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THE BALANCE BETWEEN AGRICULTURE AND INDUSTRY IN ECONOMIC DEVELOPMENT

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SUMMARY

The paper discusses some of the relationships between agricultural and non-agricultural expansion under conditions of "balanced" economic development. The latter is assumed when the rise in per capita income in agriculture is equal to the rise in the non-agricultural sectors of the economy.

When areas or countries with different levels of income are compared, the consumption of agricultural products decreases gradually when incomes rise. Similarly, when countries develop economically, a greater proportion of the additional income will be spent on industrial products and services.

The paper calculates the effect of these well known structural changes on the magnitude of the necessary transfer of population to non-agricultural professions and on the increasing amount of agricultural products to be marketed. If these conditions are not fulfilled, development is not "balanced" or is frustrated. The particular importance of the development of transportation and marketing facilities for increasing agricultural production is shown.

On the basis of an estimated relation between new investments and annual additional output of about 4:1, the magnitude of investments for an annual per capita increase of income by 2%, alternatively an annual increase in food consumption by 1%, is calculated. All calculations are made for the five aggregrate economically "underdeveloped" areas, designated by a committee of experts in a report to the United Nations.

Comparisons are made between the present study and this report. The following main conclusions are reached:

a) The magnitude of necessary structural changes and capital investments seem to preclude - in the long run and for large areas - a rate of development far beyond a 2% per capita rise in income.

b) For a balanced development, in all underdeveloped areas together, about 40% of net investments should be in agriculture.

c) Comparing both reports, the U.N. Committee report under-estimated the total capital needs of Latin America (on the basis of a 2% per capita rise in income) by about 40%, and particularly the need for investment in the non-agricultural sector. It grossly over-estimated the needs of Asia.

d) For one and a half billion people in "underdeveloped countries" a balanced development at a rate of 2% per capita rise in income annually will require about $12 - $14 billion annual investment, out of which at present $5 - $6 billion is generated within the area. For Latin America these figures are $3.5 - $4 billion and $2 billion respectively. The "gap" is about equally large in agriculture and non-agriculture.

INTRODUCTION

The "Preparatory Commission on World Food Proposals",[1] having stressed the need for expansion of agriculture, declares that "this demands a parallel expansion in industry, transportation and in other parts of the economic system. Otherwise the increased agricultural output will begin to pile up unsold or drive prices down to crisis levels."

Similar statements have since been made on various occasions when problems of economic development were discussed. Rarely has this discussion been carried on in quantitative terms. Yet, for national or international planning and allocation of resources, it is important to have yardsticks for measurement of desired degrees of agricultural and industrial development and the amounts of investment needed to reach the respective goals. One approach to these problems was made by the United Nations five-man export committee designed to advise on measures against underemployment.[2] This committee stated that the most serious of four types of underemployment concerns lack of opportunities for labor in overcrowded rural areas, and it advocates economic development as the best remedy for underemployment. Stress is laid not so much on markets for agricultural produce but rather on employment for peasants and rural labor. This report distinguishes itself from many other statements by estimating the annual amounts of investments needed to develop the underdeveloped areas of the world at a certain rate, in the agricultural and non-agricultural sectors of the economy.

The present study approaches the problem from a different angle. The amount of capital needed for non-agricultural development is based upon an assumed input:output ratio rather than upon a fixed amount per worker. At the same time an attempt is made to establish some basic relationships between agricultural and non-agricultural development. A certain expansion of agriculture requires to a certain degree a simultaneous transfer of population to industry in order to safeguard a market for agricultural produce. These relationships are calculated under the assumption that in both sectors of the economy the same rate of per capita increase in income occurs. This determines the "balance" between agricultural and industrial development.

1/ Report of the FAO Preparatory Commission on World Food Proposals, Washington, U.S.A. Feb. 1947, p. 11.

2/ Measures for the Economic Development of Underdeveloped Countries, United Nations, May 1951, Document E/1986.

A. THE IMPORTANCE OF AGRICULTURAL DEVELOPMENT

There is general agreement on the need to expand agriculture in the world as a whole, and especially food production in underdeveloped countries, in order to maintain and improve standards of nutrition. Sometimes it is argued that expansion is not expensive because techniques can be easily improved.1/ This may be true in isolated cases if new crops are introduced (rubber in Malaya, Sumatra and Borneo after 1910) or new varieties developed (high-yielding, disease-resistant sugar canes after 1925, or hybrid corn after 1935), but this thesis does not hold in general. There are no longer great fertile plains with natural grasses waiting for the plow as were available a century ago in the four corners of the earth (North America, South America, Siberia and Australia). Any large and long-term increase in food production has to come from increased yields on the existing area of farmland, from clearing of land, or from irrigation. All these require large investments in research, extension services, soil conservation, land improvement and public works.

It, therefore, is important to consider very carefully the implications of any particular target of increased agricultural production. The Sixth Conference of FAO (November 1951) unanimously adopted a resolution requesting all member governments to reach an annual increase in food production of at least 1-2% above population increase.2/ Estimating the latter at 1.25% annually, the target for agriculture then would be 2.25 - 3.25%. The UN Report put the target at 2.5%.3/

In the following study the target has been adapted to the different levels of population increase in the main underdeveloped areas, and put at 0.75% over increase of population, a modest figure in comparison to FAO and UN targets.

Let us now consider what amounts of investment would be needed to bring about such a degree of improvement in the diet. It seems reasonable to expect that the need for capital is proportionate to the annual increase in production established as the target. This would not be true in the case of a very large and sudden increase, but for our study it seems an adequate approximation. Conversely, the annual increase can be expected to be proportionate to the amount of net investments. Let us call this rate of increase a/.

How great an increase in production will be caused by one unit of additional investments depends very much on the type of investment. The number of units of capital needed to raise future output by one unit is to be called c/. This capital coefficient may be 2.5 to 4 or more under different economic circumstances and for different projects. Including current expenditures for

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1/ U.N. Document E/1986, p. 78.
2/ Report of Sixth Conference of FAO, Rome, 1952. Resolution No. 6, pp. 17-18.
3/ l.c. page 78.

research and extension services, the UN expert report[1] puts this coefficient at 4, and for simplification this assumption can be accepted.

In the third place, the job of increasing production may be assumed, other things being equal, proportionate to the magnitude of the present agricultural aggregate. Let p/ be the percentage of income derived from agriculture and d/ the percentage available for new investments. If r/ is the rate of agricultural investment in total investment, the following equations can be established.

$$a = \frac{d \times r}{c \times p}$$

If we call d x r, the amount of investment in agriculture expressed as percentage of national income = n/, we find:

$$n = d \times r = \frac{a \times p \times c}{100}$$

The absolute amount (to be called N/ in this study) can easily be derived by multiplying n/ by the total national income of the country or area. This calculation is still further simplified, if c/ is uniformly set at 4. In that case,

$$n = 0.04\ a \times p \quad \text{or} \quad a = \frac{25\ n}{p}$$

The UN expert committee goes even further by using a uniform a/ of 2.5% and p/ of 40% in all areas, thereby reducing the formula to

$$n = 0.1\ p = 4\% \text{ of national income}$$

At this point, however, we have to depart from the reasoning of the committee. In reality, the percentage of national income derived from agriculture is not uniformly 40% but differs widely even among underdeveloped countries. Let us first look at present conditions before embarking upon calculating capital requirements.

The amount of domestic savings or of total available investment funds obviously is not the same in all underdeveloped countries. The variation ranges from 3 to 8%, according to the UN Report. That part of savings which is devoted to agriculture also varies, although this ratio has seldom been studied thoroughly. Therefore, it is understandable that the annual increase of agricultural production is widely variable. For the five main regions of underdeveloped countries, the following estimate is the best available:

1/ l.c. para. 240, in conjunction with other data in the report.

Region	Population (mill.)	Increase in population 1940/50	National income	Income per capita	Net domestic savings	Domestic savings d	Income derived from agriculture est. p	Investment devoted to agriculture est. r	Rate of agricultural development a
				(billion dollars)			(percentages)		
Latin America	160	1.89	25	156	2.00	8.0	40	30	1.50
Africa (excl. Egypt)	180	1.20	13	72	0.72	5.5	52	45	1.18
Middle East	95	1.25	10	105	0.55	5.5	45	35	1.06
E.Central Asia	440	1.02	25	57	1.20	4.8	55	45	1.00
Far East (excl. Japan)	660	0.48	27	40	0.80	3.0	60	50	0.62
Total	1535	0.91	100	67	5.27	5.3	51.2	38	0.97

Although many of these figures are out of necessity rough estimates, there is a remarkable similarity between the figures for increased food production and population. The data assembled by the League of Nations between the two wars, as well as those by FAO in the postwar period, point also to a close relationship. In Java and Madura (Indonesia), food production and population data are reasonably well known after 1880. Between that year and 1940, both population and food production increased by 140%.

Although it is understandable that especially in underdeveloped countries food supplies tend to increase at the same rate as population, the phenomenon is important enough to be commented upon. The basic reason obviously is the low degree of elasticity (both price and income) of demand for basic foodstuffs. If food supplies did not keep up with population increase in a market economy, high prices for food would follow, and vice-versa. In a self-sufficient, closed economy, the same economic rule works. Production shortages here are even more sharply felt because imports from abroad are very difficult to obtain and, at the same time, it is virtually impossible to export foodstuffs. Under these circumstances, the desire to produce food, efforts to bring land into cultivation, and labor devoted to land and crops increase sharply when food shortages occur and vice versa. It would not "pay" to produce more than the standard consumption of the local community.1/ These conditions will change when better transport and marketing facilities create a market capable of absorbing local surpluses. The above-mentioned restrictive factors then will no longer interfere with the efforts to produce and - when prices are attractive - the new marketing outlets will even boost production considerably.

The overriding factor currently determining food production, both country-wise and for the underdeveloped areas as a whole, apparently still is the desire to satisfy existing standards of nutrition, rather than produce to the limit.

This is shown in the following estimate for a number of countries where the importance of agriculture p/ and the rate of net-investment d/ is fairly well known.

The figure for r/, the percentage of the investment funds devoted to agriculture, is estimated and takes into account the fact that in all countries there seems to be a tendency to devote less funds to the development of agriculture than agriculture's share in national income. The next columns, n/ and a/, are derived from the following calculations: $n = d \times r$, and $a = \frac{25\ n}{p}$

1/ In certain closed communities it was the custom to accumulate 2 or 3 years' food supply or large herds of cattle. Anthropologists have generally explained this custom as display of social importance or economic waste, but it can also be explained as a social defense against rapidly declining private efforts in case of abundant food production. It is the primitive prototype of the "ever normal granary".

Estimate of Investment in Agriculture and Increased Production

Investment in Agriculture

Country	Income derived from agricultural sector (p) 1/	Net investment (d) 2/	Percentage of total investment (r)	Percentage of national income (n)	Development of agriculture (a)	
Thailand	61.3	5.0	50	2.50	1.02	) Agriculture
India	47.5	5.5	30	1.65	0.88	) underdeveloped
Colombia	40.0	8.0	25	2.00	1.25	)
Italy	35.0	12.0	20	2.40	1.71	) Agriculture
Japan	28.0	10.0	20	2.00	1.72	) semi-
Chile	18.0	8.0	13	1.04	1.44	) developed
Netherlands	12.0	15.0	10	1.50	3.02	) Agriculture
U.S.A.	8.0	20.0	5	1.00	3.12	) highly-
U.K.	5.4	18.0	4	0.72	3.33	) developed

1/ United Nations Document E-2041
2/ Estimates based upon general information about countries.

Although based upon rough estimates, this table clearly shows why in highly-developed countries agricultural development is more rapid than in underdeveloped countries. Even where the percentage of investments and of national income devoted to agriculture is high (Thailand), the rate of increase is low. The proportion of agricultural investment in total investment increases greatly as the proportion of national income derived from agriculture rises, but this is not sufficient to allow a large increase in agricultural production. The obvious reason is that net investment is low in underdeveloped countries.

There is also a general tendency for a smaller per capita income in agriculture than in other parts of the economy. This is illustrated by data, published by the Statistical Office of the United Nations. The ratio in favor of non-agriculture is derived from the formula:

$$\frac{\text{column 1 x column 2}}{\text{column 3 x column 4}}$$

Country	Agrarian population as percentage of total 1/ (1)	Non-agrarian income as percentage of total (2)	Non-agrarian population (3)	Agrarian income (4)	Income per capita in non-agrarian activity (agrarian per capita income = 100)
N. Rhodesia	83.1	57.7 2/	16.9	42.3 2/	670
Union of South Africa	49.1	87.1	50.9	12.9	648
Canada	25.7	83.6	74.3	16.4	175
Puerto Rico	39.2	75.8	60.8	24.2	202
U.S.A.	14.3	92.0	85.7	8.0	205
Argentina	25.9	76.0	74.1	24.0	109
Chile	33.4	82.7	66.6	17.3	238
Colombia	61.0	39.6	39.0	40.4	153
Peru	62.5	67.4	37.5	32.6	343
India	68.2	52.5	31.8	47.5	226
Japan	54.3	71.6	45.7	28.4	257
Denmark	29.1	78.9	70.9	21.1	150
France	36.5	79.8	63.5	20.2	226
Germany	24.3	88.3	75.7	11.7	242
Greece	60.9	59.2	39.1	40.8	224
Italy	48.0	64.1	52.0	35.9	170
Netherlands	19.3	88.0	81.7	12.0	170
Norway	32.6	85.4	67.2	14.6	284
Poland	68.2	62.3	31.8	37.7	343
U.K.	5.4	94.6	94.6	5.4	100

1/ In fact, the percentage of persons actively engaged in agriculture, as given in the U.N. Document E/2041, has been used. The percentage of people living from agricultural income is somewhat higher in Latin America, and somewhat lower in the Eastern Hemisphere. This does not materially affect the comparison.

2/ Adjusted by £ 5 million for subsistence agriculture.

Source: U.N. Document E/2041, Tables 5 and 7.

For the five regions under consideration, the ratio works out as follows:

Region	Agricultural population	Agricultural income	Income of non-agricultural population a/
Latin America	60	40	2.25
Africa	75	52	3.00
Near East	60	45	1.84
South Central Asia	70	55	1.91
Far East	70	60	2.25
Total	69	51.2	2.18
U.N. Report 1/	70	40	3.50

a/ Income per head of agricultural population is unit.

Consequently, the agricultural sector will generally have a propensity to save even less than the already low average in underdeveloped areas, and will not be able to accumulate enough capital for the desired degree of development.2/ This, however, generally does not lead toward a flow of private capital to the countryside. On the contrary, in many countries savings by land owners are by preference invested in the cities.

Unless special governmental funds become available for the agricultural sector, population increase may easily reach a point where net investments in agriculture are inadequate to raise food production at the same rate. Where agriculture produces a large part of national income, even a large proportion of available domestic investment funds may not be enough to allow any improvement in the amount of food consumption per head.

Our simple formula now allows a comparison between estimated present investments in agriculture and the amounts required to reach an increase in production of 0.75% above population increase.

1/ The U.N. Report makes this estimate implicitly.

2/ Where land is available, the rural community however is able to expand production by investing off-season labor. The prerequisite is a rapidly expanding market such as has occurred many times in the development of export crops, but may also occur in the domestic market. Investments can most readily be made in tree crops, which is the reason for mushrooming production of cocoanuts, rubber, cocoa and similar products, whenever the prices are favorable. The very rapid development of food production by the Arab communities in Israel and in the neighborhood of the cities in Brazil in recent years are examples of the effect of market conditions on agricultural production for domestic markets.

Regions	Percentage population increase 1950-1960	Target increase of agricultural production (a)	Percentage of national income derived from agriculture (p)	Percentage of national income to be invested (n)	Amount in billions of dollars (N)
Latin America	2.25	3.00	40	4.80	1.20
Africa	1.25	2.00	52	4.16	0.54
Middle East	1.50	2.25	45	4.05	0.40
S.Central Asia	1.50	2.25	55	4.95	1.26
Far East	0.75	1.50	60	3.60	0.97
Total	1.23	2.13	51.2	4.37	4.37

Formula used: $n = 0.04 \, a \times p$

N = target of investments in billion dollars

The percentages of national income derived from agriculture in Latin America and the Middle East are about equal to the assumptions in the U.N. Report; elsewhere they are higher and, therefore, on the whole a net investment of 4.4% of national income induces only a 2% increase in agricultural production.

An overall target of a 2.5% increase in agricultural production for the underdeveloped countries as a group would absorb 5.5% of national income. If in each region an increase of 2.5% were to be achieved, capital requirements would be 4% of national income in Latin America and as high as 6% in the Far East. The regional differences in projected population increase add to the differences in capital requirements for agricultural development. An equal percentage increase over and above growth of population of 0.75% means an overall increase of agricultural production of 2.1% rather than an overall increase of 2.5%.

The compensating effects of these differences in assumptions, compared with those of the U.N. Report, are such that both calculations arrive at a need for roughly $4 billion net investment in agriculture but with a significant difference in the distribution of this amount over the regions. Part of this capital is locally accumulated at present. The exact amounts are unknown but I consider the estimate in the following table reasonable:

(All figures in billion dollars annually)

Region	Estimated present agricultural investment	Target situation	Deficit	Target set in U.N. Report
Latin America	0.60	1.20	0.60	0.96
Africa	0.32	0.54	0.22	0.53
Middle East	0.19	0.40	0.21	0.36
S.Central Asia	0.54	1.26	0.72	0.96
Far East	0.40	0.97	0.57	1.06
Total	2.05	4.37	2.32	3.86

Present net investment in agriculture in underdeveloped countries will have to be more than doubled to reach the moderate aim of a 2.1% annual increase in agricultural production. In absolute amounts, this means that for a period of time $2.3 billion new financing will be required annually. On the basis of our estimates, Africa needs roughly a 70% increase, South Central Asia an increase of 130%, and the other regions, including Latin America, will require double the amount of present investment.

The U.N. Report does not allocate enough to Latin America and South Asia, and too much to the Far East. This is the consequence of differences in population increase, which were not taken into account in the U.N. Report.

Not all of this additional capital need to come from foreign sources. Measures to increase domestic investments will have to be encouraged, although under present conditions not much can be expected from the majority of small peasants in underdeveloped countries.1/ Increased capital formation within the countries can eventually be achieved through commercialization of agriculture and through industrialization, but temporarily at least, investments of foreign capital, together with measures to increase knowledge and skill of peasants, will be necessary.

There is great diversity of opinion on how greater agricultural production can be achieved. Basically, it can be done along two lines: through more produce per unit of existing farmland or through expansion of farmland. Double cropping or avoidance of fallow has some of the characteristics of both methods.

Achieving higher yields is dependent upon the availability of farm requisites (working capital) and skill. Extension services and vocational training have as their main effect an acceleration of applying better methods; their effect is greatest with better seed, sometimes fertilizers. These services are essential to sustained long-term developments, and are a good "investment", which should be part of any agricultural development program.

1/ E.C.A.F.E. Mobilization of domestic capital: Report and documents of the first working party of experts, 1951; id. second working party, 1953.

B. CHANGES IN CONSUMPTION PATTERN

The foregoing calculations assume that industry and social overhead services are expanded along with agricultural development. Without adequate investments in transportation, communications, power, education, health and similar basic services an agricultural program of any magnitude could not be carried out. If it were attempted, the return from capital invested in agriculture would decrease. And the goal should be to get the most out of each invested dollar for development.

Agriculture cannot be developed quickly unless the non-agricultural part of the economy is expanded likewise. The reverse is equally valid, at least if we continue to assume that the food supply of the area remains adequate to fill the needs.

The problem therefore is: how much non-agricultural development is in balance with the agricultural growth just described. We will look at this problem first from the market aspect. Obviously markets must be found for the aggregate expanded production and - if the composition of the goods and services offered is equivalent to the expanding needs - the increased production will create the necessary markets, as the old adage of J. B. Say runs. It is a well-known fact that with increasing per capita income the proportion of agricultural products in the budget decreases. For our problem, we want to know how rapidly the agricultural percentage does decline. Looking at the percentages agricultural income in the five main areas, we find a clear correlation between average income and the agricultural part of it. On a semi-logarithmic basis, the trend line is straight (fig. 1). The decline in the agricultural part of the economy is about equivalent to 1.5% for every 10% increase in national income (Table I). It would follow that it is the relative increase in national income, rather than the absolute increase, which results in a certain quantitative change in the composition of the demand basket.

The chart gives the percentage of agriculture in national income rather than consumption. For large areas, both percentages will nearly coincide. For individual countries obviously there is a wide variation.

For some countries this can be readily explained because food is imported on a large scale (many mining countries!). In other countries pricing policies for agricultural products explain the departure from the trend line. For our purpose we may content ourselves with the result, that over a wide range a one percent increase in per capita consumption of agricultural products is in balance with about two percent increase in consumption of non-agricultural products and services (Table I). As we may expect, the relative change in non-agricultural consumption is greater when average income levels rise. However, this change is very gradual and slow within the range of income levels in underdeveloped countries.

TABLE I

Dollars per capita income	Percentage		Dollars per capita		Effect of 10% increase in income	
					Percentage increase in	
	Agri-cultural	Non-agri-cultural	Agri-cultural	Non-agri-cultural	Agri-cultural	Non-agri-cultural income
40	60	40	24.00	16.00	7.4	14.1
44	58.5	41.5	25.74	18.26	7.3	14.0
48.4	57	43	27.59	20.81	7.2	13.9
53.2	55.5	44.5	29.53	23.67	7.1	13.8
58.5	54	46	31.64	26.86	7.0	13.6
64.4	52.5	47.5	33.85	30.55	6.9	13.5
70.8	51	49	36.21	34.49	6.8	13.4
77.9	49.5	50.5	38.61	39.49	6.7	13.3
85.7	48	52	41.15	44.55	6.6	13.3
94.3	46.5	53.5	43.80	50.30	6.5	13.2
103.7	45	55	46.67	57.03	6.4	13.1
114.1	43.5	56.5	49.63	64.47	6.3	13.0
125.5	42	58	52.70	72.80	6.2	12.9
138.0	40.5	59.5	55.95	82.05	6.1	12.8
151.8	39	61	59.20	92.60	5.9	12.7
167.0	37.5	62.5	62.60	104.40	5.7	12.6
183.7	36	64	66.10	117.60	5.6	12.6
202.1	34.5	65.5	69.80	132.30	5.4	12.5
222.3	33	67	73.40	148.90	5.2	12.5
244.6	31.5	68.5	77.10	167.50	5.0	12.4
269.0	30	70	80.70	188.30	4.7	12.4

Applying this trend line, it now becomes possible to calculate which increase in per capita consumption of non-agricultural products and services would be in equilibrium with 0.75% increase in per capita food consumption.

Per capita increase consumption	Latin America	Africa	Near East	South Central Asia	Far East	Total
Agricultural	0.75	0.75	0.75	0.75	0.75	0.88
Non-agricultural	1.66	1.48	1.55	1.45	1.43	1.71
Total	1.32	1.09	1.19	1.06	1.02	1.28

Where agriculture is relatively most important (and per capita income lowest), 0.75% increase in food consumption is correlated with relatively lowest increase in non-agricultural consumption.

