but the decline was more marked in the countries previously cited as experiencing the more rapid economic growth. Thus in Jamaica whereas in 1950 Agriculture contributed 25% of the Gross Domestic Product, in 1960, the corresponding proportion had fallen to only about 13%. In St. Vincent on the other hand, the change was 43% to 40% of the Gross Domestic Product for the corresponding time period.

The question could now be put. Was the decline in Agriculture a necessary factor in economic growth? Was it necessary to release capital and labour to facilitate the emergence of the other sectors? The evidence we have suggested, is that Agriculture contributed little in productive resources for the emergence of other sectors.

The Cost-Price Squeeze

Significantly, the capital which contributed to the large upsurge of industrial development did not come about as a result of capital transfers from Agriculture but came rather from the capital markets of North America and Europe. The relative decline of capital accumulation in Agriculture is reflected in increasing delapidation and neglect of farms, and has largely been the consequence of a cost-price squeeze on Agriculture.

The percentage of the wage-earning labour force in Agriculture has also tended to shrink, but not for the conventional reasons. The process of development has carried an unemployment paradox. The expansion of the industrial (and tourist) sectors have in addition to creating a few jobs, radically altered the income structures of the economies. Wages in the modern sector have moved higher and higher, and through the demonstration effect they pull up wages in the agricultural sector, and possibly even far beyond what the sector can pay. This has inevitably led to increasing mechanisation and the cutting back of 'expensive' labour. The ejected labour goes to maintain, if not swell the pool of the unemployed, as few are able either to migrate or find employment in the emerging capital intensive industries.

Emphasis has been placed on rising labour costs, but they have been only part of the cost squeeze on Agriculture. Equally important has been the rise in costs of fertilisers, herbicides, pesticides, plants and machinery. In a situation where there is not much real competition for the productive factors used by Agriculture it should not be impossible to at least maintain Agriculture's share of the Gross Domestic Product if farmers can be adequately compensated by the prices they receive for their products. Unfortunately, the increases in costs of production have not been matched by similar rises in the price of the output. Admittedly, there have been some increases in the prices of some food crops on the local market, but it must be remembered that West Indian Agriculture is dominated by export crops and that the price trends in the overseas markets have been more downwards than upwards.

And then, even with price-rise in the domestic market, the slow expansion in demand for some local foods would have had their effects on the farmer's income. The low income elasticities of demand for food crops has meant that a smaller proportion of consumers income has been spent on local foods and a higher proportion on imported proteins and some so-called luxury foods. The statistics are not available, but the evidence is clear from the increasing number of ladies wheeling trolleys in supermarkets, and collecting canned foods, here and there.

Consumers have come to want more of their food prepared and processed. It is, therefore, not surprising that the food import bill has gone up considerably in recent years.

Concluding Observations

Not infrequently one hears a casual link being established between the relative decline of Agriculture and the rising food imports; sometimes the relationship is put the other way about - rising food imports and decline in Agriculture. But regardless of the way it is put the evidence seems to lend only a weak support, and argument seems futile.

West Indian Agriculture, as pointed out earlier, is dominated by export crops and these have been the commodities most affected by the cost-price squeeze. While changing patterns of consumer demands in the local markets have played their part, their influence has been limited primarily because of their lesser importance.

That the relative decline of Agriculture has been due more to cost-price squeeze than to needs of structural adjustments in a growing economy, it would seem possible that Agriculture can be revitalized through:

- (a) National wages policy with a rational wage structure for the full economic development of all sectors of the economy, the development of Agriculture as well as industry.
- (b) Changes in producers production patterns and marketing systems, to meet changing consumers' demands - consequent on rising consumers' income.
- (c) Increase product, only through better cultural practices, so as to make exports more competitive on the world markets.

These are urgent needs. For notwithstanding some decline in agricultural labour, a sizeable proportion of the population will long continue to live and work on farms; and their economic position will be of some political if not social concern.

In the United States and the United Kingdom for example, where Agriculture supports under 5% of the population then the income problems of Agriculture can easily be solved by the other sectors of the economy subsidizing Agriculture. But, even apart from the fact that the West Indian society is less affluent, Agriculture here supports too large a percentage

of the population for it to be carried by the rest of the economy. And yet, this seems to be the direction in which the Agriculture is heading.

If future economic development is not to be seriously impeded, we must attempt to arrest this trend, by planning for Agriculture, but as part of the economy and not in isolation. For you will remember, in an interdependent system, what a sector does (or possibly fails to do) is not fully attributable or credited to it, but it is contingent upon what happens in other sectors of the economy (and perhaps also the outside world).

Appendix I.