C. THE NEED FOR TRANSFER OF POPULATION

If we assume that the rate of population increase is equal in both sectors of the economy 1/, it now becomes possible to determine the rate of transfer of population necessary to get the desired rate of development in the non-agricultural sector. In this study, we call a development "balanced" where the percentage per capita increase in income in the agricultural sector is equal to the increase in the non-agricultural sector.

In the course of development, the differences between per capita income of agricultural and non-agricultural groups of population tend to diminish, but no hard and fast rule can be laid down (as shown in the table on page 8 by comparing U.S.A. and Puerto Rico or India and Japan, France and Greece). It, therefore, seemed justified to use the simple model where the percentage increase in per capita income in the agricultural sector is equal to the increase in the non-agricultural sector of the economy. Of course, if the social policy of a country involves a gradual decrease of the difference in per capita income levels, it would be necessary to plan for a larger transfer of population. The necessary degree of population transfer to reach the simple goal assumed in this paper can be determined as follows:

	Latin America	Africa	Near East	South Central Asia	Far East	Total
Agricultural production increase	3.00	2.00	2.25	2.25	1.50	2.12
Population increase	2.25	1.25	1.50	1.50	0.75	1.24
Per capita increase in income	1.32	1.09	1.19	1.06	1.02	1.28
Admissible increase in agricultural population	1.68	0.91	1.06	1.19	0.48	0.84
People to be transferred per original 100 persons agricultural population	0.57	0.34	0.44	0.31	0.27	0.46

1/ When medical services expand over predominantly rural areas, the increase on the land generally will become higher, and an additional need for movements toward the cities will appear. Likewise, if an equalization of per capita income in rural and urban sectors is aimed at - barring a transfer through taxation and pricing policies - a larger transfer would be necessary.

As a simplification, percentages have been added and deducted; to be accurate they should have been multiplied and divided, but this makes little difference in the outcome. As the basic figures are mostly targets or statistically rough estimates, the simple calculation is sufficient.

It is worthwhile to remark that the necessary degree of population transfer is directly dependent upon the rate of increase in per capita income and of agricultural production.

The following table shows this clearly for the case where per capita increase of food production (and consumption) is assumed to be 1.25% per annum.

	Latin America	Africa	Near East	South Central Asia	Far East	Total
Per capita increase in consumption:						
Agricultural	1.25	1.25	1.25	1.25	1.25	1.47
Non-agricultural	2.78	2.48	2.60	2.45	2.34	2.86
Total	2.20	1.82	1.98	1.77	1.70	2.15
Agr. production	3.50	2.50	2.75	2.75	2.00	2.62
Population	2.25	1.25	1.50	1.50	0.75	1.24
Admissible increase in agricultural population	1.30	0.68	0.77	0.98	0.30	0.47
People to be transferred	0.95	0.57	0.73	0.52	0.45	0.77

It is interesting to see the relation between numbers of agricultural and non-agricultural population, if the shift in population, necessary to absorb 0.75% increase in agricultural production, materializes.

	Starting Point		After One Year				
			Agricultural population		Non-agricultural population		Percent after one year
Region	Agrarian population	Non-agrarian population	Percent increase	Number 1/	Number	Percent increase	
Latin America	60	40	1.68	61.00	41.25	3.01	40.35
Africa	75	25	0.91	75.68	25.57	2.28	25.25
Near East	60	40	1.06	60.64	40.86	2.15	40.25
S.C. Asia	70	30	1.19	70.83	30.67	2.23	30.21
Far East	70	30	0.48	70.14	30.61	2.03	30.39
Total	69	31	0.84	69.58	31.65	2.10	31.27

1/ The sum of these two columns is total population after one year.

The same increase in per capita food availability (0.75%) has very different results on movements of population in the five regions on the assumption of equal increase in standard of living and food intake in both major parts of the economy. On the average 60% of the increase of population has to find work outside agriculture; the percentage rate of increase is about three times more rapid in the non-agricultural population, and the percentage agricultural population decreases by 0.27%.

If the per capita food consumption rises by 1.25%, it similarly can be calculated that 75% of the new population has to be transferred and that the percentage of agricultural population drops by 0.53%. The increase in non-agricultural population would, on the average, be 2.72%.

When per capita agricultural production rises, it is necessary quickly to move people away from agriculture into other activities. On the basis of a "balanced development", i.e. the same per capita increase in real income in both major sectors of the economy, this needed population shift can be shown in figures for the aggregate of the underdeveloped areas, 50% of national income derived from agriculture by 70% of population (population increase 1.25%). All figures are in percentages per annum.

The Effect of Increased Agricultural Production on Need for Non-Agricultural Production

Increase in agricultural production	Per capita increase of agricultural production	Per capita increase of total production	Admissible increase in agricultural population	Need for increase of non-agricultural population	Need for increase of non-agricultural production
1.50	0.25	0.38	1.12	1.55	1.93
1.75	0.50	0.75	1.00	1.83	2.58
2.00	0.75	1.12	0.88	2.11	3.23
2.25	1.00	1.50	0.75	2.42	3.92
2.50	1.25	1.88	0.62	2.72	4.60
2.75	1.50	2.25	0.50	3.00	5.25
3.00	2.00	3.00	0.00	4.17	7.17

The last two columns in this table show that there is slight hope of attaining the high targets for non-agricultural activities, which are equivalent to an increase of per capita agricultural production of 1.50% or more per annum. 1/

1/ Colin Clark, in a personal communication considers a 3% per annum increase in industrial population a maximum for all practical purposes.

If the necessary movement of people, with the consequent high demand for food from the cities should not occur, inevitably income per laborer in the agricultural sector would fall as a result of underemployment and of low prices for food. Under these circumstances, no further rapid increase in food production would be justified, and a high per capita increase of agricultural production and food consumption would not be attained.

D. EFFECT OF POPULATION TRANSFER ON AGRICULTURAL PRODUCTS TO BE MARKETED

The need for developing internal markets for agricultural products can be shown by a comparison of the situation in countries which have different numbers of economically active population engaged in agriculture. The following conditions are assumed:- The country produces on a net basis exactly the agricultural goods it needs, or in other words it maintains a balance between exports and imports of these products. - Sales by farmers to other farmers (local specialties and seasonal exchanges) have been neglected. - Farmers and non-farmers consume values of food commensurate with their relative income. - The difference between farm and non-farm income is increasing when the percentage of agricultural population decreases.

Percentage of active population in agriculture	Income per capita in non-agriculture 1/	Food intake by farming population	Food available for other groups 2/	Quantity of food one farmer (family) produces in percentage of own needs
70	225	56.5	43.5	177
60	200	49	51	204
50	175	42.5	57.5	235
40	150	35	65	286
30	125	28	72	357
20	115	19	81	527
15	100	15	85	667

1/ In each case income in agricultural groups = 100.
2/ Also the proportion of farm income available for industrial goods, services, servicing of investments, savings and taxes; also the amount of agricultural products to be marketed.

It can easily be shown that on an assumption of a fixed relation between per capita income in both major sectors of the economy of 200, the food intake of the farming population decreases even more rapidly, and the product to be marketed increases.

When agricultural production expands under conditions in which the increase in population can be transferred to non-agrarian activities, standards of living rise in both sectors of the economy. Even if food intake increases at a more rapid pace among agricultural groups, because their income rises faster, a much larger part of the new agricultural product has to be marketed.

Let us consider the effect of the degree of population transfer into industry under the following assumption: Population increases by 1.25%, agricultural production by 2.00% and no change in export-import status is envisaged.

1) The entire population increment is transferred to non-agricultural activities. The effect on marketing of agricultural product is as follows:

Starting Point	After One Year			
Percentage agriculturally active people	Percentage of total food consumed by agricultural population 1/	Additional Consumption by agricultural people 2/	Additional Product available for non-agricultural population 3/	Percentage of new product entering market
70	56.5	0.42	1.58	79
60	49	0.37	1.63	81
50	42.5	0.32	1.68	84
40	35	0.26	1.74	87
30	28	0.21	1.79	90
20	19	0.14	1.86	93

1/ The remainder to be put on the market.
2/ At 0.75% increase per capita.
3/ The increase in agricultural production minus additional consumption by farmers.

As this table shows, when the whole population increase is channelled away from agriculture, some 80% of the new product enters the market even at a low income level, and in its marketing aspect increased agricultural production assumes the characteristics of a more developed country, including more sales, higher consumption of industrial goods and more opportunity for savings in the agricultural sector.

2) Population increase in non-agriculture is four times that in agriculture.

Starting Point		Population after One Year		Food Consumption After One Year		
Agricultural population	Non-agricultural population	Agricultural	Non-agricultural	Agricultural population	Non-agricultural population	Percentage of new product to be marketed
70	30	70.50	30.75	57.32	44.68	59
60	40	60.35	40.90	49.60	52.40	70
50	50	50.25	51.00	43.03	58.97	74
40	60	40.16	61.09	35.40	66.60	80
30	70	30.12	71.13	28.32	73.68	84
20	80	20.08	81.17	19.22	82.78	89

The difference with the first case is felt mainly where the agricultural population is relatively large, but 60% of the new product has to be marketed, even in the lower income group.

In this manner, it is early to calculate the effect for the model, where the population transfer is just adequate to maintain the "balance" between agriculture and non-agriculture and per capita increase in food consumption is 0.75% annually.

Applying this type of calculation for the five main underdeveloped regions in the world, the following results are obtained:

Region	Increase of population divided in percentage		Present ratio of agricultural product consumed outside agricultural sector	Percentage of new product to be marketed
	Agricultural	Non-agricultural		
Latin America	44	56	53	63
Africa	54	46	41	55
Near East	43	57	49	64
S.C. Asia	55	45	40	52
Far East	47	53	43	52
Total	45	55	44	59

It would follow that 59% of the new product therefore will have to reach the market as against 44% under present conditions.

If the population transfer is adequate to maintain the "balance" between agriculture and non-agriculture, but per capita increase in food consumption is 1.25% annually, the rate of improvement is greater, the population transfer also has to be larger and the percentage of new product to be marketed is equally increased. The following rates apply in this case:

Region	Increase of population divided in percentage		Present ratio of agricultural product consumed outside agricultural sector	Percentage of new product to be marketed
	Agricultural	Non-agricultural		
Latin America	35	65	53	67
Africa	41	59	40	59
Near East	32	68	49	65
S.C. Asia	45	55	40	58
Far East	25	75	43	48
Total	25	75	44	66

Especially when the rate of development is fairly rapid, the effect is not only more sales of produce by farmers but at the same time a greater consumption of industrial goods as a result of the rise in per capita income outstripping that of per capita food consumption. It also gives new opportunities for capital accumulation in the rural areas through savings or taxation, which can then be used to finance future development. However, the whole program depends upon greatly improving the transportation and marketing facilities for rural products.1/

It should be stressed that programs for irrigation, clearing new land, mechanization and agrarian reform will have little effect, unless the individual farmers have the incentive to grow more. This incentive is lacking in a closed economy because local surpluses can not be marketed. New agricultural techniques will not alter this situation unless the markets can readily be reached; otherwise, the major deterrent to expansion in the traditional subsistence economy will continue to operate. Likewise, under agrarian reforms the tenants might eat more, but they would have no incentive to use better seed, implements and fertilizers if the surplus finds no ready market. The need for markets has been the main motive for building railroads and developing ocean ports in "new" countries during the last century, and it is bound to be one of the cornerstones of future development.

At the same time, a sufficient per capita rise in income of farmers will be impossible if not enough excess population is channeled off into other activities.2/ Any increase in food production would be consumed on the spot by more underemployed people on the land, and individual farmers would feel no incentive to increase production above the rate of growth of the population.

1/ L. Witt and Mr. Ezekiel - The Farm and the Copy - FAO publication, Rome, 1953, page 11-12 hint at this problem, but they deal with it rather as a business cycle phenomenon than a development problem.

2/ L. Witt and Mr. Ezekiel, l.c. page 2 - 6.

E. THE NEED FOR A BALANCED DEVELOPMENT

Thus, economic development is basically an indivisible process of agricultural expansion, of movement of people to non-agricultural enterprises and expansion of industry, and of improved marketing facilities and internal transportation.

Agriculture cannot prosper unless investment in other activities takes care of:

a) Increase of productivity of existing non-agricultural people and the excess of birth over death of this group;
b) Equipment, housing and public services for the population transferred from the agricultural sector.

The non-agricultural sector could be developed independently, but only at the expense of large food imports; therefore, this road is not open to the world at large. But is it not possible for a country or a group of countries? A rapid expansion of industry without a complementary expansion of agriculture evidently is possible only when the country can import the necessary food and raw materials and at the same time sell a surplus of industrial products abroad. History shows that this was the case in England and Japan. However, the two requirements must be co-existent because the country would have no funds to buy food unless it exported industrial products and the latter is necessary because the domestic rural population develops not enough purchasing power. Whenever only one of the two requirements is met, a country encounters very serious internal and external problems. For the underdeveloped countries as a whole this road seems blocked because for the most part they would have to buy and sell among themselves. There would be no supply of food and no market for industrial products if it was tried on a larger scale for a period of time.

For this reason, a policy of large scale industrialization alone cannot keep underdeveloped areas. The criticism of Viner[1/] as regards Louis Bean's proposals are valid in this respect.

Over a very long period, the degree of industrialization in relation to agricultural development, might keep terms of trade between food and industrial products in line. But it would be an almost impossible task to apply such policies as a counter-balancing factor.

It may seem pessimistic that only a 1 - 1.25% increase annually in food intake seems feasible, especially since part of the increase is caused by differentials in population growth. Yet I feel that this realistic statement calls for qualifying one of our basic assumptions, viz. the self-sufficiency in agricultural products of the underdeveloped countries as a group. This is so near to existing conditions that no statistical correction was needed in our calculations.

1/ J. Viner - International Trade and Economic Development - 1952, Chapter IV.

However, a net export of food and agricultural raw materials to more highly industrialized countries might increase. Thus the development-defeating characteristic of the low elasticity in demand for food is circumvented. Such exports could provide the means to buy more developmental and consumer goods and add to the self-financing of economic development. External trade might furnish the motive power for a more rapid economic development than otherwise could be possible. This was the development pattern of many countries between 1880 and 1930, but since the disastrous depression of the thirties there has been great reluctance to follow that course. Changes in demand and supply and violent fluctuations in the prices of food and agricultural raw materials seriously hamper a further increase in this trade.

It would take a long period of continuous high prices or prospects for sustained fair prices before farmers and governments would start an all-out effort to produce more agricultural goods for export. Producers are keenly aware that the inelasticity of demand for foodstuffs would reverse the trend at a later stage, and nobody is attracted by prospects of long-term cycles with excessively high or low prices. The conclusion, therefore, is that no rapid increase is likely to occur unless stability of economic conditions is better safeguarded.

Therefore, it is in the interest of the whole world that safeguards should be found against a future "big depression". This is the reason for the continued interest in schemes for economic stabilization as well as development (World Food Board Plan, International Commodity Clearing House, Commodity Agreements, the Angell and Goudriaan reports, etc.).

F. CAPITAL NEEDS FOR DEVELOPING THE NON-AGRICULTURAL SECTOR

In order to calculate the amounts of capital needed to develop the non-agricultural sectors of the economy, it is necessary to estimate the capital co-efficient in these sectors. On the basis of a publication of the U.N. Statistical Office, I divided these activities into three groups: (Table II)[1/]

A) Mining and construction, transportation, communications and dwellings; these belong to the group which needs a large amount of capital for one unit of increased production.

B) Manufacturing, which includes activity with both a high and a low co-efficient.

C) Commerce and other activities, which belong largely in the group with a very low capital input:output ratio.

The rather astonishing conclusion can be drawn that there is no apparent relation between the degree of economic development and the proportion of the three groups in the non-agricultural sector of the economy, measured by the national income they generate. Roughly speaking, it contains 20% of A, 30% of B, and 50% of C (compare India with the USA). If the capital co-efficient in these three groups is assumed at 9, 4 and 2 respectively, this average works out at 4.0. However, very few studies have been made to determine the effect of investments in different sectors of the economy. Also, the statistics used for this purpose are not strictly comparable, as the breakdown between activities is not handled in the same way in all countries. A tentative comparison has been made between the countries in the last two columns of the Table.

As could be expected, there is a tendency for the capital co-efficient to be high in countries where:

a) A large part of the population is active in primary production, especially mining.

b) Transportation is very difficult or expensive; this applies especially to some countries in Africa.

The figure is low, and therefore presumably underestimated, in Egypt, Puerto Rico, the Dominican Republic and Turkey, where a large proportion of income is derived from "other activities".

1/ The figures in this Table are derived from U.N. Document E/2041.

Although the statistics are not sufficiently accurate and comparable, the figures seem sufficient to conclude that no clear trend can be established between the rate of development and the capital input:output ratio. Unless there are special cases, as a rough approximation a ratio of 4.0 can be assumed for the underdeveloped countries as a group regardless of the differences in economic development.

There appears to be no reason for using different capital coefficients for the main regions, except for the fact that probably in Africa, where a large percentage of output is concentrated in mining, and a great need exists for better transportation and new general services, the coefficient will be higher. No allowance has been made for this fact, as there is no sufficient statistical evidence to do so and, therefore, the need for investments for Africa may be understated in this paper. Of course, on a country basis, such differences could not be ignored.

TABLE II

	Percentage Distribution of Non-Agricultural Income by Major Branches of Industry					Capital Coefficient	
Country	Mining	Construction, Dwellings, Transportation and Communications	Manufacturing	Commerce	Other	For non-agricultural activities	For the whole economy 1/
Egypt	-	10.5	20	18.5	51	3.13	3.52
Kenya	2.5	27	16	31	23.5	4.42	4.24
N. Rhodesia	60	7.5	3.5	12.5	16.5	7.29	5.90
U. of S. Africa	13	17	27.5	20	22.5	4.65	4.57
Canada	4	18	36	24	18	4.26	4.22
Dom. Republic	3.5	7.5	27	35	27	3.31	3.59
Mexico	11	14	28	30	17	4.31	4.25
Puerto Rico	-	16	15	28.5	40.5	3.42	3.56
U.S. America	2.5	13	33.5	30.5	20.5	3.75	3.77
Argentina	2.5	17	28	31.5	21	3.93	3.95
Chile	11.5	9	29	21	29.5	4.01	4.01
Colombia	3.5	15.5	32	27.5	21.5	3.97	3.98
Paraguay	-	15	46	20	19	3.97	3.98
Peru	9	8	27.5	33	22.5	3.74	3.82
Venezuela	33	x	x	x	x		-
China	1	20	19	36.5	23.5	3.85	3.94
India	1.5	15	31.5	32	20	3.78	3.88
Japan	3	17	38	22.5	19.5	4.16	4.11
Philippines	2.5	13	9	38.5	37	3.26	3.72
Thailand	1.5	x	33	x	x	-	-
Turkey	-	6	36	35.5	22.5	3.14	3.56
Bulgaria	3	10.5	39	23.5	24	3.72	3.85
Denmark	1	22	38.5	19.5	19	4.40	4.32
Finland	-	20	46	18.5	15.5	4.42	4.30
France	6.5	27	22	16.5	28	4.84	4.67
W. Germany	a/	12	59.5	11.5	17	-	-
Greece	1	13.5	37.5	26.5	21.5	3.76	3.86
Hungary	4	7.5	58	14	18.5	4.00	4.00
Iceland	-	25.5	20	36.5	18	4.18	4.11
Ireland	-	x	34.5	30.5	x	-	-
Italy	1	12	47.5	20	19.5	3.86	3.91
Netherlands	2	23	31	19	20	4.27	4.24
Norway	a/	24	49.5	16	10.5	-	-
Poland	a/	11.5	57	31	0.5	-	-
U. Kingdom	3.5	18.5	41	14	23	4.36	4.34

1/ With a capital coefficient of 4 for agriculture.
a/ Mining included in manufacturing.
x/ No specification.

G. INVESTMENTS NEEDED FOR TOTAL DEVELOPMENT

We started our considerations with an equal increase in per capita agricultural production. We thereupon found that the effect on non-agricultural development depends upon the relation between both sectors of the economy, which itself changes when per capita income increases. Therefore, a given increase in agricultural production will - if the development is "balanced" - correspond with a smaller overall increase in national product, when per capita income is lower and vice versa. Similarly, the increase in use of agricultural products would be larger in areas with a lower income if the percentage of rise in per capita income were to be the same.

In this paragraph we will calculate the need for investment in two cases:

a) Agricultural production rises 1% per capita in each area, on the average; equivalent to 1.65% per capita increase in total income;

b) Per capita total production rises 2% in each area, on the average, accompanied with a per capita rise in agricultural production by 1.4%.

a) Agricultural production rises 1% per capita

	Population Increase	Agricultural Production Increase	Per Capita Increase Non-Agricultural Production	Non-agricultural Production Increase
Latin America	2.25	3.25	2.24	4.49
Africa	1.25	2.25	1.99	3.24
Near East	1.50	2.50	2.07	3.57
S.C. Asia	1.50	2.50	1.97	3.47
Far East	0.75	1.75	1.96	2.71
Total	1.23	2.42	2.38	3.61

	Agric. Income	Capital Needed 1/	Non-agric. Income	Capital Needed 2/	Total Capital Needed
Latin America	10.00	1.30	15.00	2.68	3.98
Africa	6.76	0.60	6.24	0.81	1.41
Middle East	4.50	0.45	5.50	0.81	1.26
S.C. Asia	13.75	1.37	11.25	1.56	2.93
Far East	16.20	1.13	10.80	1.16	2.29
Total	51.21	4.85	48.79	7.02	11.87

1/ Percent of production increase x 4 x agricultural aggregate output.
2/ Percent of production increase x 4 x non-agricultural aggregate output.

Development here is on the whole somewhat below the level in the second case, where we assume in each region a 2% per capita increase of income per annum.

b) Per capita total income rises 2%

	Agricultural Production Increase Per Capita	Non-agric. Production Increase Per Capita	Agricultural Production Increase Total	Non-Agricultural Production Increase Total
Latin America	1.14	2.54	3.39	4.79
Africa	1.38	2.72	2.63	3.97
Near East	1.26	2.60	2.76	4.10
S.C. Asia	1.40	2.68	2.90	4.18
Far East	1.44	2.82	2.19	3.57
Total	1.40	2.68	2.63	3.91

	Agric. Income	Capital Needed	Non-agric. Income	Capital Needed	Total Capital Needed
Latin America	10.00	1.34	15.00	2.82	4.16
Africa	6.76	0.71	6.24	1.13	1.84
Middle East	4.50	0.50	5.50	0.90	1.40
S.C. Asia	13.75	1.60	11.25	1.89	3.49
Far East	16.20	1.42	10.80	1.54	2.96
Total	51.21	5.57	48.79	8.28	13.85

As we might have expected, the increase over the former case is largest where per capita income is lowest; in Latin America the figure is about the same, but in Asia it is 20 - 30% higher. Total investments needed for an increase in per capita income by 2% are nearly $14 billion annually, to increase agricultural production by 1% per capita, around $12 billion is needed.