GROWTH OF THE GROSS DOMESTIC PRODUCT (at Factor Cost) 1950 - 1963
(Current Prices)
\$ Million

<u>Year</u>	<u>Jamaica</u>	<u>Trinidad and Tobago</u>	<u>Barbados</u>	<u>Antigua</u>	<u>St. Kitts</u>	<u>Montserrat</u>	<u>The Windward Islands</u>	<u>The West Indies</u>
1950	336.1	n.a.	54.4	5.8	9.3	n.a.	n.a.	n.a.
1951	392.0	308.3	61.8	n.a.	n.a.	n.a.	n.a.	n.a.
1952	455.8	337.3	64.0	n.a.	n.a.	n.a.	n.a.	n.a.
1953	512.1	379.6	70.2	12.1	13.6	n.a.	n.a.	n.a.
1954	574.5	404.2	70.7	10.7	14.2	2.6	n.a.	n.a.
1955	654.8	469.0	81.4	12.4	14.6	2.6	n.a.	n.a.
1956	760.8	547.3	84.0	15.0	15.5	2.5	81.4*	1,506.5*
1957	921.9	659.1	103.0	16.8*	16.2*	2.9	84.5*	1,768.0*
1958	957.8*	719.4	110.1*	18.0	16.9	2.9*	n.a.	n.a.
1959	951.2	799.1	110.1	20.9	18.0	3.1	n.a.	n.a.
1960	1,033.4	865.9	119.8	21.3	19.1	3.2	96.1	2,158.8
1961	1,107.4	954.8	127.8	22.0	21.0	3.3	98.8	2,335.1*
1962	1,147.9	1,005.7*	134.2*	22.5*	21.4*	3.6*	101.4*	2,436.7*
1963	1,219.1		143.3*	24.0*	22.0	3.8*	104.8*	

Sources: 1950-58 The West Indies National Income Statistics, No. 1 of 1960. Federal Statistical Office, Federal House, Port of Spain, Trinidad.
 1959-63 Economic Survey of Jamaica 1964. Government of Jamaica.
 1958-62 The National Income of Trinidad and Tobago. Central Statistical Office, Port of Spain, Trinidad.
 1960-63 An Abstract of Statistics of the Leewards, Windward Islands and Barbados. I.S.E.R. (Eastern Caribbean), U.W.I., Barbados, June 1964.

* Provisional Estimates n.a. Not available

Appendix II.

GROSS DOMESTIC PRODUCT (at Factor Cost) BY INDUSTRIAL ORIGIN: WEST INDIES, 1961

Islands	Agriculture	Constructing and Engineering	Manufacturing and Mining	Distribu- tion and Commerce	Transport	Services and Profession	Rent of Dwellings	Government	Total
Jamaica	133.1	127.5	266.3	183.3	88.9	200.9	3.6	71.2	1,074.8
Trinidad and Tobago	108.0	49.7	410.3*	145.9	72.6**	55.6	19.6	93.1	954.8
Grenada & Carriacou	11.2	2.8	0.6	3.9	0.8	2.0	2.1	5.3	28.7
Antigua & Barbados	5.4	3.2	0.2	3.2	0.8	3.4	1.5	4.3	22.0
Barbados	36.4	12.0	12.2	28.0	8.4**	12.3	6.2	12.3	127.8
Dominica	9.0	2.3	0.5	2.9	0.3	1.2	1.2	3.5	20.9
Montserrat	1.4	0.3	0.1	0.4	0.1	0.2	0.3	0.9	3.7
St. Kitts Nevis & Anguilla	9.1	2.3	0.2	2.8	0.3	1.2	1.2	3.9	21.0
St. Lucia	9.1	2.0	1.4	4.3	0.7	1.9	1.9	4.6	25.9
St. Vincent	9.3	0.5	1.1	3.9	0.6	1.8	2.1	3.5	22.8
ALL ISLANDS	332.0	202.6	692.9	378.6	173.5	280.5	39.7	202.6	2,424.7

* Including quarrying

** Including public transport

Source: A Digest of West Indian Agricultural Statistics, Department of Agricultural Economics and Farm Management,
U.W.I., St. Augustine, Trinidad. 1965.

Appendix II(a).

APROPORTIONAL CONTRIBUTION TO GROSS DOMESTIC PRODUCT, BY INDUSTRIAL ORIGIN: WEST INDIES, 1961

Islands	Agriculture	Constructing and Engineering	Manufacturing and Mining	Distribution and Commerce	Transport	Services and Profession	Rent of Dwellings	Government	Total
Jamaica	12.4	11.9	24.8	17.0	8.3	18.7	0.3	6.6	100
Trinidad & Tobago	11	5	43*	15	8**	6	2	10	100
Grenada & Carriacou	39	10	2	14	3	7	7	18	100
Antigua & Barbuda	25	15	9	15	4	5	7	20	100
Barbados	28	9	10	22	6**	10	5	10	100
Dominica	43	11	2	14	1	6	6	17	100
Montserrat	38	8	3	11	3	5	8	24	100
St. Kitts, Nevis & Anguilla	43	11	1	13	1	6	6	19	100
St. Lucia	35	8	5	17	3	8	9	18	100
St. Vincent	41	2	5	17	3	8	9	15	100
ALL ISLANDS	15	9	29	19	7	9	3	9	100

* Including quarrying

** Including public transport

Source: A Digest of West Indian Agricultural Statistics, Department of Agricultural Economics & Farm Management, U.W.I., St. Augustine, Trinidad, 1965.