These are very large amounts and we would want to consider carefully their implications. How realistic are the calculations? The outcome is greatly influenced by the use of an assumed capital coefficient of 4, both in agriculture and in the non-agricultural sector. The basis for this figure in the agricultural sector was its use by the UN committee of experts. It included provisions to spend 1% of national income on government services for research, extension and agricultural training. This figure is very high and probably would never be attained, not even in highly agricultural countries with a rapid rate of development. Consequently, a coefficient of 3.5 instead of 4 might be used, but this assumes a high degree of efficiency in the use of funds and skill.

In the non-agricultural sector it is based upon rough estimates for different parts of the economy. Here again, the figure may be somewhat high in some areas, although it actually may be too low for Africa.

The execution of development programs cannot be envisaged without some costly trial and error and, therefore, on the whole it seems unwise to make

the assessment too low. The introduction of a capital coefficient of 3.5 instead of 4 would bring the total amount of capital needed down from $13.85 billion to $12.15 billion.

In a number of cases we have made comparisons with the assumptions in the UN experts report. It seems worthwhile also to compare the outcome of both calculations on the assumption that the goal is a 2% per capita increase in income.

Estimates of Capital Needed (billion dollars annually)

	UN Report			Present Study		
Regions	Industrialization	Agriculture	Total	Non-agriculture	Agriculture	Total
Latin America	1.58	0.96	2.54	2.82	1.34	4.16
Africa	1.78	0.53	2.30	1.13	0.71	1.84
Middle East	0.94	0.36	1.30	0.90	0.50	1.40
S.C. Asia	4.36	0.96	5.32	1.89	1.60	3.49
Far East	6.61	1.06	7.77	1.54	1.42	2.96
Total	15.27	3.86	19.13	8.28	5.57	13.85
Present Savings	x	x	5.24	3.22	2.05	5.27
Deficit	x	x	13.89	5.06	3.53	8.59

In agriculture, we calculated a need for capital of about 50% above the estimate of the UN experts, but in non-agriculture, we arrive at a figure lower by 46%. This discrepancy is mainly the result of two factors in the claculation: The UN report assumes a larger population transfer, and it assumes a higher amount of capital needed for creating employment for one laborer outside agriculture.

The present study indicates that such a large population transfer would have to be accompanied by an unprecedented rise in productivity per worker in agriculture or would result in a serious scarcity of agricultural products. Therefore, such assumption must be considered unrealistic. The second assumption really is paramount to a very high capital-coefficient in industry in underdeveloped countries. Investments of $15 billion would increase national income by only $2.5 billion, a capital coefficient of 6. Admittedly, in underdeveloped countries much "social overhead capital" is needed with a low direct return. But the difference with more developed countries cannot be that large, and I believe that $2.5 billion additional income can be expected from investments of around $8 billion in industry.

Also, the assumed rate of increase in industrial employment would be unprecedented and would create unsurmountable organizational obstacles. The net result from both assumptions of the U.N. committee is an investment program which is far out of balance in its emphasis on industrialization. It underestimated both the need for agriculture and overestimated the possibilities for industry. In our "balanced" program, 40% of total investments have to be devoted to agriculture, whereas the U.N. report allocates only 20% to agriculture.

A rough estimate of the use of existing domestic funds, which however seems to fit in with actual rates of development, would show that at present also 40% of total funds are used for agricultural improvements. Therefore, roughly speaking, total investments should be increased in both sectors of the economy in about the same proportion.

These generalized conclusions are valid only for the total of the underdeveloped areas. The U.N. report allocates by far too little for developing industries in Latin America; in the Middle East both studies arrive at the same figure. It is in South, South East and East Asia that the U.N. report believes that $11 billion annually should be invested in non-agricultural development. This, I believe, is not only out of proportion, but wholly impracticable. Our calculations lead us to an amount of $3.5 billion, still a very large sum but not impossible.

One check on some of our assumptions is a comparison with the development in the USA in an earlier period. In the period 1895/1940, per capita production rose by 2% per annum, population by 1.48%.1/ These rates are about equal to the targets used in this paper for the underdeveloped area as a whole. It seems unrealistic to aim for the underdeveloped areas as a whole a substantially higher rate of development than those encountered in the U.S.A.

Another check on the validity of the use of a capital coefficient of 4 can be made by applying them to present conditions. We then arrive at the following rate of development by using estimates of present domestic savings.

Regions	Agrarian Income Billion $	Annual Increase %	Non-agrarian Income Billion $	Annual Increase %	Total Income Billion $	Annual Increase %
Latin America	10.0	1.50	15.0	2.33	25.0	2.00
Africa	6.8	1.18	6.2	1.61	13.0	1.38
Near East	4.5	1.16	5.5	1.64	10.0	1.38
S.C. Asia	13.7	1.00	11.3	1.51	25.0	1.20
Far East	16.2	0.62	10.8	1.07	27.0	0.69
Total	51.2	0.97	48.8	1.60	100.0	1.32

1/ Prof. Th. Schultz (Agriculture in an Unstable Economy, New York, 1945) puts the increase of agricultural production in the USA at 1.4% annually between 1895 and 1940 and of industrial production at 4.3% with the population in those years increasing 1.48% annually. In "the golden age" of agriculture in the USA agricultural production increased 2.5% annually. However, this was under special circumstances of easy and rapid opening up of new lands and a large immigration of skilled laborers.

The target for the USA is put (p. 126) as follows: It seems likely that agriculture can be fairly prosperous if during the first two decades after the war the annual rate of increase in non-agricultural output reaches 4 to 6%. This would probably make room for an expansion in agriculture of upward of 2% per year.

It should be remembered that we started with a rough approximation of the division of total domestic savings between both sectors of the economy. Under these assumptions non-agricultural income would increase at about 50% higher rate than agricultural income. This agrees roughly with available actual data. At the same time, these figures strengthen the confidence in the use of capital coefficients of this order of magnitude as a yardstick for the expectations under a development program.

Let us compare this rate of development with recent and expected increase in population.

Region	Population increase 1940-50	Increase expected 1950-60	Increase in income	Per capita increase or decrease to be expected
Latin America	1.89	2.25	2.00	- 0.25
Africa	1.20	1.25	1.38	+ 0.13
Near East	1.25	1.50	1.38	- 0.12
South C. Asia	1.02	1.50	1.20	- 0.30
Far East	0.48	0.75	0.69	- 0.06
Total	0.91	1.24	1.32	+ 0.08

With the exception of Africa, where a small increase in per capita income seems possible without outside financing, present savings are in each region barely sufficient to maintain per capita income under the rate of population increase in 1940-50, but insufficient under the rate of increase in 1950-60. The difference is greatest in South C. Asia, as a result mainly of improvements in health conditions in recent years.

Though only rough estimates, these figures very clearly bring out the actual situation in underdeveloped areas--present domestic savings are insufficient to maintain the already low per capita income levels.

The ratio between domestic investments and population increase therefore is a quantitative expression for the degree of "underdevelopment" of a country. We might define underdevelopment as a state of affairs in which a country cannot develop its potential resources and raise per capita income levels without outside financing. This seems a better definition than the actual existence of low levels of income and standards of living. Nor is the term "underdeveloped" an expression to describe an existing gap which is rapidly being closed; on the contrary, there is evidence that the "gap" is widening because the rate of development is more rapid in highly developed countries, where population increase is below that of many underdeveloped areas and the amount of savings and investments in proportion to gross national product is higher.

One of the paradoxical results of better health conditions, in itself a consequence of economic development, is that it pushes countries back into the "underdeveloped" category, unless at the same time the percentage of domestic savings increases about four times more rapidly than the percent-wise increase in population. On the other hand, it is only through such development of internal resources, backed by assistance from abroad, that a solution can be found.

DECLINE OF AGRICULTURE WITH INCREASING NATIONAL INCOME

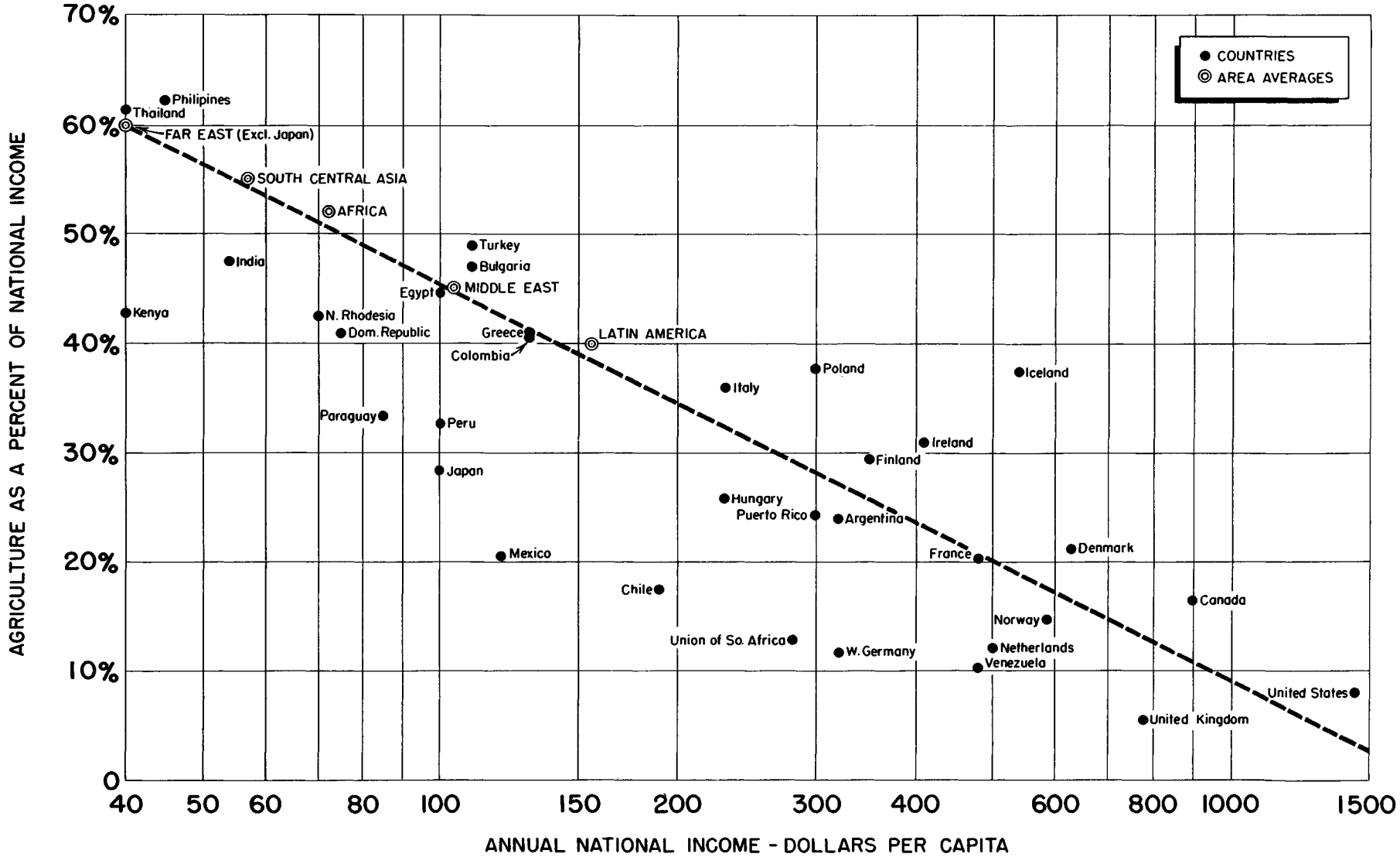

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FIGURE 1

Fourth Meeting of Technicians of Central Banks

of the American Continent

Some Aspects of Recent Latin American Experience with Bilateral Trade and Payments Agreements

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This paper is scheduled for discussion in Washington
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AGENDA ITEM 20

*The views expressed in this paper are those of the author and do not necessarily represent the views of the International Monetary Fund.

Some Aspects of Recent Latin American Experience with Bilateral Trade and Payments Agreements

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Some Aspects of Recent Latin American Experience with Bilateral Trade and Payments Agreements

1. Introduction[1/]

In the interwar period Latin America had a consistent surplus on trade account in its balance of payments with Europe, which surplus was approximately offset by a deficit on invisible account due mainly to European shipping and investment earnings. The trade surplus with Europe was accompanied by a Latin American import surplus and an invisible deficit with the United States. This over-all picture is of very limited value, however, since the positions of specific Latin American countries varied widely. The southern countries of South America traditionally ran very heavy trade surpluses with Europe and trade deficits with the United States, the former financing the latter, while in many of the other Latin American republics export surpluses with the United States were accompanied by import surpluses with Europe. After World War II, the countries in the first group were anxious to regain their export markets in Europe, where, however, most countries were short of dollars. They, therefore, entered into a number of bilateral payments agreements under which payments in convertible currencies occur only in exceptional circumstances, viz. when swing ceilings have been exceeded. Since this elimination of the need to pay for imports in convertible exchange leads to discriminatory import licensing being applied in favor of those countries with which payments agreements are in force, other Latin American countries also signed a number of such agreements after the initial pattern had been established by the end of 1947. As long as Latin American countries did not enter into such agreements, they were discriminated against by European countries, particularly with regard to commodities which the latter were able to obtain from their dependent or associated territories without incurring financing problems.

European countries were prepared to enter into payments agreements with Latin American republics mainly for two reasons, (1) to be able to purchase in inconvertible currency commodities for which they had been paying dollars, and (2) in order to facilitate their exports to agreement partners. These two reasons correspond to the two main purposes of bilateral payments agreements. One is the simple one of alleviating an existing dollar problem. The other is the more complex one of creating a basis for a type of commercial policy action which, in a world of inconvertibility and discrimination, is much more powerful than action on customs tariffs. Whereas between countries trading with each other in convertible currencies there normally is no relationship whatever between the over-all exchange of goods in each direction, this relationship is immediately established by the signing of a payments agreement between two inconvertible countries, each of which knows that the partner, like itself, will try to avoid making settlements in convertible exchange which are required when the swing credit has been exhausted, and on the other hand will normally attempt to reduce inconvertible claims as quickly and as much as possible.

1/ This paper was prepared before the potentially significant changes in the exchange control systems of the United Kingdom and the German Federal Republic announced late in March 1954.

The number of Latin American payments agreements with countries inside and outside the Western Hemisphere now is larger than that of their prewar clearing agreements. While some of the latter were used mainly for commercial policy purposes, others served primarily to safeguard the financial interests of European investors. Hence the significance of those agreements in a convertible environment where clearing agreements were exceptional instruments of exchange policy was different from that of the postwar payments agreements.

Many payments agreements have been supplemented by trade agreements containing reciprocal import and export licensing commitments in the form of value and/or volume quotas of listed commodities. These trade agreements are intended to procure scarce import commodities, to secure outlets for exports disposed of with relative difficulty, and generally to influence the volume of current payments falling due each way in such a manner as to obtain a smooth functioning of the payments agreement, thus avoiding the need for dollar settlements in respect of overdrafts of the swing ceiling, with the concomitant danger of a cutting back of the debtor country's imports from the creditor country. Whereas the nature of trade agreements requires their frequent renegotiation taking account of changing supply and demand conditions, bilateral payments agreements do not require repeated revision and may remain in force with little or no change for several years. Frequently, however, a trade agreement and a payments agreement formally constitute a single instrument. In that case, changes in either agreement usually are implemented through supplementary protocols to the original trade and payments agreement.

2. The Pattern and Types of Latin American Trade and Payments Agreements

(a) Development of the pattern of agreements

By early 1950, the twenty Latin American republics could be roughly divided into three groups on the basis of the number of their payments agreements. The first group comprised Argentina, Brazil, Paraguay and Uruguay. Each of these countries was partner to a significant number of payments agreements. Because trade thereunder was financed in inconvertible currencies, each was a non-dollar country to most of its main trading partners with inconvertible currencies, although, because of the development of their bilateral accounting positions, they were in that period usually not considered as soft-currency countries by their payments agreement partners. The second group, consisting of Bolivia, Chile, Colombia, Ecuador and Peru, had signed very few payments agreements and was considered part of the dollar area by most of the major trading countries. A reservation is required here to the effect that Peru's sterling payments agreement with the United Kingdom enabled Peru to pay and receive sterling in trade with many non-sterling area countries on the basis of administrative transferability, so that in some respects that country was half-way between a dollar country and a payments agreement country. Chile, similarly, financed part of its foreign trade in transferable sterling, but demanded payment in dollars for its copper exports, and therefore remained closer to the position of a dollar country. The third group, finally, consisted of Mexico, Venezuela and all the republics in Central America and in the Caribbean. In their case,

payments in inconvertible currencies were either non-existent or negligible, and consequently they were universally considered to constitute part of the dollar area. This grouping was closely connected with the pattern of production and hence with the pattern of foreign trade, the countries with few payments agreements or none being those who traded mainly with the United States and Canada, while those with more agreements included the River Plate countries, much more dependent on trade with Europe, and in some respects, direct competitors of the United States and Canada.

The early pattern of agreements has been changed in three principal ways in recent years. First, some of those Latin American republics which to all or most of the rest of the world constituted part of the dollar area have gradually entered into a number of payments agreements with certain European countries or into trade arrangements similar in some of their main effects to payments agreements (these trade arrangements are described in more detail below). This was done in order to overcome the effects of discriminatory import licensing in countries with inconvertible currencies, and thus to recapture or expand markets in Europe. The principal pacts to be mentioned here are those of Cuba with France, the Federal Republic of Germany, the United Kingdom, Italy, Austria and Yugoslavia; the agreements concluded by Colombia with Austria, Belgium, Denmark, Ecuador, Finland, France, the Federal Republic of Germany, Italy, Spain, Sweden and the United Kingdom; and a number of bilateral agreements entered into by Mexico, which in 1950 embarked on a policy of tightening its commercial ties with Europe by means of various types of agreements. Developments along similar lines but of less quantitative significance occurred in some of the smaller dollar countries of Latin America, such as El Salvador and Guatemala.

The second major development was the further intensification of the network of agreements signed by the southern South American countries. Argentina, Brazil, Paraguay and Uruguay further increased the already significant number of their payments agreements and complementary trade agreements particularly by concluding such pacts with some of the smaller European trading countries. Also, while concluding few additional payments agreements of the type covering the bulk of its payments with the partner country, Chile in its exchange budgeting adopted a bilateral approach vis-a-vis many countries in 1951.

The third principal change in the network of agreements was the termination of a number of agreements with some of the major trading countries of Europe. Thus, payments in convertible exchange between the Federal Republic of Germany and Mexico were resumed in 1952, and the German payments agreement with Colombia was denounced late in 1953, but temporarily extended. The Brazilian trade agreement with the United Kingdom which expired in 1951 has not been replaced with another one, although the sterling payments agreement still is in force; the Belgian and Swiss trade agreements with both Argentina and Brazil have not been renewed upon expiration, and the Belgian payments agreements with Argentina and Brazil were terminated in 1951. When the existing trade and payments arrangements between Argentina and Switzerland expired in that year, payments between the two countries continued in Swiss francs on the basis of unilateral Swiss regulations creating for most payments a clearing regime under the supervision of the Swiss Clearing Office. In the case of the Mexican-German agreement,

the lack of prescription of currency in Mexico had caused a significant proportion of imports to be effected outside the agreement, i.e., against payment in free U.S. dollars and at the lower prices quoted on that basis due to the German export bonus system then applying to exports settled in convertible currencies. The other agreements referred to have been terminated mainly because of serious differences in views with regard to import licensing and export pricing policies applied on the Latin American side.

Two other developments of importance must be mentioned. Under bilateral sales agreements concluded by the semi-official Nitrate and Iodine Sales Corporation, Chile has increasingly sold its nitrates against payment in soft currencies rather than in dollars as in the early postwar years. Whereas Chile in certain respects thus came closer to being a payments agreement partner and at the same time a soft currency country in the eyes of her trading partners, Peru moved in the opposite direction by reducing its acceptance of sterling from non-sterling area countries, as a result of which other countries insisted more than before on payment in dollars for all sales to Peru.

There are relatively few bilateral trade and payments agreements between pairs of Latin American countries. Most of them cover trade and payments either with neighboring countries or with Argentina. The main ones are those concluded by Argentina. In this connection it should be mentioned that payments between Argentina and Chile until recent months were effected mainly in Argentine pesos under the terms of circulars issued by the Argentine Central Bank in 1949, which prescribed the financing in Argentine pesos of most trade with the neighboring countries and Peru. When an agreement aiming at economic union between the two countries was signed in 1953, discussions started on ways and means of improving the payments mechanism and thereby fostering reciprocal trade. These have now resulted in the signing of a bilateral payments agreement with the U.S. dollar as the unit of account, which is hoped to reduce the difficulties which had resulted from the fact that Chile had been unable to apply its system of multiple buying and selling rates to the fluctuating rate of the Argentine peso in the Chilean banking free market. The Argentine-Chilean agreement is significant also in that it is open for adherence by other Latin American countries. New trade and payments agreements signed by Argentina with Paraguay, Peru and Ecuador apparently are considered by some as constituting partial implementation of the multilateral provisions of the agreement with Chile, although in each case payments transactions remain on a bilateral basis. The payments agreement with Paraguay may eliminate some exchange rate problems similar to those between Argentina and Chile.

To conclude the description of the pattern of agreements, reference must be made to those concluded with Japan. That country is the principal agreement partner outside Latin America and Europe. The first Japanese agreements with Latin American countries were signed in 1949. Their number has not increased significantly since, but discussions regarding the signing of further trade and payments agreements continue intermittently.

(b) Principal types of agreements

The types of Latin American trade and payments agreements have shown a gradual trend toward standardization. The early payments agreements between Latin American and European countries in most cases provided for agreement accounts in the European partner's currency. The only case where the Latin American partner's currency was used for that purpose was under the provisional payments agreement between Brazil and the Netherlands which was replaced in mid-1953 by one providing for U.S. dollar accounts. Many of the early payments agreements have continued in force, and consequently many Latin American payments agreement accounts still are conducted in European currencies. Thus the six agreements with the United Kingdom are so-called sterling payments agreements under which, in contrast to the type called "monetary agreements" by the United Kingdom, all payments are effected in sterling only. Of these agreements, five provided for bilateral accounts status under the U.K. exchange control regulations, while that with Chile granted that country transferable account status.1/ Several other Latin American payments agreements are conducted in French francs, Swedish kronor, Netherlands guilders, etc. Most of the newer agreements, however, including all German and Japanese payments agreements with Latin American partners, are based on the U.S. dollar. Thus, the usual type now is an agreement with the U.S. dollar as the unit of account and with obligatory invoicing in U.S. dollars. This minimizes the difficulties resulting from multiple currency systems and also those with regard to exchange guarantees on outstanding balances and regarding the liquidation clauses applicable to balances at termination. The trend is also towards agreements under which payments are decentralized, i.e., under which commercial banks are permitted to conduct sub-accounts of the central agreement account. Where such decentralization already exists, the number of private banks participating in the conduct of the agreement accounts is growing.

The transactions to be covered by payments agreements mostly are all current transactions related to direct trade between the partner countries, but in many cases specific provisions on permitted types of transit trade are now included, as well as, in certain cases, clauses defining the origin of goods to be considered direct exports or provisions regarding the use of certificates of origin. The swing margins showed a fairly general tendency to be raised until the functioning of many agreements in the post-Korean boom caused certain European countries to attempt a downward revision in some cases. In this connection, however, it might be mentioned that in 1951 clauses constituting an arrangement similar to a swing were inserted in the sterling payments agreement in force between the United Kingdom and Argentina. The ceiling on the swing in the Swedish-Argentine payments agreement was eliminated in the same year. Clauses intended to keep part of the direct trade between partners on a dollar basis are disappearing. There is a growing number of clauses providing for the use of Latin American shipping and insurance facilities for part of the trade between the partner countries. At the same time, the trade agreements have become less significant. In certain cases they have been dropped, in others the value or quantity quotas have become less detailed. Several important agreements,

1/ See footnote on page 1.

however, now include provisions for participation by the partner country in the Latin American country's industrialization programs through the supply of capital equipment under deferred payment arrangements.

In view of the large number of countries involved, it is not surprising that, despite the tendency towards standardization referred to, considerable variety exists in the types of Latin American payments agreements. One type of relatively minor practical importance is that of agreements which provide for settlement in freely disposable U.S. dollars of the full accounting balance at regular intervals. Under the Franco-Peruvian agreement, although of a different type, dollar settlements are made by the debtor country almost continuously. The agreement commits Peru to maintain the appropriate cross-rate for the French franc in the Peruvian certificate market. There are a few inter-central bank arrangements under which the central bank of a Latin American country is prepared to buy and sell the other country's currency, most bilateral trade being conducted in that currency. Furthermore, the Japanese agreements with Peru and Uruguay are of the so-called "dollar cash" type, under which all payments and receipts are actually made in freely disposable U.S. dollars; among Japan's agreements only those with Argentina and Brazil are of the "open account" type under which the U.S. dollar is no more than an accounting unit and where the inter-governmental credit element is implemented by swing provisions. Japan has also had "dollar cash" payments agreements with Chile, Colombia, Mexico and Venezuela, all of which were concluded by SCAP in 1949 and expired when the Japanese Peace Treaty went into effect. Finally, some of the Latin American payments agreements are clearing agreements of the inter-war type, which contained no swing margin of the postwar type but provided for payments to exporters out of amounts in domestic currency paid into the clearing by importers in the same country, while they discharged the importer of his debt to the exporter at the moment he made his in-payment in his own currency. Such payments regimes exist between Cuba and Spain, and between Uruguay and Switzerland. It may be added that some balances under inter-war Latin American clearing agreements still have to be cleared off.

As noted above, a significant development has been the increasing number of payments agreements, trade agreements, and combined trade and payments agreements concluded by Colombia with European countries. In return for purchasing commitments with regard especially to coffee and bananas, the European partners were permitted by those agreements to supply goods the import of which into Colombia was severely restricted or previously prohibited.1/ Since February 15, 1952, Colombia has permitted certain goods to be imported only from countries with whom trade is approximately balanced (U.S. and Canada) or with whom trade or payments agreements have been concluded. In May 1953 the awarding of public contracts was restricted to the same group of countries. After discussions with Switzerland, however, this provision was, in October 1953, declared no longer applicable to countries maintaining freedom of exchange and imports. In some cases the agreements specify that Colombian coffee may be resold by the partner country to destinations other than countries specifically excepted, the latter generally being those of the North American

1/ The prohibited list was abolished by Decree No. 513 of February 19, 1954.

continent and those with which trade or payments agreements are in force. Reportedly, a Colombian agreement signed in recent weeks embodies a new feature, permitting Sweden to fulfill one-half of her purchasing commitment for coffee by purchases of that product through London, against payment in sterling. The number of agreements and understandings has become so great that probably the bulk of Colombia's exports to Europe is now being settled in inconvertible currencies or, where only a trade agreement has been signed and payments both ways continue in free dollars, offset by additional European exports. It has been officially stated in Colombia that the agreements are intended as an instrument to recapture and expand markets in Europe which had been endangered by Colombia's status as a dollar country.

Somewhat similar agreements concluded between Cuba and various European countries have had the effect of making quantities of Cuban dollar sugar available to European countries against payment in inconvertible currencies or, in the absence of a payments agreement, by shipping additional exports settled in dollars.

The main agreements provide that Cuba shall extend preferential tariff treatment to the partner country on listed goods in return for a purchase commitment for specified amounts of sugar and other products, particularly cigars. Such agreements enable the European country to cover part of their sugar purchases in Cuba by additional exports to Cuba which continue to be settled in dollars. Other countries have due to the multilateral most-favored- nation provisions of the GATT, benefited from the same tariff concessions, but the items on which they are granted have, of course, been chosen so as to offer Cuba's agreement partners the likelihood of significantly increasing sales. The main pacts of this type have been concluded with the United Kingdom and the Federal Republic of Germany. Another type of agreement concluded by Cuba provides for the sale of sugar to a European country, payable in part in the partner country's currency, and to be resold entirely to third countries, with the inconvertible portion of the sales proceeds of the sugar available only for imports to Cuba from the partner country. As in the case of Colombia, these arrangements attempt to improve sales prospects in Europe which had been impaired by the fact that all purchases in Cuba had to be settled in dollars and that there was little likelihood that these purchases would induce increased exports to Cuba unless some type of bilateral arrangement was entered into. Certain sales under such arrangements have shown a tendency to be concluded at prices slightly higher than those charged to other countries. The partner countries, on the other hand, seem in most cases to have continued granting exports to Cuba all the facilities granted on sales against payment in convertible currencies.

Also of interest are the so-called global compensation agreements concluded by Italy with a number of countries, including Peru and Colombia. Under such pacts, there is no bilateral payments agreement, but trade is balanced by a number of individual compensation transactions up to specified totals for specified commodities, while usually all payments are in free U.S. dollars. A certain similarity to those agreements is shown by the

Franco-Colombian trade agreement, where French coffee importers are required to contact intending exporters to Colombia through the banking system in order to effect their coffee purchases in Colombia on the basis of "combined transactions" in accordance with prescriptions given by the Ministries of Finance and of Economic Affairs. Under that system, also, payments are made in U.S. dollars via New York.

(c) Customs tariffs

The signing of trade and payments agreements in many cases has had a greater impact on trade between the partner countries than the level of the customs duties applied by each to the other's exports. This does not imply, however, that the importance of action on tariff matters may be ignored. Eight Latin American republics (Brazil, Chile, Cuba, the Dominican Republic, Haiti, Nicaragua, Peru and Uruguay) are signatories of the General Agreement on Tariffs and Trade, and all but Brazil and Peru have extended the period of validity of their tariff concessions up to July 1, 1955. Several republics have more or less thoroughly overhauled their import tariffs in the postwar years, one of the main aims being the change-over from specific to ad valorem customs duties in order to adapt both the revenue and the protective effects of the tariffs to the general postwar rise in price levels. Latin American countries have also entered into a number of additional most-favored-nation treaties regarding customs duties and internal taxes and levies on imported goods, both with payments agreement partners and with other countries.

In Central America, a movement toward economic integration, affecting tariffs and other matters, is making progress. Within the framework of this movement, Nicaragua and El Salvador in 1951 concluded an agreement which is referred to as a free trade treaty. It exempts some of their imports from each other from export and import duties as well as internal levies and charges. It also abolishes import and export restrictions on certain products entering into their mutual trade. The treaty states that the two countries aim ultimately to establish a customs union.[1/] Later in 1951, the two countries also signed a payments agreement, the use of which is not obligatory, however. The central banks are to sell each other colones and cordobas up to a swing ceiling of U.S.$100,000. The agreement accounts may be used only for imports originating in the partner country which are listed in the annex to the free trade treaty. El Salvador has since concluded free trade treaties with Guatemala and Costa Rica. Also, the Central American republics in 1952 signed an agreement regarding the unification of tariff nomenclature.

3. General Trends in the Functioning of Latin America's Trade and Payments Agreements

(a) Changes in Latin American positions vis-a-vis bilateral agreement partners

Developments affecting the functioning of the Latin American trade and payments agreements after the 1949 devaluations in Europe include the

1/ El Salvador had signed a somewhat similar free trade treaty with Honduras in 1918.

creation of the EPU, the outbreak of the Korean fighting, the three successive droughts in the River Plate region, and the increasing availability of export goods in Europe and Japan. In this period, inflation in most of the Latin American countries continued, whereas in Europe inflationary pressures were eased significantly. Also, the 1949 devaluations in Western Europe had been fairly general, affecting a total of 13 countries, whereas in Latin America most countries maintained their par values or their basic exchange rates. Among the countries trading heavily with Europe, Brazil did not devalue the cruzeiro. Argentina effected a partial devaluation against the U.S. dollar by a sweeping revision of its multiple rate system, but made no change in the rate for the basic exports which mainly go to Europe. Within a few days of the Argentine action, Uruguay proceeded to make similar adjustments in its multiple rate system. Several Latin American countries subsequently were forced to permit a gradual depreciation of specific import and export rates.

The creation of the EPU enabled member countries to buy commodities also available in Latin America more freely from each other, and particularly from each other's non-metropolitan territories, or from outside sources which accepted sterling. After the fighting in Korea had started, several Latin American countries, especially Argentina and Brazil, bought heavily abroad, including purchases from their European agreement partners. In some cases there was a significant formal relaxation of import and exchange restrictions, as in Uruguay where in 1950 a system of "sworn declarations" exempted certain types of imports from the requirement of prior import permits, and in Chile where a "free area" of commodities not subject to quantitative restrictions was included in the exchange budget for 1951. The droughts in the River Plate region severely limited exportable stocks in Argentina. This had repercussions in other Latin American countries, mainly Brazil and Paraguay. Both had to obtain wheat from the United States against payment in dollars, although the former held a large claim under its payments agreement with Argentina. This in turn tended to induce these countries to restrict their other dollar purchases more severely and therefore to turn increasingly to their European suppliers with whom payments agreements were in force. In addition to the low exportable stocks in some cases, official pricing policies and exchange rate policies frequently prevented large European purchases. This was true, e.g., of Brazilian cotton, Chilean copper and various products sold by the Argentine state trading agency, IAPI. The increasing availability of goods for export in countries outside Latin America, finally, meant the return of a buyer's market, with the concomitant opportunities for Latin American countries to obtain more favorable terms of payment for imports from private exporters and large credits from foreign governments.

Due mainly to the basic developments indicated above, the Latin American creditor position of the early postwar years vis-a-vis Europe was reversed. The Latin American holdings of sterling and other European currencies were practically used up by mid-1951 and, despite increasingly long credit terms obtained on imports from several European countries, large commercial and financial arrears against many European countries were accumulated, in several cases implying the Latin American countries' overdrawing of the swing ceilings. The main debtors under payments

agreements were Argentina and Brazil, while the main creditors were the United Kingdom, the Federal Republic of Germany, France, Italy, the Netherlands, Sweden, Denmark, and Finland. Trade agreements usually were fulfilled only in part, mainly due to the low level of exportable stocks referred to above, and to difficulties in obtaining Latin American import licenses for non-essentials, which were caused in part by protective policies but were aggravated by the growing imbalance in payments agreement accounts.

(b) Increasing significance of transit trade

Of perhaps more fundamental importance for the use, and therefore the functioning, of Latin America's payments agreements was the increasing significance in recent years of transit trade which made for more complicated trade and payments relations with agreement partners. In part that trade was independent of the positions developing under specific payments agreements, but certain types of it were resorted to for the express purpose of changing such bilateral positions. The European countries anxious to build up their transit trade had various motives for that desire. One was to increase the movement of goods through their ports, warehouses and processing facilities, in view of the employment which resulted regardless of the monetary aspects of the financial settlements involved. Another motive was to increase the usefulness and therefore the strength of their currencies by supplying third countries with an increased range and volume of products. The significant thing here is the route along which payment is affected rather than the route taken by the goods. Intermediary countries would usually insist on receiving currencies at least as hard as those spent, but this was no hard and fast rule. The receipt of a specific soft currency might, e.g., be authorized if a relatively small outlay of dollars would result in a much larger accrual in the inconvertible currency, or if, in re-establishing a commodity market, it was considered desirable to give inconvertible countries access in that market to hard currency goods. A third motive was to influence the composition of exchange reserves, e.g., by reducing excessive credits accumulated under payments agreements.

The fact that certain established trade channels run through third countries has in itself caused differences of opinion between some Latin American and some European countries. Thus significant proportions of Mexican and Peruvian exports are shipped via ports in the United States. All of the imports of such countries as Bolivia and Switzerland are shipped through foreign ports. At the least, the actual routing of exports may be reflected in misleading trade statistics. Thus, part of the French exports to Cuba are shipped through Belgium or German ports and are recorded in Cuba as imports from Belgium or the Federal Republic of Germany, whereas French export statistics seem to count certain French iron and steel exports shipped through foreign ports as exports to those countries rather than to Cuba. Resulting uncertainties as to the significance of official trade statistics have been of some importance where trade agreements between Latin American and European countries provide that there shall be a specified relationship between the partner countries' purchases from each other, as in the case, e.g., between Peru and the

Federal Republic of Germany. In the present context, however, the use of the term transit trade will be reserved for transactions in which, regardless of the route along which the goods are shipped, the country of final consumption makes payment not to the country of origin but to a third, intermediary country.

Transit trade in Latin American products had been extensive in the interwar years, when a substantial proportion of the sales of products such as cereals, wool, cotton, metals, coffee, cocoa and tobacco had been channelled through the various London and continental commodities markets. Such transit trade had in practically all cases been based on the official exchange rates, since the currency received was largely a matter of indifference in a world which was substantially convertible. After the war there was a strong urge in various European countries to resume this traditional trade which had resulted in large earnings on shipping, banking and insurance account, in addition to the profits of the trade and also to a general tightening of relations with the countries of origin. The Latin American countries entering into postwar trade and payments, however, initially showed a distinct tendency to exclude transit transactions from the transactions to be settled under the terms of payments agreements and from the commodity quotas included in trade agreements, usually making all operations of this type dependent on ad hoc approval. Nevertheless, the actual treatment of transit proposals gradually became more liberal on the Latin American side.

Meanwhile, a new type of transit trade arose, that involving implicit or explicit broken cross rates, and based on hardness-of-currency grounds, and profitable because of the price differences for the same or similar goods in various markets that had been caused by restrictive and discriminatory import licensing. The transactions referred to include the so-called commercial switches. In such transactions the profit to be made on the sale of a hard-currency commodity in a soft-currency market where prices are inflated allows the intermediary to engage in a linked second transaction which leaves a loss and, therefore, could not be undertaken independently. The unprofitable transaction is a sale of a soft-currency commodity in a harder currency market at a price lower than that ruling in the country of origin plus the cost of shipping. Trade based on this principle may also involve compensation deals and outright purchases and sales of currencies at a discount or at a premium. Significant discrepancies between the cross rates for different currencies, such as are now found in Brazil and Chile, create additional incentives for commercial transactions which could not be consummated if the official exchange rates were applied between the currencies of the countries of origin and those of final consumption.

"Straight" transit trade--that is transit trade carried out without the assistance of exchange manipulation or broken cross rates--made it possible for certain European soft currency countries to supply some Latin American inconvertible countries with products originating in other European inconvertible countries, and conversely to buy products from the former for resale to the latter. Part of that trade was a resumption of a traditional inter-war pattern, e.g., where an established commodity market in an intermediary country assured buyers of a good choice of qualities, financing

facilities, and other regular commercial facilities. In such transactions purchases and sales usually were effected in currencies of equal hardness. Thus, through the re-opening of the London commodity markets, inconvertible countries could, against payment in sterling, obtain certain raw materials and foodstuffs from a large variety of sources, including in certain cases dollar sources. This transit trade is of even wider scope if one takes into account the resale of imported commodities after a certain degree of processing, such as the trade in refined sugar by the United Kingdom and the Netherlands. Another part of this "straight" transit trade was induced largely by monetary or commercial policy considerations. A European country having a payments agreement with a Latin American one might want to provide the latter with additional exchange enabling it to increase its imports from the former; the European partner might then buy certain products in excess of its immediate requirements and resell them to a third country. Or a European country with an extreme credit position vis-a-vis a Latin American payments agreement partner, which caused the latter to reduce its purchases there, might channel part of its sales to the partner country through a European country where the Latin American country was buying more liberally. Payments agreement partners with an extreme debtor position, on the other hand, had an incentive to channel their purchases through third countries in order to avoid the need for settling deficits in hard currency which would arise if the swing ceiling were overdrawn.

"Straight" transit trade also was increasingly resorted to by European payments agreement partners to obtain at better prices goods which could be obtained more cheaply from the Latin American countries of origin via some of the latter's other agreement partners, even if this implied that the European buying countries' bilateral claims on Latin American countries were not reduced as much and as fast as they might have been. This occurred, e.g., where Latin American countries created subsidy export rates for specific products if sold in specific currencies only.

Although in "straight" transit trade soft currency goods are usually sold for soft currencies or harder currencies, and hard currency goods only for hard currencies, it has recently become possible in certain cases to buy dollar goods on this basis. Thus some dollar coffee and dollar metals have become available in a few European commodity markets against payment in soft currencies.

Another type of transit trade which assumed significant proportions was the commercial switch deal involving the resale to the dollar area of goods bought in Latin America under payments agreements, and correspondingly the resale of dollar goods to Latin America or Europe against payment in inconvertible currencies. In some cases such resale was made in the trader's own country. Similar transit trade on a switch basis between Latin American payments agreement countries and EPU countries, in both directions, also occurred. One motivation for these two types of commercial switches was to reduce claims on Latin American payments agreement partners. They can also be operated in such a way as to increase claims or reduce debtor positions. Finally, owing to the EPU arrangements, under which member countries' accounting deficits, once their quotas have been exhausted

are payable 100 per cent in gold or dollars, it has at times been possible for European countries to buy commodities in dollars outside the EPU monetary area and resell them against soft currencies to EPU members, even without charging the mark-ups normally obtained for sales of dollar commodities in soft currencies. Such transactions were particularly significant when temporarily undertaken by the United Kingdom in the second half of 1952. They affected relations between certain Latin American countries and their agreement partners.

All these forms of transit trade implied that the direct ties between certain Latin American countries and some of their European payments agreement partners became looser. Also, countries on both sides obtained easier access to competing products, particularly dollar products, through transit trade of the switch variety. A similar effect resulted from the relaxation of restrictions on dollar imports into some European countries over the last three years. In addition, the premia charged on dollar products sold for inconvertible currencies have fallen significantly in that period because inconvertible countries were better supplied with dollar imports.

The actual importance of these types of transit trade has varied greatly from country to country, from commodity to commodity, and over time. In a majority of cases, however, they have tended to obscure the developments in direct trade with agreement partners. Colombia had the experience that some of its main payments agreements showed a lopsided trend in the accounts due in part to commercial switches. A significant proportion of certain partner countries' exports was supplied in transit by third countries who received dollars for those sales, so that the agreement accounts recorded mainly the partners' purchases in Colombia, and very few sales. The import prices in dollars for such indirect purchases usually were below those quoted for the same goods if obtained direct from the country of origin against payment in the appropriate inconvertible currency. The resale of Latin American products to the dollar area by payments agreement partners assumed its largest proportions, in the case of Argentina and Brazil, which had incurred the highest debtor balances under their agreements. As a defensive measure, many Latin American countries introduced or tightened regulations regarding the production of certificates of origin and of consumption, and regarding the supervision of the valuation of imports and exports. Colombia, on July 7, 1952, prescribed payment through the appropriate agreement account for all imports originating in countries with whom payments agreements are in force, even if those goods are imported from third countries. El Salvador, which lacked a regular system of prescription of currencies, made customs clearance conditional on the production of documentary evidence that payment had been made through an appropriate account. On the other hand, some Latin American countries permitted certain resale of their products to the dollar area by payments agreement partners paying in inconvertible currencies.

(c) The working-off of excessive balances under payments agreements

Since the Latin American countries running into large deficits with payments agreement partners usually also had incurred significant liabilities vis-a-vis the United States and other dollar area suppliers, they were in many cases not in a position to settle their overdrafts under payments agreements in dollars. Hence European creditors cut back their exports, and a deadlock developed in many instances, with trade between each pair of countries decreasing markedly and frequently being sustained mainly by barter and compensation deals or by European purchases for resale to third countries.

The methods chosen to clear the agreement accounts and thus to reopen the channels of trade have shown considerable variety. They have had their main impact on Argentina and Brazil, the payments problems of other Latin American countries under their agreements being of smaller significance. The European creditor countries tried to increase their purchases in those countries where they held significant balances, and to reduce their sales to them. In view of the export price policies being pursued at times by some of the Latin American countries, commercial switch deals sometimes were used at the same time to reduce those prices to other EPU countries and to the United States. Compensation deals were resorted to in order to keep both imports and exports moving, and those deals usually involved an implicit reduction of Latin American export rates. Countries engaging in switch transactions both ways between Latin American payments agreement partners and EPU countries probably sought to ensure that the amounts in Latin American currencies used up in such deals exceeded the corresponding receipts in such currencies. Transit sales of third countries' products to Latin America at official exchange rates presumably were reduced by agreement partners holding claims under payments agreements on those countries.

Direct imports from Latin American partner countries were facilitated by more extensive use of open general licenses and free import lists, and by measures intended to stimulate domestic consumption such as derationing and reduction of domestic taxation on coffee. On the other hand, European countries took various measures to restrict exports to some payments agreement countries in Latin America, including certain measures which were intended simultaneously to cheapen imports from those countries. These were schemes under which in some European countries exporters, in order to export to Argentina and Brazil, were required to make a payment resulting in an import subsidy to importers effecting purchases in the same country. Also, imports and exports under such systems could be linked in such a way that exports to a specific partner country would not exceed a certain predetermined proportion of imports from that country. Other measures taken on the European side included the creation of freely fluctuating spot or forward markets for some Latin American agreement currencies in which they showed a significant discount. Such measures amounted in effect to a subsidization of imports that was financed from the windfall profits to be obtained from exports to those countries. Several of these schemes proved of little help, however, when the Latin American countries drastically reduced the volume of import licenses

granted for purchases in Europe. In a few cases, claims on Latin American countries were transferred between European countries with the consent of the debtor country.

The use of Latin American held accounts in Europe was restricted in certain cases. The types of cover granted under export credit insurance schemes on exports to Latin American debtors were reduced in various European countries, and the premia for such cover raised. In certain cases, private creditors in Europe appear to have engaged in compensation deals under which they obtained settlement of long-standing debts at a discount. Finally, the sale of payments agreement balances at a discount, against payment in harder currencies, was in certain cases permitted.

Measures taken on the Latin American side included the cutting back of imports, and presumably of transit purchases, from European creditors, the creation of new export rates, such as the Argentine preferential export rate for wool sold against payment in U.S. dollars or Argentine Account sterling, and the downward adjustment of export prices in the Latin American currency for sales to specific European creditors. Some of those measures created new patterns in transit sales to Europe. In some cases, the European partner's currency was permitted to go to a premium over the U.S. dollar in the Latin American country's exchange market, as did the German agreement dollar and the pound sterling in the Chilean banking free market. Also, the debtor countries increasingly permitted the creditor countries to purchase commodities for resale to third countries in various types of transit transactions. Argentina in 1953 appears to have made a particular effort, to a large extent by a reduction in direct imports, to build up sterling balances and to use the swing against Germany as little as possible. Where Latin American countries considered their earnings of certain payments agreement currencies excessive, they occasionally permitted their sale in free exchange markets against dollars. Such sales have involved especially current sterling earnings. The reluctance of some Latin American countries to hold certain currencies was related to their dissatisfaction with the revaluation clauses covering balances under the payments agreements in question. Occasionally exporters were required to surrender all export proceeds in U.S. dollars, even if this involved the exchange of inconvertible receipts for dollars in a free market.

The trade that was carried on between Latin American and European payments agreement partners during the last two years to a large extent consisted of European exports with long delivery dates which had been contracted for earlier, of individual compensation deals often involving goods valued at many millions of dollars each way, and of trade which in effect was transit trade conquering the obstacles of official pricing policies and exchange rates. During the past year, however, some of the major arrears problems have been solved or come near to a solution. Agreements on this subject were reached by Brazil with Germany and the United Kingdom. Agreement was reached between Argentina and Italy on the use of the Italian claim for the support of the emigration of agricultural workers to Argentina. The Netherlands is negotiating on the renewal of the 1948 payments agreement with Argentina and discussing

the matter of the claim on that country. Also, some countries have by various methods worked off most of their excessive claims on Latin American partners, e.g., Finland and Sweden. Thus one basic condition for an improvement in trade and payments relations between Latin American countries and their payments agreement partners, viz. the clearing of the agreement accounts, would now seem to have been fulfilled in some of the major bilateral relationships. At the same time, due to a gradual adaptation of Latin American exchange policies and export pricing methods associated with world-wide changes in the commodity supply situation, the likelihood of some Latin American export prices being closer to "world levels" has become greater. Argentina has agreed to trade at "world market prices" with the Federal Republic of Germany and Sweden. Brazil early in 1953 started to facilitate the sale of its "produtos gravosos" by applying subsidy export rates, and late in 1953 permitted many foreign currencies to appreciate in the Brazilian exchange market by the application of an auction system for foreign exchange.

4. Evaluation of Recent Developments under Latin American Trade and Payments Agreements

Despite the difficulties referred to in the preceding section, the number of Latin American payments agreements is large and still growing. It covers, particularly in the cases of Argentina, Brazil, Uruguay and Paraguay, most of the important trading relationships with countries outside the American continent. Various countries outside Latin America are making further efforts to obtain imports from dollar countries such as Colombia, Cuba and the Central American Republics on a non-dollar basis, whether by means of payments agreements or under trading arrangements creating the likelihood of additional exports which are intended in effect to pay for the desired dollar commodities. The negotiation of further payments agreements or trade agreements with countries outside and inside Latin America is pending or contemplated.

(a) Difficulties in the functioning of many Latin American agreements

Although it is impossible to determine how satisfactorily a payments agreement is functioning without being acquainted with the exact purposes each partner had in mind in agreeing to each clause of the agreement, it may be said that an agreement does not function satisfactorily unless a high and continuous volume of trade of appropriate composition and at reasonable prices is financed under its terms, without significant debtor and creditor positions developing for periods longer than those caused by seasonal sales, and unless all other current payments provided for in the agreement are also continuously and without undue restriction permitted to be effected in each direction. In terms of these criteria, the functioning of many of the area's payments agreements during the last three years has been extremely unsatisfactory, and so has been the implementation of complementary trade agreements which in some cases have been permitted to expire unrenewed. The most important development from the viewpoint of international monetary stability has been the fairly general attempt to work off excessive claims on Latin American countries, involving the

implicit and explicit breaking of cross rates. It might be said that some Latin American countries' trade and payments relations with many or most of their payments agreements partners during the last two years had reached an impasse. There are some signs, on the other hand, that the worst may be past. As indicated above, the fact that certain agreement accounts have been cleared creates one of the essential conditions for satisfactory relations with trade and payments agreement partners. Nevertheless, it may be concluded from past experience with the Latin American agreements that some past and present causes of their unsatisfactory functioning may grow in importance, and that others may lie ahead, some of which may be related to the possible introduction of convertibility in certain major European trading countries.

First, there is the fact that at least three of the main European countries--Belgium, Switzerland and the United Kingdom--have so far been reluctant to become involved in complicated contractual relationships with Latin American countries, and show few signs of a change of heart, despite the pressure brought to bear on the respective governments by their export interests. Also the Federal Republic of Germany has informed certain Latin American agreement partners that the termination of its payments agreements with them was preferred. From this attitude, which presumably has been strengthened by the improvement of the European payments position which occurred during the last two years, the inference may probably be drawn that, if difficulties in the operation of their agreements should arise, they will be less ready than they have been in the past to make special concessions in order to solve the difficulties. Second, the growing use of transit trade based on broken cross rates, by providing a technique for the reduction of excessive positions, may reduce the interest on both the Latin American and the European side in facilitating the smooth functioning of bilateral payment agreements in such a manner as to prevent the emergence of such positions. Third, the reopening of commodity markets in London and elsewhere makes some European countries less dependent on satisfactory payments relations with Latin American raw material producing countries in order to cover basic import requirements and may indeed serve to concentrate a larger proportion of Latin America's foreign trade on a smaller number of European countries. Fourth, the recent liberalization of dollar imports by the Netherlands and the Federal Republic of Germany may, by reducing those countries' demand for soft currency goods such as Brazilian cotton and tobacco, have unfavorable effects on their direct trade with certain Latin American payments agreement partners, increasing the likelihood of renewed European bilateral surpluses arising and of transit trade and other measures being resorted to to prevent their becoming excessive or to reduce them. Finally, the diminishing scope of governmental imports and the growing freedom of private importers in countries such as the United Kingdom, the Federal Republic of Germany and the Netherlands, together with the growing availability of competitive goods from new sources (both in physical terms, and, due to transit trade operations, pricewise even if at the official rates those goods are over-prices) will tend to reduce sales to European agreement partners unless there is fully competitive pricing of Latin American exports, which in the face of high and often still rising domestic cost of production may be a goal difficult to attain.

(b) Peculiarities of Latin American trade with inconvertible currency countries.

To determine whether there is much likelihood that Latin America's trade and payments agreements are going to operate more satisfactorily, it is necessary, however, to review somewhat more closely the special characteristics of Latin America's trade and payments with soft currency countries outside the continent.

The basic cause of the difficulties in Latin America's trade and payments relations with Europe is probably the inherent discontinuity in the reciprocal exchange of goods, but particularly in Latin American exports. This discontinuity, for various reasons - some of them political - is less marked in European countries' relations with their associated and dependent territories in Asia and Africa. Also commercial and financial relations among Western European countries are very close and therefore of a more continuous nature. The composition of imports and exports between them is extremely broad and varied. The financial relations are equally well developed, the number and amount of payments each way being considerable on account of banking, shipping and insurance services, investment earnings, tourism, business travel, family remittances, etc. The volume and variety of the underlying transactions and the corresponding payments is very large and they occur in uninterrupted flows which, though all may fluctuate over time, tend to cancel out. This is not true of trade and payments between any European country and any Latin American payments agreement partner. The Latin American country has only a small number of export products which the partner country is likely to purchase from it in relatively large volume, although there may be numerous products of which small quantities are bought. Consequently the European partner's imports are closely dependent on the availability of stocks for export, and on the prices quoted for their sale abroad. Also, the major Latin American export products are usually prlduced seasonally, whereas the predominantly industrial character of the European partner's exports makes them available at all times. These two facts imply a much greater likelihood of significant fluctuations in trade and in corresponding payments between any Latin American-European pair of partners than between any pair of European agreement partners. So also does the fact that raw material prices are subject to greater fluctuation than are prices of manufactured goods. A corollary of this and of the fact that the terms of trade of most Latin American countries tend to move uniformly vis-a-vis Europe, is that most Latin American countries tend to be debtors (or creditors) vis-a-vis most European countries at the same time, a fact that has prevented a standing arrangement for clearance of Latin American balances among EPU countries from assuming real significance.

The problem may be aggravated by the tendency in Latin America to reduce imports of manufactured consumer goods (the so-called non-essentials, or, from the European viewpoint, the traditional exports) to a minimum. This implies that a considerable and growing proportion of Latin American imports from European payments agreement partners now consists of capital goods whose deliveries and payments show a higher degree of discontinuity than those of consumer goods. Thus, the character of trade between Latin America and Europe is such as to cause a much greater likelihood of large fluctuations in actual movements of goods and in payments for those goods than does the character of intra-European trade, where the existence of restrictions has not prevented the resumption of a significant exchange of textiles, wines, radio sets, passenger automobiles, etc. Added to

this there is the fact that financial relationships are much looser than within Western Europe, and that banking, shipping and insurance transactions between a European and a Latin American country frequently are effected through companies related to the European partner; thus, when trade developments are unsatisfactory, the latter's banking, shipping and insurance business with the Latin American partner tend to deteriorate simultaneously. Also causing discontinuities in bilateral relationships is the fact that the bulk of the European country's exports to the partner country is frequently effected by only three or four large firms, in recent years sometimes firms that have established subsidiary manufacturing plants in the Latin American country. Since a considerable proportion of the direct trade between the partner countries thus in the hands of a small number of Latin American exporters and a small number of European exporters, and since furthermore the two not infrequently are united in one and the same firm, it is relatively easy for the exchange control authorities both on the Latin American and on the European side to grant import and export privileges on a quid pro quo basis, including a barter or compensation basis which links imports and exports of approximately equal essentiality or which serves to offset, and continue in force, inappropriate prices or exchange rates. Since the criteria for approval of such deals may be subject to frequent change, this is an unstable basis for a high level of trade.

In addition to these inherent discontinuities in trade and payments relations between many pairs of Latin American and European agreement partners, there has sometimes been a lack of coordination between trade and exchange control authorities on the European side, and more frequently on the Latin American side. Such lack of coordination has been caused to some extent by long delivery dates on European capital goods. And even where there has been no lack of coordination, the European countries have frequently contracted deliveries of capital equipment involving large sums and long delivery periods which cannot be altered nor offset by manipulation of other European exports if the Latin American partner proves to develop a serious bilateral debtor position. Under various payments agreements, also, European export licensing policies and Latin American import licensing policies apparently have not been sufficiently adjusted in accordance with developments in bilateral payments positions. These factors create a greater likelihood of the development of the payments balance getting out of hand.

Changes in official policies are more frequent in Latin America than in Europe. This is another factor making for instability in relations with payments agreement partners. In Latin America, changes frequently occur in the buying and selling rates of exchange for specific currencies and for specific goods; quotas and exchange rates under exchange budgets are likely to be revised during the year; the prescription of currency for sales of specific export commodities is subject to variation. Also, policies regarding the permission to sell the Latin American partner's products in transit, and to import a third country's goods on a transit basis from agreement partners, are less enduring than in Europe. All of these are unsettling factors affecting the smooth functioning of bilateral payments agreements, and, of course, even more so that of bilateral trade agreements.

A cause of instability, that is due both to general world market conditions and to institutional factors in the Latin American or European partner

countries, is the fact that some major Latin American exports in principle are sold only in specific currencies, and that over-all supply and demand developments for these and competing products may affect the bargaining position of the producing country to the extent of changing the prescription of currency. Thus Chilean nitrates in the early postwar years were sold only against payment in U.S. dollars, but now they can be obtained for inconvertible currencies. In addition the conditions tied to the use of those soft currency earnings have shown a tendency to change to the effect that they must be spent increasingly on imports of a type which Chile considers less essential. Chilean copper has, ever since the war, generally been sold only in U.S. dollars, but Argentina and the Federal Republic of Germany have in recent years been permitted to obtain limited quantities on more favorable terms -- Argentina in exchange for cattle, and Germany against payment in German agreement dollars. Brazilian coffee similarly was initially to be obtained only against payment in U.S. dollars, whereas now it is available to all payments agreement partners under the terms of the relevant agreements, and to some even for certain transit sales to third countries. Colombia has increasingly enabled European countries, which previously had to settle their coffee purchases in U.S. dollars, to buy coffee under payments agreements or under trade arrangements where the coffee is in effect paid for by additional exports settled in dollars by Colombia. Cuban sugar until late in 1951 was sold only for U.S. dollars, but it also has become available to some countries and in limited quantities against payment in soft currencies. Conversely, Peruvian cotton could in the past be purchased in sterling by non-sterling, non-agreement partners, whereas now they have to settle in dollars. It is clear that the possibility of negotiating on the prescription of currency for certain Latin American countries' major exports in itself creates an element of uncertainty, the authorities on both sides being more inclined to put off any drastic measures regarding their bilateral trade, or the negotiation of new agreements, until there is greater certainty as to those raw materials.

State trading and attempts at state trading in such countries as Argentina Brazil, Chile, Colombia, Cuba and Mexico have in recent years provided another element of discontinuity in trade and payments with European countries, since they made those relations more dependent on isolated central decisions affecting a large proportion of the Latin American partner's exports.

(c) Incentives to retain payments agreements

Attention has been drawn to the complications arising from commodity arbitrage, other types of transit trade, and the negotiation of claims under payments agreements in the free exchange markets of third countries. The scope of these kinds of transactions appears to have increased to such an extent that the measures initially intended in most cases to improve the functioning of specific payments agreements may come to be an obstacle to their operation due to the resulting obscuring of direct trade and payments relations between some partner countries and of the probable future developments in those relations. At the same time, the re-establishment of commodity markets in Europe, together with the improved dollar position of some European countries and the liberalization of dollar imports into those countries, facilitates access of their importers to many of Latin America's staple exports, either by buying them in transit from European traders against

payment in inconvertible currencies or by buying them direct in the country of origin against payment in dollars. Thus a tendency might well develop for some European countries to do without some of their Latin American payments agreements, particularly those with countries having relatively few restrictions on dollar imports and those which, although restricting dollar imports, have few payments agreements and consequently do not have a markedly discriminatory import policy.1/ The termination of certain payments agreements with countries such as Ecuador and Peru could then be a step towards the restoration of convertibility on non-resident account by some European countries which already have made significant progress towards attaining convertibility on resident account.

As indicated in the Introduction, payments agreements in a world of inconvertibility serve to alleviate each partner's difficulties in financing imports from the other since these no longer need to be settled in convertible currencies, and for that reason the agreements at the same time serve to improve both countries' sales prospects in each other's markets. If the partner countries subsequently reverted to dollar payments, each might be anxious to run a surplus against the other and therefore restrict its imports from that country, so that trade in both directions would fall. Also, the existence of a payments agreement frequently makes it possible for one partner country to induce the other to take more of its exports, namely by purchasing first and thus incurring a debtor position which to the second country constitutes an inconvertible claim which it is anxious to liquidate by means of additional imports. As long as some countries have to restrict their dollar imports significantly, their trading partners will consequently have an incentive to sign payments agreements with them, even where such agreements are unlikely to function smoothly, provided that they value them sufficiently highly as export markets, and provided that imports to be obtained under the terms of such agreements remain attractive as to price, quality, delivery date, and terms of payment. Since most European countries and Japan do consider the River Plate countries and Brazil as valuable export markets, and since the latter are forced to keep their traditional export outlets in Europe open, while countries in both groups still maintain significant restrictions on dollar imports, it is likely that Argentina, Brazil, Paraguay and Uruguay will continue to finance a significant proportion of their trade with inconvertible countries under payments agreements. Reference has already been made to the possibility that trade under existing Latin American payments agreements may become more concentrated on a few specific payments agreement partners, but this need not imply a reduction in the number of payments agreements maintained by these four South American countries.

It was said in the last paragraph that sufficient incentives to enter into payments agreements were present only where imports could continue to

1/ Special circumstances, however, may have opposite effects. Under a commercial treaty concluded between Uruguay and Switzerland in 1938, the former undertook to license Swiss imports equivalent to 85 per cent annually of Swiss purchases from Uruguay. In order to facilitate the execution of that commitment, Switzerland in January 1954 made payments to and from Uruguay subject to clearing insofar as deliveries of goods originating in the two countries and the accidental charges thereon are concerned. Apparently, a substantial proportion of imports of Uruguayan goods into Switzerland had not been recorded in Uruguayan export statistics as sales to Switzerland due to the fact that those goods were consigned to European ports or were acquired by Swiss importers in transit deals.

be obtained on satisfactory terms as to price, quality, etc. Latin American countries have had widely divergent experiences in that respect. Prices paid under payments agreements have usually been higher than those quoted for the same or similar goods if payment in dollars was offered. Dollar countries such as Venezuela have had the benefit of a wide variety of European dollar export promotion measures, which, together with the competition from suppliers in the United States and Canada, have led to lower prices, shorter delivery periods, and better terms of payment, than obtained by countries such as Argentina and Brazil, even before many European agreement partners started restricting their exports to the latter. On the other hand, it is difficult to say how these terms would have developed if Argentina and Brazil had not incurred large bilateral arrears, and had not had serious inflationary pressures. Also, these two countries in 1952 and 1953 were able to conclude with payments agreement partners a number of complementary trade agreements which assure deliveries of capital equipment over periods of various years and thus may constitute a significant contribution to their development programs. This factor may well prove an additional condition in favor of maintaining payments agreements with overseas countries viewing Brazil and the River Plate republics as desirable export markets.

It is unlikely, on the other hand, that countries now trading mainly in dollars would serve their own interests best by solving their sales problems by concluding a significant number of payments agreements. Those countries customarily trade with the United States and other dollar countries to such an extent that it would be very difficult to build up an exchange control administration capable of avoiding the accumulation of inconvertible balances, or in other ways to induce private importers to use up accruing agreement currencies. The governments of some of the northern Latin American countries have already experienced difficulties in inducing their importers to utilize balances in inconvertible currencies and have had to award public works contracts to agreement partners in order to prevent undue accumulation of such claims. Also, it would be hard to prevent dollar commodities purchased under the terms of payments agreements from being resold to other countries, so that some potential dollar exports to non-agreement partners are settled in soft currencies. In that case, a dollar commodity might ultimately be turned into a soft currency commodity, with a corresponding deterioration of the currency composition of the exporting country's balance of payments and monetary reserves. However, some of the smaller Latin American countries usually running import surpluses with Europe have found that payments agreements and, in a few cases, trade agreements, have served to expand the volume of their trade, and they may for that reason be anxious to maintain those pacts

Payments Agreements, Clearing Arrangements and Similar Arrangements in Force between Latin American Republics and Selected Countries Outside Latin America as at January 31, 1954

	Members of the European Payments Union									Non-EPU Countries		
	Belgium-Luxembourg	Denmark	France	German Federal Rep.	Italy	Netherlands	Sweden	Switzerland	United Kingdom	Finland	Spain	Japan
South America												
Argentina	-	x	x	x	x	x	x	x	x	x	x	x
Bolivia	x	-	x	-	-	-	-	-	-	-	x	-
Brazil	-	x	x	x	x	x	x	-	x	x	x	x
Chile	-	-	x	x	-	-	-	-	x	-	x	-
Colombia	x	x	-	x	-	-	-	-	-	x	x	-
Ecuador	x	-	x	x	x	-	-	-	-	-	x	-
Paraguay	-	x	x	x	x	x	-	-	x	-	-	-
Peru	-	-	x	-	-	-	-	-	x	-	-	x
Uruguay	x	-	x	x	x	x	x	x	x	x	-	x
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-
Other Latin America												
Costa Rica	-	-	-	-	-	-	-	-	-	-	-	-
Cuba	-	-	x	-	-	-	-	-	-	-	x	-
Dominican Republic	-	-	-	-	-	-	-	-	-	-	-	-
El Salvador	-	-	-	-	-	-	-	-	-	-	x	-
Guatemala	-	-	-	-	-	-	-	-	-	-	-	-
Haiti	-	-	-	-	-	-	-	-	-	-	-	-
Honduras	-	-	-	-	-	-	-	-	-	-	-	-
Mexico	-	-	x	-	-	-	-	-	-	-	x	-
Nicaragua	-	-	-	-	-	-	-	-	-	-	-	-
Panama	-	-	-	-	-	-	-	-	-	-	-	-

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DEVELOPMENTS IN THE U. S. ECONOMY

A presentation for the
Conference of Technicians of the
Central Banks of the American Continent

May 4, 1954

Division of International Finance

Division of Research and Statistics

Board of Governors of the Federal Reserve System

Ginsburg
Ward
Treiber
Margit
Koch

DEVELOPMENTS IN THE U. S. ECONOMY

Introduction - Mr. Young

(Economic changes-1952-1954) This spring activity and employment in the U. S. economy have been a little higher than they were two years ago at the time this Conference met in Havana. The physical volume of industrial production--output at factories and mines--has been slightly above the early 1952 level and the dollar amount of gross national product--output in all parts of the economy--has been about 5 per cent higher, running at an annual rate of just under 360 billion dollars. Non-agricultural employment is at almost exactly the same level as two years ago.

Prices are also at levels similar to those of early 1952. Consumer prices for goods and services are a little higher while wholesale prices of goods are moderately lower.

(Unemployment) Altogether production is as large or larger than two years ago, and the resources of the economy are not so fully employed, as meanwhile resources have grown considerably. The labor force has increased, plant capacity has expanded, and output per man-hour has risen. The number of persons unemployed has increased from about 2 million to about 3.7 million or 6 per cent of the labor force. The rise in total population meanwhile has been over 5 million, from 157 million to 162 million.

(Production & prices) Today's policy problems, then, are different from those of two years ago although production levels are similar. Policy problems are greatly different from those of one year ago, when production was high and there was an upsurge under way in business activity and in credit demands. Federal Reserve actions then were aimed to restrain the upsurge and thereby to minimize any later reaction. Now most observers would regard the immediate objective of

stabilization policy as one of active credit ease to cushion current recession from last year's high levels and to provide a financial climate favorable to business revival.

Industrial production in March was about 10 per cent below the July 1953 high. In April it apparently declined a little further but not much. Output of nondurable manufactures, durable consumer goods, and minerals has been steady since December, and total industrial production has declined much less rapidly than in the second half of last year.

(Industrial production--4 periods)

Some analysts are already looking for signs of an end to the decline, a development which might pave the way for recovery later this year. Others, taking a more pessimistic view of the underlying situation, expect only a levelling off or further declines. Analysts generally are busily studying past periods of recession to see what clues they can find as to prospects. This chart shows that the decline in total industrial production so far has been similar in amount to that after October 1948 and August 1929 and much less marked than the decline after July 1937. At this stage, measured by months of decline in 1949 and 1937 the lowest point was close at hand and an upturn was soon to follow, whereas in 1930 over two years of further decline lay ahead.

One similarity between this period and 1949 is that at both times a shift from inventory accumulation by business to inventory reduction was an important element in the decline. One difference is that defense outlays, which rose somewhat in the 1948-49 period, have declined considerably since last spring. Another difference from 1949 is that prices have generally continued stable rather than declining significantly.

(Retail sales and output)

Those expecting an early end to the decline emphasize that the inventory situation is more favorable in some respects than a year ago. This chart shows that the decline in production of consumer goods has been greater than the decline in retail sales, and inventories of these goods are not being accumulated as they were before. Total business inventories of all types of goods have been declining lately, with marked reductions in durable goods inventories, as production of such goods has been well below final sales.

(Textiles & apparel)

More specifically, attention is directed to the sharp declines which occurred in production of some goods such as apparel and textiles after May last year. These declines, it is said, brought output to a very low level, quite out of line with final takings. Despite some recent weakness in textile markets, it is argued, the next important move must be up rather than down.

(Residential and business construction)

The same analysts point to the continued high levels in construction activity as evidence of basic strength in the economy and probable general recovery soon. It is part of this position that fundamentally conditions have been sound right along except for the excessive accumulation of inventories and that once inventories are adjusted the economy will be in a position to advance again.

(Security outlays)

In this view declines in defense outlays since last spring are not regarded as a serious threat to the economy because meanwhile taxes have been reduced and those benefiting from tax reductions may be expected to spend more for civilian goods and services. In any event, defense outlays continue to be very large, much larger than in 1949, and the bulk of the reduction indicated in the January budget estimates may already have been achieved.

(Stock prices) The upward course of stock prices since last September, despite declining profits, is cited as evidence that economic prospects are good and that financial and business confidence is strong. Interpretations differ concerning the importance of actual and prospective tax reductions and of lower interest rates in strengthening stock prices.

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(Inventories-durable and nondurable) Those observers who expect only a levelling off or further declines in production believe that inventories, at least of durable goods, are still very high and that liquidation of inventories will need to continue for some time to bring stocks into line. They point out that business stocks of durable goods, although about 1.6 billion dollars below their peak last autumn are still 1.8 billion or 4 per cent larger than a year ago when sales were higher and still rising.

(Business construction) In this general view, the high level of business and other private construction is regarded as reflecting a lag in response to an overbuilt situation and to recession elsewhere. It is said that incentives for business construction have been unusually strong in recent years as a consequence of the enlarged defense program and the special tax amortization program. Looking at the detail of the business construction total, these analysts note that industrial construction has already declined moderately and that total business construction is being maintained close to peak levels partly by a high level of expenditures for commercial construction, now free from restrictions which earlier held this type of construction down.

(Security outlays)

The decline in defense outlays so far is interpreted as part of a continuing downward trend--unless the international political situation worsens--and it is emphasized that total demand in the economy can be maintained only if other demands expand enough to offset this decline in defense outlays. It is also noted that further growth in total demand and production is essential in an economy in which productivity is increasing rapidly and the population and labor force are growing.

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(Prices-3 curves)

Such a quick summary does not do justice to the opposing views of the current situation. No mention has been made, for example, of conflicting views on price developments, or credit developments.

In the more optimistic view, the important facts about price developments are that the speculative advance in material prices in 1950-51 was followed by a corresponding decline and that, generally speaking, over the past year or more price averages at all levels have been fairly stable, indicating widespread confidence and rather well balanced relationships. Despite recession in the United States, foreign demands have been strong in recent months, helping to sustain prices of materials. Farm prices, which earlier had declined sharply, have advanced this year and recently prices of industrial materials, including steel scrap and nonferrous metals, have strengthened somewhat.

(Wholesale prices-farm and other)

From a less optimistic point of view, it is argued that the limited extent of recent price reductions, at least for finished goods, has forced larger than necessary declines in production, employment, and incomes. It is also noted that some of the recent stability in prices reflects farm price supports rather than market demand and that recent strength in nonferrous metal markets has reflected in part a new program of increased buying for government stockpile.

(Factory and other non-agricultural employment)

In deciding how serious current developments actually are and what may need to be done to stimulate activity, the impact of reduced activity on employment and unemployment is one of the most critical considerations. Declines in employment at factories have been marked and widespread since July. In non-manufacturing lines as a group, employment rose until October and, following later declines, is now only slightly below a year ago. Mining, transportation, and Federal employment are considerably lower while State and local government employment is higher.

(Disposable income)

Recession since summer has checked the growth of disposable income but has not reduced income, owing in part to tax reductions effective at the beginning of this year and to increased unemployment benefit payments. Wage and salary receipts are down considerably from their high last summer, as a result of reductions in employment and also in hours worked by those employed, but are only moderately lower than a year ago.

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(Gross national product)

The variety of economic developments during the past seven months of recession has been great and this needs to be remembered. Nevertheless, study of recent changes in broad aggregates, such as those which comprise the gross product, can be helpful in coming to an understanding of what is going on. Mr. Garfield, Adviser on Economic Research in the Division of Research and Statistics, will begin the analysis along these lines.

Gross national product--total, inventory change, and Federal

(GNP-table) The current contraction in economic activity is often referred to as an inventory recession. This table shows why. In the first quarter of this year, producers and distributors were liquidating inventories at an estimated annual rate of around 4 billion dollars. In the second quarter of last year, inventories were being accumulated at a rate of 6 billion. The difference between +6 and -4 is a decline of 10. The net decline in total national product is estimated to be only a little larger--12 billion dollars.

Federal outlays for goods and services meanwhile decreased 5 billion, reflecting lower security outlays, and certain broad groups of consumer and producers' outlays also showed a decline of 5 billion. In the same period, increases totaling 8 billion were shown, chiefly in outlays for consumer services and State and local government.

(Domestic investment) While the phrase "inventory recession" is a convenient tag rather than a precise description, it does call attention to a major feature of developments which has special implications for the future. Inventory shifts themselves are short-time moves. If other demands hold up, producers and distributors after a fairly short time must increase their takings just to meet current demands and maintain working stocks.

(Inventories-durable and nondurable) The inventory situation varies, of course, for different types of goods, different stages of production and distribution, and different firms. At this time, for example, stocks of nondurable

goods as a whole are showing only moderate change. This is partly because many producers and distributors dealing in such products were quite cautious earlier and partly because liquidation of stocks of some goods, such as textiles, has been offset recently by accumulation of other products.

Since last September, stocks of durable goods have declined considerably. The decline started with these stocks at a very high level, however, and such stocks are still large.

(New orders-durable and nondurable) New orders received by manufacturers of durable goods declined sharply from last summer to January and then rose somewhat in February. New orders have been well below sales and consequently unfilled orders have been declining sharply from their earlier exceptionally high levels. The decline in new orders for nondurable goods was much more moderate, with little change in recent months.

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(GNP-table-repeat) The decline in Federal outlays for goods and services since last spring, it may be noted again, was one-half as large as the turn-about in inventory accumulation. Subject to the usual reservations concerning international political developments, some further reductions in defense outlays are scheduled, chiefly in military hard goods other than aircraft, ships, and electronic equipment. Outlays for farm price support may also be reduced from recent high levels.

(Federal outlays-bars) The recent decline in Federal outlays for goods and services has been in contrast to a small rise in 1949. The current level of such outlays, of course, is much higher than at that time, chiefly because of larger defense spending.

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(GMP-table, 4 lines only)

Along with the statement that this is an inventory recession is often coupled the statement that the decline has not become cumulative. One meaning of this is that final producer and consumer demands over-all have not shown important declines accompanying the reductions in inventory buying and Federal buying. The situation with regard to these other demands, totaling over 300 billion dollars, will be discussed by Miss Burr, Assistant Director of the Division of Research and Statistics.

Gross product--a start on the other 300 billion

(GNP-all other)

This table suggests that so far changes since last spring in most broad types of demand, other than inventory and Federal demands, have been moderate and offsetting. Producers expenditures for equipment, for example, appear to be down only a little and for nonresidential construction to be practically unchanged.

(Farm machinery & tools)

Output of farm machinery declined sharply during much of 1953 and there were reductions also in output of machine tools and trucks. So far this year there has been some recovery in truck production and farm machinery output. However, over-all activity in machinery industries, including ordnance production, has continued to decline.

(Metal fabricating)

The yellow line shows that the recent decline in output of producers durable goods and ordnance as a whole has been similar in amount, although less proportionately, than the decline in the first half of 1949. A large part of the decline this time has been in output of ordnance, which in 1949 was rising. It may be noted that about half of the substantial decline which occurred in output of producers equipment in the 1949 recession came after production of consumer metal products, shown by the blue line, had begun to advance again.

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(Private business construction, line chart)

Since June of last year, construction for business purposes has shown little change. There has been a moderate decline in industrial construction, a leveling off in construction by public utilities, and, following further expansion, a leveling off in commercial building.

(Plant and equipment)

Recent surveys of business spending plans indicate plant and equipment outlays in 1954 not far below the record level of last year. Although business volume was declining during the late autumn and winter months, plans for capital outlays apparently were not reduced. Maintenance of a high volume of capital outlays reflects marked increases for some industries, such as the automobile industry, which are largely offsetting reductions by some others, such as the steel industry.

The volume of capital expenditures depends, of course, on many considerations, including prospects for profitable use of equipment and ease of financing. While productive capacity in many lines is more than adequate to meet present reduced demands, many businessmen are gearing their capital expansion programs to long-run prospects, which they regard as favorable. Improvements in machinery and plant design offer many opportunities to lower costs. Ample funds are available for investment on attractive terms. Proposed tax changes involving depreciation allowances and dividend income are aimed to stimulate investment activity.

(Internal funds)

Financing of capital outlays by corporations is largely out of internal funds, amounting last year to two-thirds of outlays for fixed and working capital purposes. Depreciation allowances have continued to rise, but retained earnings have declined considerably from the advanced level of the first half of last year. New capital issues to obtain outside funds so far this year have been about 15 per cent below a year ago.

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Altogether, it is evident that the impact of the recession on capital equipment outlays has been very limited. The same is true of residential construction, which will be discussed by Mr. Wood, Senior Economist in the Consumer Finances Section of the Division of Research and Statistics.

Residential construction

(Private, business & residential construction)

Private residential construction declined somewhat last summer, owing in part to temporary difficulties in obtaining advance commitments on mortgages. Toward the end of 1953, however, there was some pickup and in the first quarter, residential building was not far below the advanced level of the second quarter of last year.

(Housing starts, monthly)

The total of 97,000 housing units started in March represented a seasonal rise from recent months. The March total was somewhat below a year ago because of a reduction in starts on public projects. The number of private starts for the first quarter was about the same as a year ago and the seasonally adjusted annual rate was over 1.1 million units.

(Housing starts-annually)

Is this rate of housing starts sustainable? Already it has continued longer than most observers expected, a fact which may be taken either as a warning against estimates that are too low or--since it has continued about as long as the comparable high level of the 1920's--as a warning that a downward adjustment in building is possible.

(Population-5 year periods)

One important reason for the sustained advanced level of building has been a continuing rapid rate of increase in population. This rapid increase in population has been unexpected and very different from developments after the mid-1920's, when the population increase slowed down considerably. Another reason for sustained building has been the large decline since the end of the war in the number of families sharing living quarters with others.

In recent years the number of households occupying separate quarters has been increasing at a less rapid rate than immediately after the war, tending to limit demand. On the other hand, demand has been increased by marked changes in living requirements as the average number of children per family has been growing and the number of single individuals maintaining separate quarters has been rising.

(Business & residential building)

Looking back to 1948 we find that residential building declined somewhat then but by the middle of 1949 was beginning to expand, providing a stimulus to recovery. So far this time residential building has been rather steady. Builders are now optimistic about the outlook for maintaining a high rate. Consumer buying plans in 1954 reported in the Board's Survey of Consumer Finances "suggest that demands for the year, though below those reported last year, are still large."

(Mortgage lending)

A Federal Reserve survey of lenders and builders earlier this year indicated that, with few exceptions, funds were available for advance commitments as well as for completed mortgages on terms increasingly favorable to borrowers; that several large institutional lenders were aggressively seeking mortgage investments; and that as a result, prices of completed mortgages were rising and yields declining. Easing in the mortgage market is making houses available on the most liberal credit terms since 1950. Applications for Government-aided loans have been very high in recent weeks.

Current legislative proposals might result in more widespread easing in the mortgage market. We know very little about the

depth of the market for houses financed with little or no down payment and maturities running up to 25 or 30 years.

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Next, consideration will be given to consumer demand for goods and services. This will be discussed by Mr. Trueblood, Senior Economist in the Business Conditions Section of the Division of Research and Statistics.

Consumer goods

(Consumer goods, production & sales, repeat)

A downward adjustment has taken place in retail purchases of consumer goods from the high level of early 1953, but this decline has been considerably less marked than the decline in production. Purchases of durables have declined more than those of nondurables. This spring, however, sales of passenger automobiles have shown a rather marked pickup and sales of household durables have been steady.

(Consumer durable goods)

Auto production declined sharply after mid-1953 but rose in January and has since been maintained at an advanced rate. Stocks of new cars increased through early March but more recently have shown little change. Production for the year as a whole is generally expected to be moderately below the high level of last year, reflecting a somewhat lower level of sales in the domestic market and less accumulation of inventory by dealers. The Board's Survey of Consumer Finances reported that consumers in early 1954 had somewhat fewer plans to purchase new cars than they had a year ago. Plans to purchase used cars were the same as a year ago.

(Used car prices)

Used car sales have been large this spring and used car stocks have been declining from very high levels. Used car prices, after allowance for depreciation, have been steady since mid-December, following a decline of one-fourth from the high of September 1952.

(Consumer durable goods)

Output of household durable goods has tended to stabilize this year at a level about 25 per cent below the sharply advanced rate of early 1953. Subsequent declines last year were marked for all major items and television output dropped about 50 per cent. Most

recently television output has leveled off. Meanwhile sales of household durable goods have held relatively steady since autumn and so far this year have averaged only about 3 per cent below the high rates of early 1953.

(Auto instalment credit)

Reflecting some reduction in sales and in the use of credit to finance purchases made, instalment credit extensions on automobiles--and also other consumer durable goods--declined after last spring, allowing for seasonal. Meanwhile repayments, based on contracts made over many months before, continued to rise. During the first quarter of this year repayments have exceeded extensions.

(Consumer credit outstanding)

As a consequence of these trends, the expansion in instalment credit outstanding, which had been very rapid in the early months of 1953, slowed down considerably in the last half of the year. In the first quarter of this year instalment credit outstanding showed a decline of 800 million dollars, which was partly seasonal but was in marked contrast to a rise of 700 million in the first quarter of last year.

(GNP-all other)

Purchases of consumer nondurable goods, as is usual in a downturn, have declined much less proportionately than purchases of durable goods and, as noted earlier, production of such goods has shown no further decline since December. Consumer demand for apparel slackened appreciably last autumn from very high levels, partly as a result of unseasonable weather. Subsequently apparel sales showed some recovery. Consumer demand for foods has remained close to record levels and prices of meats and some other foods are above a year ago. Consumer outlays for services have continued their

upward trend and in the first quarter were estimated to be at an annual rate 4 billion above the second quarter last year, reflecting in part higher rent payments.

State and local government outlays meanwhile have continued to rise as capital outlays and operating costs have both increased further. Further growth in such outlays is generally expected but opinion is divided as to whether the growth will continue to be as rapid as in the recent past.

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Recent developments in foreign trade and economic conditions abroad will now be analyzed by Mr. Marget, Director of the Division of International Finance.

Foreign Trade and World Economic Conditions

(W. Europe industrial production)

There has been remarkably little evidence of any weakening of the economic situation abroad. Business activity in Western Europe has continued to expand. Despite a decline in steel production on the Continent, total industrial output has risen considerably in most of the European countries. In January and February the level of production was about 7 per cent higher than the year before.

For other areas, there is some evidence of decline in mining production during the second half of 1953. Otherwise there have been few signs of recession. In Canada, where industrial production fell off slightly after the middle of last year, output in January 1954 was about as large as in January 1953.

(U.S. foreign trade)

While a reduction of United States imports has absorbed some of the internal impact in the United States of the shift from inventory accumulation to liquidation, commercial export demand for United States products has held up fairly well. The foreign trade surplus has widened by several hundred million dollars since a year ago, tempering to that extent the net effect of changes in domestic demand upon domestic production and income.

(U.S. exports, Canada, Latin America, Other)

A breakdown of United States exports shows the composite influences of demand abroad, of supply conditions abroad, and of the movement toward liberalization of controls in some countries. While exports to Canada have fallen off somewhat, exports to Latin America were larger in the first two months of 1954 than a year ago. Sales to other areas, taken in the aggregate, were virtually unchanged.

(U.S. exports, agricultural and other) Stability in exports over the past year and a half has been the average experience for various types of commodities. Although sales of wheat have been even smaller in the current crop year than they were the year before, total agricultural exports appear not to have decreased significantly. The increase shown for the second half of 1953 was due to seasonal factors.

(Dollar payments) Prospects for continuing stability in exports can be found in the general balance-of-payments situation. Although the flow of dollar payments to other countries for our imports of goods has fallen off, other payments are holding up. Particularly important at the present time are military expenditures overseas, for maintenance of our forces and for offshore procurement of equipment to be furnished to other countries. These military expenditures account for about 2-1/2 billion dollars of the 1953 payments in the area labeled "services and offshore goods" in this chart, and they will probably be larger in 1954. The flow of dollar aid in the form of grants for defense support and for economic and technical assistance is also expected to be at least as large this year as in the latter part of 1953. Government loans will be smaller, but the net outward flow of private U. S. capital will apparently be several hundred million dollars larger than during 1953.

(Gold and dollar holdings) It is becoming clear that problems of dollar shortage are no longer pressing heavily on Western Europe or on the sterling area, as they were a few years ago. Growth of foreign gold and dollar holdings is continuing. The total rose by about 2-1/2 billion dollars in 1953, and by about half a billion in the first quarter of 1954. There will be a further rise during the remainder of this year.

The rebuilding of foreign gold reserves and dollar holdings has in some cases made them adequate for meeting foreseeable contingencies without resort to trade restriction. In the United Kingdom and the rest of the sterling area, where internal financial stability has been maintained, a real start is being made in opening up markets and relaxing discriminatory restrictions on trade. The recent abolition of bilateral sterling accounts and the broadening of transferability of all sterling outside the dollar area may be regarded as another step in the direction of fuller convertibility of sterling. And on the continent of Europe several countries, especially Germany and the Netherlands, have had very sizeable increases in reserves. Those two countries have recently taken concrete steps toward dropping some of their controls on trade and capital movements, and they seem prepared to go a good deal farther along this line.

(Imports, Europe and U.S.)

While foreign demand has caused the volume of U. S. exports to up well, the general stability of prices in world commodity markets has exerted a broader influence, helping to sustain a belief in many quarters that no serious deflation lies ahead. European demand has provided a real element of strength in world markets. It is interesting to note, as this chart shows, that Western Europe imports twice as much from countries outside Europe, Canada, and the United States as this country does; rising demand and production in Europe can therefore serve, for other countries, as a powerful offset to a moderate decline in activity in the United States.

(U.S. imports, outside L.A.)

Thus, when we turn from considering the impact of external influences upon the United States to glance at the geographical distribution of the impact, upon the rest of the world, of the decline in

import purchases by the United States, we are necessarily taking only a partial view of the economic forces affecting other countries. We have already noted that Canadian industrial production in January was about the same as the year before. This means that the impetus of economic development in Canada has largely offset the impact of a reduction in U. S. purchases from Canada. In January and February these imports were about 10 per cent smaller than in the same months of 1953. In this chart we show moving averages, the latest for Canada being an estimate for February. In March, according to Canadian statistics already published, there was a considerable rise.

In Europe, in view of the rise in monetary reserves, internal policies in most of the countries can now be adjusted to maintain economic activity without serious risk of upsetting the balance of payments.

For many of the countries of Asia, Africa and Oceania, import demand from Europe provides at least a partial offset to the decline in U. S. imports.

(U.S. imports, Latin Am.) This is the case also in Latin America. For a number of Latin American countries the rise in coffee prices and the advance in our petroleum imports have kept sales to the United States at a high level; in January and February United States imports from the dollar area countries, taken as a group, were higher than a year ago. In the case of Mexico there was a decline of nearly 20 per cent, but it is interesting to observe that Mexico's total exports to all destinations in January this year were just about as large as the year before. Among the other countries, Argentina provides another example of offsetting influences.

Argentina's sales to the United States were much smaller than in the early part of 1953, but the total exports of Argentina were much larger than at that time.

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We now turn to domestic development in the field of credit and monetary policy. Mr. Koch, Chief of the Banking Section of the Division of Research and Statistics will review these developments in concluding this presentation.

Credit and monetary developments

(Selected credit changes-1st qtr.)

Recent credit changes contrast sharply with the expansion of a year ago. Credit outstanding has declined in the areas of short-term business loans and consumer instalment credit, reflecting mainly readjustments in business inventory holdings and contraction in consumer outlays for automobiles and other durable goods. Ready availability of credit has helped to keep the reduction of inventories on an orderly basis. Placement of capital issues and mortgages, greatly facilitated by easier credit conditions, has been in large volume, helping to maintain activity in the capital goods sectors, where the terms for credit are very important considerations. The larger repayment of borrowing by the Federal Government this year than last was made possible by both a lower volume of expenditures and an increase in receipts, especially from corporate taxes.

(Mortgage debt outstanding)

Mortgage extensions have continued in near-record volume. At the end of 1953 home mortgage debt outstanding, shown on this chart, was 65 billion dollars, up about 7 billion for the year. Outstanding mortgage credit of all kinds rose to more than 100 billion dollars, up 9.5 billion. This increase was larger than in any year except 1950, when the growth in total mortgages outstanding was 10 billion. Current data in the mortgage credit sector indicate that mortgage lending has continued active in the first few months of 1954.

(Security issues)

The total amount of borrowing in the securities market, excluding Federal issues, during the first quarter was about as large as a year ago, although new issues of corporations were down about 15 per cent. Flotations of State and local government securities for new capital thus far in 1954 have been maintained at a high level and there have been important World Bank and Canadian issues this year. The present calendar of offerings suggests that State and

local government issues will continue large in the months ahead. The corporate calendar currently seems light.

(Bank loans and investments) Total loans and investments of commercial banks declined moderately and seasonally thus far this year, by about 2 1/2 billion dollars through April. This reduction has been about the same as that in the comparable months of last year. This year bank loans and investment in securities other than U. S. Government securities have shown little change as compared with an increase last year when private demands for bank credit were very strong. On the other hand, bank holdings of Government securities have declined much less this year than last.

(Bank loans) Among the various types of bank loans, loans to business concerns have declined somewhat more than might have been expected seasonally. This year's decline, moreover, followed a less than seasonal increase in the last half of 1953. Real estate loans at commercial banks have continued to increase. Bank loans to consumers, which had leveled beginning in the middle of 1953, have declined thus far this year, whereas last year they increased during the comparable period. On the other hand, agricultural loans, not shown on the chart, rose sharply through the first quarter of this year, due largely to bank purchases in February of an additional 350 million dollars of certificates of interest in loans on agricultural commodities held by the Commodity Credit Corporation. In early April, however, 125 million dollars of these certificates were redeemed by the CCC.

(Deposits & currency, unadjusted) Demand deposit and currency holdings of individuals and businesses apparently declined about 7 billion dollars in the first quarter, slightly less than the usual seasonal decrease. Demand deposits dropped about seasonally in January and February but somewhat less than seasonally in March. The currency return flow after Christmas this year has been large, however, and the amount of currency outside banks has declined somewhat more than is usual at this season. Time deposits have continued to increase.

(Deposit turnover) The rate of turnover of demand deposits in banks outside major financial centers, which rose considerably in the latter part of 1952, more or less leveled off during 1953 and is currently about the same as a year ago. It is also interesting that the turnover rate for demand deposits at banks in leading centers outside New York City moved upward over postwar years with only a leveling off in 1949. The current level is not greatly different from that for the late 1930's. In New York City, the rate of turnover of deposits has increased in recent years to the highest level in over 20 years.

(Reserve factors) Since the end of the year, banks have gained substantial reserves through the return flow of currency. Banks lost some reserves through further gold outflow early in the year, but recently gold holdings have shown little change. The additions to reserve funds have been largely absorbed by sales and redemptions of Treasury bills by the Federal Reserve, including those held at the end of the year under repurchase agreements. Required reserves, however, have declined as a result of the decrease in deposits. The net effect of these changes is that bank reserve positions have become increasingly easy.

(Free reserves and bill yields)

Recently member bank borrowings from the Federal Reserve Banks have been averaging less than 200 million dollars and excess reserves have generally been close to 700 million dollars with free reserves averaging around 500 million dollars. This is in contrast to the situation a year ago when borrowings were substantially larger than excess reserves.

(Money rates)

With bank reserves readily available and private short-term credit demands slack, money market yields decreased sharply further in early 1954. Since late January the rate on new Treasury bills has fluctuated around 1 per cent, lower than at any time since mid-1949. Rates on other short-term Government securities and on commercial paper also declined further over the first quarter of this year. In February the Reserve Bank discount rates were reduced from 2 to 1 3/4 per cent. The bank lending rate to prime commercial customers was reduced from 3 1/4 to 3 per cent in March. In April, an additional reduction of 1/4 per cent in the discount rate was made at most of the Reserve Banks. Yields on Treasury bonds have declined to the lowest levels since early 1951 and those on high-grade municipal and corporate bonds showed declines through early March. Recently corporate bond yields have been stable and municipal yields have risen somewhat, reflecting the large volume of these securities on dealer shelves and the heavy calendar of offerings.

Credit and monetary policy

(Free reserves and bill yields)

The Federal Reserve policy of credit ease followed since last summer has contributed to a cushioning of the economic readjustment. In the boom phase of the winter and spring of 1953, credit restraints helped to discourage speculative excesses, restrain inventory accumulation, damp down undue expansion in capital goods expenditures, and encourage saving. Subsequently, credit policy has helped to encourage business capital outlays, home construction, and State and local expenditures for construction and other improvements, as is indicated by the sustained if not growing volume of activity in these areas. Inventory liquidation, moreover, has thus far been orderly, with no material pressure arising from financing problems.

(Deposits & currency, seasonally adjusted)

While bank credit in recent months has been readily available, monetary expansion has not continued. The volume of demand deposits adjusted and currency has more or less leveled off since the spring of last year, after allowance for usual seasonal changes. Time deposits as well as other liquid savings forms, however, have continued to increase at about the same rate as in 1953. The current slackness in private demand for bank credit raises a question as to how monetary growth can be supported in the months ahead so that monetary developments may tend to cushion economic decline and not accentuate it.

(Demand deposits & currency-seasonal pattern)

Ordinarily the volume of privately-held demand deposits and currency declines sharply in the first quarter of the year, levels off in the second quarter, and then increases considerably in the second half of the year. As we have seen, developments thus far in 1954 have followed this pattern. In addition, there has been a continuation of the growth trend for time deposits. If this growth and the usual seasonal monetary developments are to occur over the remainder of this year, there will have to be a growth in the loans and investments of commercial banks of about 7 billion dollars during this period. Allowing also for some monetary growth over the year as a whole, the increase in bank credit would have to be even larger.

(Bank loans and investments)

The major outlets for credit in 1954 now appear to be in mortgages and in corporate, State and local government, and Federal Government securities. The volume of savings flowing to investment institutions continues large and there is a developing pressure on savings institutions to keep their funds fully employed. This pressure is highly desirable in order to help maintain and further stimulate private and municipal construction, corporate outlays for plant and equipment, and spending for houses and durable goods by final consumers. Commercial banks may be expected to compete for a part of these credits, particularly tax-exempt securities, high-quality mortgages, and instalment paper. Over the remainder of 1954, however, the Federal Government now appears to be the major potential borrower whose demands might be focused on commercial banks.

(Free reserves and bill yields) To keep monetary developments operating as a positive sustaining force, with an adequate flow of savings and bank funds into productive activities, monetary policies are currently being directed at providing a plentiful supply of bank reserves and adequate liquidity for banks.

(Yields) Interest rates have already declined considerably and funds have become more readily available in markets for long-term as well as short-term funds, to private as well as government borrowers. How great the influence of these shifts may be on economic developments under present circumstances is, of course, difficult to determine at this time, but there is reason to believe that their influence is pervasive and powerful.

(Production and prices) In conclusion, since the end of last year, as a result of all the many domestic and international forces operating in the current situation, the decline in economic activity in the United States has slowed down. Commodity prices have continued rather stable, with some advances in basic commodity markets, both for domestic and imported commodities. Thus, the decline in activity which started last summer has not developed into any rapid downward spiral. Moreover, in general, the impact of the decline in activity in the United States on other countries has been at least offset by other influences abroad, and, with some exceptions, activity abroad has continued to expand. This has tended to strengthen world markets. Finally, some domestic developments now going on, in particular the liquidation of inventories, may be laying the foundation for recovery and for the renewed growth in activity which is essential if we are to make full use of our growing resources in manpower and plant capacity to increase production and to raise living standards.

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INCOME GROWTH IN THE SOUTHERN UNITED STATES SINCE 1929 AS A MODEL OF ECONOMIC DEVELOPMENT

Contents

For discussion at the session on
"Balanced Economic Development"
on Thursday, May 13, 1954

INCOME GROWTH IN THE SOUTHERN UNITED STATES SINCE 1929 AS A MODEL OF ECONOMIC DEVELOPMENT[1]

I

The Theoretical Pattern of Southern Economic Development

In the world of states existing in various stages of economic development, one of our central problems is how to bring the less developed areas nearer to the level of the more economically advanced nations. There is a great temptation in modern times to rely upon the state to achieve macroeconomic effects by using its many powers to encourage or discourage this or that particular kind of activity in order to promote economic development. There is particularly the temptation to use the powers of the central bank for that purpose. Not so long ago, however, we would have been much more inclined to leave such things to the play of economic forces operating in the free market; the powers of government would have been invoked only to the extent necessary to facilitate these adjustments.

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[1]The opinions presented in this paper are those of the author and do not necessarily represent the views of the Federal Reserve Bank of Atlanta. The author has attempted to synthesize some of the results of the regional research program carried on at the Federal Reserve Bank of Atlanta for several years and is consequently indebted to the many persons who have taken part in this program. For suggestions and criticism, he is especially indebted to Dr. E. L. Rauber, Vice President and Director of Research, and Dr. A. H. Kantner, Agricultural Economist. W. M. Davis of the Research staff assisted with the compilation of the data.

Some persons, of course, often state that the real economic world never was, or no longer is, of such a nature that the proper adjustments could be made through the interplay of the free forces of the market. In this paper I would like to suggest, however, that perhaps this is still the best way to approach many of our current problems of economic development. I am going to illustrate my thesis with the experience of the southeastern part of the United States and the way it has achieved its present status, for I think it is a particularly good example of the realization of expectations under the assumptions of neo-classical economic theory. Except for the years of the Civil War, the South was never a nation in itself and, therefore, could not attempt to further its own development by the use of powers available to a central government. It had to rely, by and large, on the relative mobility of the factors of production in their search for those employments that would raise the marginal productivity of labor and capital to a level comparable to that of the nation at large.

For many years, the South was a low income area that seemingly had been by-passed in the progress taking place in most of the United States. As late as 1920, per-capita income in the Southern states was less than half, 45 percent to be exact, of the per-capita income in the rest of the United States.[2] Even in the relatively prosperous 1920's the South did

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[2]Estimate derived from data in Maurice Leven, Income in the Various States, (New York, 1925).

not better its comparative economic position, and in 1929, when general prosperity characterized the American economy, it still retained the same income standing as in 1920.

During the last quarter of a century or so, however, when incomes throughout the nation have expanded substantially, the rate of growth in the South has been particularly striking. A comparison between 1929 and 1952, two years of relatively high income for the nation, indicates the magnitude of the change.[3] In 1929, per-capita Southern income, measured in dollars of 1947-49 purchasing power, amounted to $469. By 1952, the comparable per-capita figure had risen to $988. In this process of growth, which was achieved during a period when the South's population expanded by more than 25 percent, per-capita income had risen to an amount almost two-thirds as great as that of the rest of the nation.

The conclusion that this income growth resulted not from the execution of a preconceived plan drawn-up by the Government, but from such adjustments in factor use as would be expected under conditions set forth in neo-classical analysis, may be surprising to some, whereas to others it may seem naive. Many persons are of the contrary opinion that Government-sponsored projects had primary rather than incidental effects in

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[3] U. S. Department of Commerce, Office of Business Economics. The annual estimates of income payments to individuals begin with 1929. "Income payments to individuals" differs somewhat from "national income" and, in general, the dollar totals for the former are slightly lower. Unless otherwise noted, "income payments to individuals" are used in this paper. Wherever possible, comparisons are made with 1929 in order to eliminate, to some extent, the bias of the depression of the 1930's upon long-term comparisons.

promoting this development. Perhaps this can be attributed to the publicity given to such programs as the TVA and other public power projects, the Federal Government's agricultural program, planning activities of the early 1930's, special inducements such as tax exemptions to attract industry to the South, municipally financed plant facilities, and other promotional devices. Yet a careful examination of the process of the South's income growth reveals that these special devices were not forceful enough to have initiated the broad changes necessary for such expansion. In some cases these special devices may have actually been a hindrance rather than a help.

The thesis of this paper can be better understood if it is prefaced by a short description of the physical and economic features of the South before the period of recent growth. We shall find that income in the South, at least theoretically, could have been increased by correcting the maladjustment of factor or resource use within the South and between the South and the rest of the United States. That adjustments strong enough to raise the comparative income level of the South did not occur before can be explained by the fundamental barriers to the free flow of resources from one use to another. Examination of some of the major changes occurring in the South, often obscured by less important but more dramatic developments, will show that removing these barriers, to some extent by governmental action, resulted ultimately in economic development through resource adjustment.

II

Physical and Economic Character of the Southeastern United States

In recent years, the South, insofar as it can be considered a distinct region, has been defined as an area including eleven southeastern states with many economic and social characteristics in common.[4] The states of Virginia, Kentucky, and Arkansas lie farthest to the north. The western boundaries of Arkansas and Louisiana serve as its boundary to the west, and the Gulf of Mexico and the Atlantic Ocean set its southern and eastern boundaries.[5] The area thus excludes some parts of the United States below the historical Mason-Dixon Line that now have more characteristics in common with the states of the Northeast. It also excludes Texas and Oklahoma, which are included in the Southwest.

The South covers approximately 537,000 square miles, about equal to the area of either Peru or Bolivia or about two-thirds that of Mexico. Its area is about one-fifth greater than Columbia's, over twice as large

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[4]Including the states of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia. The basis upon which these states were included in the South are described in H. W. Odum, Southern Regions of the United States (Chapel Hill, 1936). The words South and Southeast are used interchangeably in this paper.

[5]Four Federal Reserve Banks have major portions of their territories in the South. The Federal Reserve Bank of Atlanta, however, is the only Bank whose territory is entirely within the South as defined in this paper. It serves Alabama, Florida, and Georgia, the southern halves of Louisiana and Mississippi, and the eastern two-thirds of Tennessee, which area contains about half the population of the South. The southern states served by the Richmond Bank include North Carolina, South Carolina, and Virginia. The St. Louis Bank serves the parts of Mississippi and Tennessee not included in the Atlanta District, Arkansas, and part of Kentucky. The Dallas District serves part of Louisiana. In addition, part of the Cleveland District is in Kentucky.

as Chile's, and about one-half as great as Argentina's. In 1930, there were approximately 25.5 million persons living in the region, a number almost equal to the present population of Mexico. Approximately a fourth of the population in the South was of the colored race.

Much of the northern section of the South is mountainous, although rarely do the mountains reach 5,000 feet above sea level. These mountains are covered by trees and other vegetation. Closer to the sea, the mountains give way to rolling hills and eventually to the coastal plains. Aside from the coastal plains, the area along the lower Mississippi River constitutes the only extended level area in the South.

The region for the most part has short, mild winters and long, warm summers. Rainfall is abundant in most areas, varying from 40 to 60 inches a year. Especially heavy rainfall in the mountain areas furnishes water for the South's many rivers. As a result of the mountainous character of the region, there are numerous sites for the development of hydroelectric power plants.

Over half the land in the South is forest land. Although practically all the original forests have been cut, the rate of annual growth is high and the original forests have been replaced by second-growth pine and hardwoods. Cultivated soils are inferior to those of the Middle West and are subject to extensive erosion unless protected by special practices. Because of either lack of original fertility or its exhaustion, Southern agriculture requires large amounts of commercial fertilizers.

In certain sections, particularly Kentucky, Tennessee, and Alabama, there are sizable reserves of coal and iron ore, although the iron ore is somewhat inferior to that of some other parts of the United States and mining it is more expensive. In Florida and Tennessee there are extensive reserves of phosphate rock. Petroleum and natural gas are found in Louisiana, Mississippi, and to a lesser extent in Alabama. Total petroleum production amounted to 321 million barrels in 1952, approximately half that of Venezuela.

Thus, the South has some economic advantages in its climate and natural resources. Generally, it could not be classified as an undeveloped area with large tracts of vacant land available for exploitation by agriculture or unexplored mineral resources. Natural resources are more abundant than in some other parts of the United States and certainly more abundant than in many other nations of the world. Rather than being classified as an undeveloped country in the sense that its resources have not been exploited, it should probably be characterized as an under-developed country in the sense that its resources have not been utilized to optimum capacity.

From the standpoint of the pattern of its income sources and resource use, the South had in the early part of this century many of the characteristics of so-called under-developed areas with low incomes. However, even in 1938 when President Roosevelt characterized the South as "The Nation's Number One Economic Problem," per-capita income was not as low in comparison with the rest of the world as had sometimes been assumed.

Despite the unreliability of income statistics in international comparisons, it is probably safe to conclude that the South apparently had a per-capita income about equal to that of France, Belgium, or the Netherlands in Europe, and higher than that of any other nation in the Americas except Canada, which it closely approached.[6]

Yet in comparison with the rest of the United States, the underdeveloped character of the South's economy was striking. It was predominantly a rural area. Although the proportion of its population living in cities was increasing slowly, 70 percent of its population in 1930 still lived in rural areas, whereas in the rest of the United States 67 percent of the population lived in urban areas. Thirty-eight percent of its population was engaged in productive economic activity compared with 40 percent for the nation. (See Table I.) The birth rate was higher than in other sections of the country, and, as a result, a larger proportion of its population was in the lower and economically unproductive age group.

The most important single source of income in the South was agriculture, with farm income derived chiefly from two cash export crops--cotton and tobacco--which together accounted for approximately two-thirds of total cash receipts. The region was a deficit area so far as grains and many foods were concerned. Agriculture was carried on by a labor force

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[6] W. S. Woytinsky, World Population and Production (New York, 1953), pp. 389-96.

TABLE I

ECONOMICALLY ACTIVE POPULATION
UNITED STATES AND SELECTED COUNTRIES

	Year	Percent of Total Pop. Econ. Active	Percentage of Economically Active Population Employed In: Agriculture Forestry Fishing	Mining	Manufacturing	Construction Transportation Communication	Commerce	Other
United States								
Southeastern States	1920	37	52	2	14	9	6	17
	1930	38	44	2	15	10	8	21
	1940	33	36	2	17	10	12	23
	1950	35	23	2	20	12	16	27
All Other States	1920	40	20	3	30	12	10	25
	1930	40	16	3	25	15	14	27
	1940	35	14	2	25	12	18	29
	1950	38	10	2	27	14	19	28
Canada	1948	37	26	2	26	14	16	16
Argentina	1945	39	26	1	23	12	13	25
Chile	1948	39	34	4	18	7	9	28
Peru	1947	36	62	2	18	2	5	11
India	1948-49	39	68	1	13	2	6	10
Denmark	1948	44	29		28	13	14	16
France	1946	51	36	2	23	11	9	19
Greece	1946	33	61	1	6	5	14	13
Italy	1948	42	48	1	21	6	10	14
United Kingdom	1949	45	5	4	38	19	12	22

Source: Derived from United Nations, National Income and Its Distribution in Under-Developed Countries, p. 6, and U. S. Census, Characteristics of the Population. Census classifications for 1920 and 1930 have been adjusted to improve comparability. Because of differences in classification, comparability between areas is subject to limitations.

considered excessive, on numerous small holdings, with less than optimum capital, and by methods leading to depletion of fertility and soil erosion. As a result, per-capita farm income in the South was only 60 percent as great as that on farms throughout the United States and only 37 percent as great as the per-capita income of all persons living in the United States.[7] The problem of Southern poverty, therefore, was in reality that of the poverty of Southern farmers.[8]

The economic problems of Southern agriculture were of long-standing. During the early colonial period, world demands for cotton and tobacco and the South's warm climate made it very profitable to produce these crops under a plantation system that employed slave labor. Under the old plantation system, production was, it has been said, an uneconomic combination of land and resources because it was an intensive type of operation at a time when land was abundant and extensive operations, theoretically, would appear to be most suitable. The costs of this inefficient type of production, however, could be shifted to slave labor in the form of a subsistence standard of living, and to the land in the form of the exhaustion of fertility.

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[7] C. T. Taylor, "Some Economic Consequences of Federal Aid and Subsidies to Southern Agriculture," Southern Economic Journal, XIV (1947), pp. 62-72.

[8] Earle L. Rauber, "Low Income Groups in Southern Agriculture," Agricultural Adjustment and Income, Postwar Economic Studies, No. 2, Board of Governors, (Washington, 1945).

Most of the capital of plantation owners was in slave labor. After slavery was abolished the planters had no capital except land. Freed slave labor was relatively immobile and therefore cheap, and capital to develop a more extensive type of agriculture was lacking. A system of small tenant holdings was instituted and cotton and tobacco production continued.

Around the turn of the century, the structure of Southern agriculture, thus, was about the same as it had always been.[9] Some industrialization had taken place in the area, but a smaller proportion of total income was derived from manufacturing and other non-agricultural activities than was true in other parts of the country. By 1930, such manufacturing as had developed was concentrated in those types of industry requiring relatively small amounts of capital per worker, such as textiles, lumber, and food processing. The greater part of Southern industrial production was sold on markets in other parts of the United States or in foreign countries rather than for local consumption. Value added per worker in 1929 in the South was only 69 percent of that in the country as a whole, and wages averaged only 65 percent as much as they did throughout the United States.[10]

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[9] Ibid.

[10] R. B. Vance, All These People, (Chapel Hill, 1945), pp. 248-317.

Further evidence of the scarcity of capital during the first quarter of the century was reflected in the relative standing of the region's financial institutions. The region was served by a network of commercial banks and after 1914 by the facilities of the Federal Reserve System. Commercial bank deposits, however, averaged only $127 per capita in 1930, compared with $516 elsewhere in the United States. Commercial banks, the chief source of short-term working capital for agriculture and business, made a larger proportion of their total loans to farmers and to small businesses than banks elsewhere, but they extended little long-term credit. The relative scarcity of capital was reflected in a higher interest rate paid on loans.[11]

The most obvious reason for the low per-capita financial resources was the low income level. As is common with low income receivers, Southerners had a high marginal propensity to consume and a low marginal propensity to save. Savings in the form of insurance and various types of investments were likely to flow to the large financial centers outside the South since there were no highly organized money market centers within the region. Moreover, it has been contended that companies with headquarters elsewhere controlled many of the manufacturing plants in the area and kept minimum balances in the South's commercial banks.

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[11] For a discussion of the financial structure of the South see C. B. Hoover and B. U. Ratchford, Economic Resources and Policies of the South, (New York, 1951, chap. VII), and J. B. McFerrin, "Resources for Financing Industry in the South," Southern Economic Journal, XIV (1947), pp. 62-72.

The effect of this outflow of capital has often been exaggerated. If the financial structure of the South channeled savings out of the region, the machinery also existed for drawing funds from areas where capital was more abundant. The establishment of the Federal Reserve System in 1914 did not perhaps create the regional capital markets as was intended. It did, however, facilitate the transfer of funds between regions and establish close contacts between commercial banks in the South and those in other parts of the country. Investment markets capable of handling small municipal security issues existed on an informal basis and the participation of Southern investment dealers with northern investment houses in underwriting security issues undoubtedly facilitated the transfer of funds into the area.[12]

The South's economy, like those in other countries based upon the production of agricultural commodities for which there is a relatively inelastic demand in the world market, was particularly vulnerable to declining business activity in this country and in other parts of the world. For example, in 1920 when the price of cotton fell from 45 cents to about 15 cents, the prices of commodities bought from other sections of the United States did not fall proportionately. As a result, funds went out of the region in substantial quantities. In the Atlanta Federal Reserve District, commercial bank deposits in that year declined almost 20 percent,

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[12] C. T. Taylor, "The District's Growing Investment Market," Monthly Review, Federal Reserve Bank of Atlanta, /cited hereafter as MR, FRB Atlanta/, (Nov. 1950), pp. 105-108.

but for the United States as a whole they changed little. Per-capita income in the South declined 7 percent, whereas in the rest of the nation it increased 10 percent.[13] Because there were no obstacles to the free flow of goods and funds between the South and other sections, there was no formal balance of payments difficulty or "dollar gap" during such periods. There were, however, serious deflationary consequences. One of these was the wave of commercial bank failures during periods of depression.

III

Major Features of Income Growth, 1929-1952

Such was the picture of the Southern economy before 1930. It was, of course, an economy that would yield low incomes to most of those living in the area. It was not, however, very different from the kind of economic structure that would be expected in an area where capital was scarce. Since labor was relatively abundant, the types of agriculture practiced utilized large quantities of labor. Capital in manufacturing was economized by investment in those types of industry that required little capital per worker. With the existing stock of capital and the relative abundance of labor, the production pattern was probably the most economical one. Low incomes, of course, accompanied this type of

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[13] For a discussion of the "sensitivity" of deposits in one section of the South see T. R. Atkinson, "Fluctuations of Member Bank Deposits," op. cit., (May 1953), pp. 2-3, and C. T. Taylor, "Deposit Growth at Sixth District Banks," op. cit., (1950) various issues.

production, but it is doubtful if total income would have been higher if the available capital had been employed in enterprises requiring large amounts of capital in relation to the labor force.

The prescription for raising Southern incomes under these conditions in terms of neo-classical economics appears fairly simple. It could be accomplished by a migration of labor to other areas and by an inflow of capital into the region. Expansion of capital in the South would make possible a reallocation of the factors of production within the region until the marginal productivity of land, labor, and capital was equal within the South. Total income would consequently rise.

Under existing conditions, the pattern of economic development resulting from the free flow of private investment capital in the South would be somewhat as follows. Until labor became relatively scarce, private investors would continue to direct capital toward enterprises low in ratios of capital to labor. Greater returns to labor in non-agricultural production would tend to shift production toward those types using less labor in relation to capital; capital in turn would be attracted to agriculture. As labor became relatively scarcer, the pattern of industrial development would shift toward industries using larger amounts of capital per worker. In the process, the general level of productivity would increase, and incomes would expand. With the resulting growth in purchasing power would come a development in what are sometimes called the tertiary types of industries such as trade and services.

That, in general, such changes have occurred in the South is indicated by broad measures. Although between 1929 and the present the rate

of growth in income has not been uniform from year to year, the magnitude of the changes in the region's economic structure can best be appreciated by comparisons for the whole period. Comparisons are, of course, limited to those years for which statistical data are available.

TABLE II

PER-CAPITA INCOME PAYMENTS TO INDIVIDUALS
IN THE SOUTHEAST, SELECTED YEARS

Year	Current Dollars	Dollars of 1947-49 Purchasing Power*	Ratio of Per-Capita Income to Rest of U. S.
1929	344	469	45
1930	279	391	41
1934	239	418	52
1940	322	538	50
1945	803	1044	62
1947	884	926	60
1952	1121	988	63

*Adjusted by use of Consumers Price Index.

Source: Derived from estimates of state income payments to individuals, U. S. Department of Commerce.

As would be expected under the conditions set forth and with no legal barriers to migration, labor migrated from the low income agricultural areas of the South toward more lucrative employment in the urban areas of the South as well as of other parts of the United States. Between 1930 and 1940, migration from the South was at a rate of less than one percent of the 1930 population, but between 1940 and 1950 Southerners left the South at the rate of 7 percent of the 1940 population.

Although many persons moved to urban areas between 1930 and 1950, in the latter year 60 percent of the population still lived in rural areas. However, many were no longer dependent on agriculture for income. Out of every 100 workers, only 23 worked in agriculture, forestry, or fishing, compared with 44 twenty years earlier. In other words, by 1950 labor had moved from low-productivity and low-income occupations to those of higher productivity and higher income until 76 percent of the workers were engaged in non-agricultural endeavors.

The effects on the region's agriculture were striking. Typical of the South is the Sixth Federal Reserve District, or the Atlanta District, where there were almost a fifth fewer people on farms in 1950 than in 1930. With farm labor less abundant, the type of production changed drastically. Eight million acres of cotton were harvested in 1950 instead of the 14 million harvested in 1920, but yields had increased from 184 to 262 pounds per acre. Cash receipts from livestock, which had been less than half as important as receipts from cotton in 1920, surpassed cotton in importance in 1950. Farm income, in dollars of constant purchasing power, increased a third, but because fewer persons were left on the farms to share it, per-capita income expanded about two-thirds. One indication of the growth in capital investment is the increase from 33,000 tractors in 1930 to 276,000 in 1950.[14]

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[14] A description of agricultural changes in the Atlanta Federal Reserve District is found in W. B. Davis, Sixth District Agriculture: Facilities, Output, Income, and Debt; Federal Reserve Bank of Atlanta (1953).

In passing, it may be well to point out that by the end of World War II, the so-called "revolution" in Southern agriculture was over. But by this time, agriculture had adapted itself to the changed market conditions and to the reduced labor supply with the result that per-capita farm income in general was above that of the prewar years. Total agricultural income, however, has not expanded further in the postwar period. But production practices have continued to change, and agriculture has contributed indirectly to income growth by permanently freeing labor to other types of productive activity.

As great or greater changes occurred in the structure of the South's non-agricultural economy. Non-agricultural sources of income had increased in relative importance from less than 80 percent of total income to about 90 percent. The growth in income from manufacturing, although exceeded by the growth in income from other sources, perhaps serves as the most evident illustration of the evolutionary changes accompanying increased private capital investment.

Manufacturing payrolls in 1952 in the Southeast were over five times as great as in 1929. The greater part of the changes in manufacturing, however, took place after 1939. The South's manufacturing, we have seen, was heavily concentrated in those types requiring low capital investment per worker such as textiles, lumber, and food processing. During the earlier part of the period of investment, new capital investment continued to flow toward these types of enterprises. Although data on actual capital expenditures are not available, employment figures for 1939 show that

in that part of the South included in the Atlanta Federal Reserve District these three major types of manufacturing were employing 60 percent of the manufacturing workers.

TABLE III

EMPLOYMENT BY TYPES IN 1939, 1947, and 1953
ATLANTA FEDERAL RESERVE DISTRICT

	Percent of Total			Percentage Change	
	1939	1947	1953	1939-47	1947-53
Apparel	8	7	9	+ 42	+ 50
Chemicals	6	7	8	+ 53	+ 16
Fabricated Metals	3	3	4	+ 71	+ 58
Food	11	12	12	+ 47	+ 8
Lumber & Wood Products	21	22	17	+ 46	- 14
Paper & Allied Products	4	4	5	+ 76	+ 51
Primary Metals	6	6	5	+ 56	0
Textiles	28	19	17	+ 18	- 2
Transportation Equipment	1	4	5	+306	+ 17
All Other	12	16	18	+ 65	+ 25
All Types	100	100	100	+ 49	+ 12

Source: 1939: U. S. Census of Manufactures; 1947 and 1953: U. S. Bureau of Labor Statistics.

The production program of World War II did not, as we shall see later, result in many lasting capital investments in Southern manufacturing. Nevertheless, both employment data for 1947 and investment data for the same year indicate a gradual shift toward manufacturing using more capital in relation to labor. According to the United States Census of Manufactures for 1947, two-fifths of the 410 million dollars spent for new manufacturing plant or equipment in the states included in the Atlanta

Federal Reserve District was in textiles, lumber, and food processing plants. There were, however, important expenditures made for chemical plants, pulp and paper mills, and primary and fabricated metals plants that require large amounts of invested capital per worker.

TABLE IV

EXPENDITURES FOR NEW PLANT AND EQUIPMENT
ATLANTA FEDERAL RESERVE DISTRICT

Type	Percent of Total Expenditures 1947	1952-53
Textiles & Apparel	14.0	4.7
Lumber & Wood Products	8.4	3.6
Food & Kindred Products	15.5	1.9
Chemicals & Petroleum Products	22.0	47.6
Primary & Fabricated Metals	9.9	13.0
Paper & Allied Products	14.3	8.8
Machinery	2.2	8.6
All Other	13.7	11.8
Total	100.0	100.0

Sources: 1947: Actual expenditures for new plant and equipment reported in U. S. Census of Manufactures.

1952-53: Announcements of plant expansions as tabulated by Federal Reserve Bank of Atlanta.

In the later part of the postwar period, investment in those types of manufacturing requiring large amounts of fixed capital per worker have predominated. Lacking official data on a regional basis, a tabulation of expenditures announced for the Atlanta Federal Reserve District states may be considered typical. Plans for plant expansions or new plants announced

in 1952 and 1953 indicate that less than 10 percent of the total $751,000,000 for such expenditures was to be made in textile, lumber, and food processing manufacturing. About half of the expenditures were to be made in chemicals and petroleum products plants and most of the remainder in pulp and paper, metals, machinery, and other types of manufacturing plants that use large amounts of fixed capital per worker. The effect of this new type of plant investment cannot yet be fully observed because all the new facilities have not yet come into production. Employment changes by type of manufacturing between 1947 and 1953, however, give some indication of the changed pattern of investment.

Measured by the number of workers employed, the South's two most important manufacturing industries, textiles and lumber, have contributed little or nothing to over-all industrial expansion in the postwar period. New textile plants erected in the postwar period resulted in no net addition to employment although they probably prevented employment of textile workers from declining as much as it did throughout the rest of the United States. In the case of lumber manufacturing, in the Atlanta Federal Reserve District 15 percent fewer persons were employed in that industry in 1953 than in 1947. Merely to replace the jobs lost in textiles and lumbering between 1947 and 1953 required new jobs equivalent to almost 10 percent of total manufacturing employment at the earlier date.

With income increasing, as has been noted, we would expect to find a greater proportion of the working population devoting its energies to what have sometimes been called the tertiary types of economic activities, such

as trade, services, construction, and government service. Such a shift has characterized Southern economic development. Between 1930 and 1950, the proportion of the working population engaged in activities other than agriculture, manufacturing, and mining increased from 39 percent of the total to 57 percent. These activities, in fact, have been of greater importance as a source of increased income than manufacturing itself although, of course, their growth may have resulted in part from the income arising out of manufacturing. (See Table V.)

IV

Removal of Barriers to Resource Adjustment

Evidence that income growth in the South has resulted from major shifts in resource use, most of them involving substantial capital investment, is impressive. This evidence, however, does not explain why similar changes did not occur before, nor what brought about the changes in the recent period of economic development. To answer these questions we must get behind the aggregate figures. It will be found that there were serious impediments or barriers to the resource adjustments required for raising income and that breaking down these barriers, in some cases over a course of many years, accounts to a major extent for the recent rapid economic development in the South.

These barriers to economic development may be conveniently grouped into four major categories. (1) There were the factors leading to immobility of labor. (2) There was a lack of entrepreneurial talent. (3) There was a deficiency of what has now become known as "social

TABLE V

INCOME PAYMENTS TO INDIVIDUALS IN THE SOUTHEAST
BY SOURCE

	Components as Percent of Totals					Percentage Change		Percent of Total Change
	1929	1946	1947	1950	1952	1929-52	1947-52	1947-52
Agricultural Income	21	15	16	13	12	+131	- 1	- .2
Manufacturing Payrolls	14	17	17	17	18	+411	+ 50	+20.5
Trade and Service Income	25	25	25	25	25	+318	+ 37	+22.8
Government Income Payments	9	22	21	21	20	+895	+ 63	+26.5
All Other Sources	31	21	25	25	25	+237	+ 55	+30.4
Total	100	100	100	100	100	+317	+ 42	100.0

Source: Derived from U. S. Department of Commerce estimates of income payments to individuals by states.

overhead capital." (4) Partly as a result of these conditions within the South but largely as a result of economic opportunities in other areas, the opportunity cost of investments in the South to capitalists in other areas prevented the flow of capital into the area. These major barriers will be discussed in more detail.

The chief factors that contributed to the immobility of labor in the South was the low level of general education and lack of industrial experience and the limited spread of the knowledge of improved agricultural techniques. As a rule, mobility of labor increases with a rising level of education. The reasons for this are obvious. Education itself brings with it a desire for self-improvement and an awareness of economic opportunities. But of equal importance is that economic opportunities in modern industry in general are open only to those who possess at least the rudimentary skills of writing and reading.

For many years, the South's general level of public education was notoriously low.[15] At the turn of the century, for example, only two-thirds of the children of school age were attending school, and then only for an average of two months out of each year. As a result, a large proportion of the working population, especially in the rural areas, lacked even the most elementary type of educational preparation. As late as

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[15]The data and the analysis that follow are taken principally from an article published by the writer, "Education as an Investment in Sixth District Economic Progress," MR, FRB Atlanta, (1946), pp. 93-97, and from an address delivered before the Southwide Education Conference of the Southern Association of Science and Industry, Asheville, North Carolina in 1947.

1920, the illiteracy rate in the South was twice that of the nation. This prevented not only the absorption of many workers into industry but also the application of improved techniques in agriculture.

Education in the South, as in other parts of the United States, is financed almost entirely by state and local governments. Since Southern states were hindered by lack of funds, it would have been understandable if they had kept the expenditures for public education to a minimum. On the contrary, however, Southerners shared the universal faith of most Americans in the benefits of public education. As a consequence, they taxed themselves more heavily in relation to their incomes and spent a larger proportion of their public revenues for education than the more wealthy states in other parts of the country.[16]

Educating a population is a slow process. By 1910, however, 70.3 percent of the Southern children between five and seven years of age were enrolled in school. In 1920 and 1930 the figures had increased to 77.5 and 82.3 percent, respectively. At present, the quality of Southern education is still below that of many other parts of the United States, but at least the minimum elementary and high school education is available for all, and practically all children of school age are attending school. The benefits of this investment in education, however, were not realized until

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[16] In 1929-30, for example, throughout the United States as a whole, $2.30 out of every $100 was spent for education; in the South, $2.70: Eli Ginzberg and D. W. Bray, The Uneducated, New York (1953), p. 180. See also C. H. Taber, A Decade of State Tax Revenues, MR, FRB Atlanta (1951), pp. 101-105.

about twenty-five years ago.[17] The result has been the removal of one of the chief factors contributing to the immobility of labor.

Considering the South's educational level as it was early in the century, the industrial development of that time had many points in its favor as a means of training workers in industrial discipline. Even today, the textile industry, for example, does not have high educational standards for its workers. Although the productivity of each worker was lower than in one using more capital, this industry trained many workers in industrial disciplines and equipped them with basic skills that could be transferred to more complex types of production.

Basically, lack of education, broadly defined, also contributed to the immobility of labor in agriculture since workers with little or no education could carry on only the traditional types of agriculture. The diffusion of agricultural knowledge that resulted in greater mobility of agricultural labor began early in this century.[18]

The Southern states, along with states in other parts of this nation, had set up land grant colleges of agriculture with Federal aid during the

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[17] Ginzberg, writing of present conditions, says, "The striking rise of the educational level in the South during the past several decades has made it possible for an industrialist establishing a plant below the Mason-Dixon Line to anticipate that his employees will be basically literate (op. cit., p. 136)....Employers are able to set rather high educational requirements and expect them to be met," p. 151.

[18] This summary of the development of the agricultural extension service was prepared by A. H. Kantner, Agricultural Economist, Federal Reserve Bank of Atlanta.

last half of the nineteenth century and initiated agricultural research. The impact of the boll weevil on cotton growing emphasized the need for carrying the results of the research to Southern farmers. Soon after the turn of the century, Seaman A. Knapp of the United States Department of Agriculture was sent to the South to establish demonstration farms in areas infested with the boll weevil, and, in turn, he sent agents to other parts of the South to teach farmers better practices. Private funds from the Rockefeller General Education Board were used to supplement government funds. The state agricultural colleges also began to hold local "institutes" and businessmen joined with farmers in setting up programs on a local or county basis.

The success of such programs led to pressure on Congress for funds. In 1914, under the Smith-Lever Act, Congress agreed to match grants made by states for county extension work. Since the formula set up for the distribution of funds took into account the greater rural population in various areas, Southern states received more in proportion to their total population than others. The programs carried on by the extension services expanded over the years, with the total appropriation increasing from about $1,000,000 in 1914 to $34,000,000 in 1952.

How much the program, essentially one of education, has broken down barriers to agricultural adjustment in the South cannot be over-emphasized. One or more trained agricultural workers is located in practically every county of each Southern state. These workers bring the farmers the best advice on agricultural practices, together with the home demonstration

agents who carry on a program to improve family living. In that part of the South included in the area served by the Atlanta Federal Reserve Bank alone, there were about 1,500 agricultural extension workers in 1935. By 1950 the number had increased to over 2,000.

Lack of entrepreneurial talent within the South also can be traced to events occurring well before the beginning of the twentieth century. The casualties suffered by the Confederate States during the Civil War were some of the heaviest war casualties suffered by any nation. Moreover, the toll was particularly heavy on the educated classes. The South was thus deprived for many years of the leaders who perhaps would have developed the region quite rapidly under different circumstances. This condition was perpetuated for many years.

For one thing, institutions of higher learning suffered from deficiencies similar to those of public schools. And even if a young man did manage to secure sufficient training, he was likely to turn toward other areas that offered better opportunities for his talents. For another thing, the South was largely excluded, because ports of entry were in other areas, from the heavy immigration of Europeans that brought the northern and western states not only a supply of unskilled labor but a potential managerial class as well.

Many of the events that have improved the mobility of Southern labor also have helped remove the barriers to resource adjustment resulting from a lack of entrepreneurial or managerial talent. Public funds went toward the support of state colleges and universities and particularly

into their scientific and technical schools. Experience was acquired during the slow period of industrial growth and especially during the period of World War II. The war activity also attracted professional and managerial personnel to the South from other parts of the United States, and many of these persons stayed in the South after the war ended. Indeed, the relative scarcity of professionally trained persons had begun to draw them to the South even before the war. It is estimated that from 1935 through 1940 there was a net immigration of persons with four or more years of college training amounting to almost 6 percent in contrast to the total net migration from the region.[19]

In the most recent period of industrial development, the greater part of industrial investments has been made by large national concerns. This means that in a sense private industry has carried on its own "Point IV" program for the South. The branch plants had access to the managerial experience and scientific knowledge of the parent company. It has not been uncommon during the initial stages of the opening of new Southern plants for a body of skilled and technically trained workers to be transferred from plants in other areas to train local workers.

Although an area's educational level and managerial class might be considered part of its social overhead capital, these elements have been considered separately because of their great importance to Southern

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[19] U. S. Department of Commerce, Regional Trends in the United States Economy, Washington (1951), p. 109.

economic development. But in addition to these barriers to resource adjustment, the South for many years lacked other types of social capital that create what are sometimes called "external economics," such as transportation facilities, municipal services, electric power, and the other services essential to the operation of a modern economy. A large part of this deficiency, however, was overcome prior to the recent period of economic development.

Early in its history the South had made heavy investments in railroads and by 1860 had almost one-third of the total mileage of the railroads in the nation. After the Civil War, however, the South lagged in the development of transportation facilities. A renewed effort to improve these facilities began with the age of motor transportation when in the 1920's most of the Southern state governments embarked on extensive programs of highway building. Capital outlays by state governments, including heavy expenditures for highways, were higher in the South in relation to total expenditures than elsewhere. Much of the highway building was financed by borrowing, which was later to prove embarrassing to the state governments. Nevertheless, as a result of the program, by 1930 the South had a network of surfaced highways equal in mileage in relation to its land area to those outside the South, if not equal in quality.[20]

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[20] Hoover and Ratchford, op. cit., pp. 208 ff. See also, C. T. Taylor, "Population Increase, Municipal Outlays and Debt," Southern Economic Journal, IX (1943), p. 333.

Establishment of manufacturing in the South during the period of early industrialization involved not only erecting and equipping plants, but it also generally meant providing housing, utilities, and services ordinarily provided by municipalities. Indeed, the manufacturer often had to provide services that ordinarily would be given by private enterprises such as retail establishments. Thus, the mill village was a common adjunct to an early Southern textile plant. Although it was later contended that the establishment of these mill villages was merely a means by which management could control labor, it would probably have been impossible for manufacturing plants to operate in the early stages of development without them.

Over the years these conditions have changed. During the 1920's, when the state governments were building highways, municipalities were also borrowing heavily to provide new streets, water systems, and other facilities. Now, the manufacturer takes for granted that these services will be supplied.

The South has numerous suitable sites for hydro-electric power plants, and between 1921 and 1930 installed generated capacity increased at about three times the rate of that in the rest of the country. This was before the inauguration of the Tennessee Valley Authority by the Federal Government in the early 1930's. Even then electric power rates averaged lower than in other parts of the United States. TVA policy had, of course, direct benefits in the form of lower rates and increased power in that part of the South it served directly. TVA and government power developments,

however, even now provide only a third of the electric power consumed in the entire South. The remaining power development has been carried on by privately owned public utilities. There is little doubt, however, that TVA policies stimulated such private developments.

There was, however, another barrier to the economic growth of the South, which resulted from factors originating outside the area. Even though capital apparently yielded a higher return in the South than in the more economically mature areas of the United States, even more promising opportunities to private investors began to open up elsewhere. In the later part of the nineteenth and the early part of the twentieth century, the opening of the West, the building of the great transcontinental railroads, and other ventures offered prospects of high profits. Even in the more developed northeastern section of the United States, opportunities for certain types of industrial investment were great. The virgin forests of the Pacific northwest and the unexploited natural resources of other areas surpassed those of the South in quality under the existing state of technology. Although cattle might be raised more profitably in the South than cotton, for example, greater returns rewarded the potential investor in cattle raising in other parts of the United States. These and other conditions meant that if the investor weighed expected returns from his investments in the South against the returns he might secure elsewhere, he found the opportunity costs were too high.

Beginning with the period of World War II and accelerating during the postwar period, the opportunity cost of capital investment in the

South declined also largely because of factors originating outside the region. For one thing, the continued growth of the American economy meant an ever-increasing demand for additional raw materials and labor to supply goods to meet the demands of the market. The seemingly insatiable worldwide demand for paper, for example, soon directed the search for raw materials from the forests of the North to those of the South. Scientific research, by making possible the use of Southern pine to make paper, increased the value of a resource heretofore having only marginal value and presented the only opportunity for expanding the production of pulp and paper in the United States.

Other illustrations show how the expanded needs of the American economy, together with improved scientific and technological knowledge, increased the value of Southern resources. The natural gas and petroleum reserves in the South became more valuable with the development of the petrochemical industry. Investment opportunities in other types of chemical plants became more tempting as the growing American economy exhausted the available industrial water supply in other areas. Moreover, with industrial development in other areas reaching greater maturity, opportunities for capital investment became relatively less attractive there.

These and similar factors combined to reduce opportunity costs of making private investment in the South in comparison with investment in many other parts of the United States. But in addition, another type of industrial opportunity was developing in the area that private investors were quick to recognize--the expanding Southern market.

From the standpoint of economic development, the most lasting effect of World War II upon the Southern economy was the impetus it gave to a growth in purchasing power. Although more than $4,000,000,000 were invested in industrial plants in the South during World War II, most of this investment had little value for producing goods to satisfy the markets of the postwar period. Industrial expansion during World War II came late to the South and only after capacity and manpower had been exhausted in the more industrialized regions. Moreover, it was concentrated in such types of manufacturing as munitions, shipyards, and aircraft factories. Success in converting these plants to peacetime use was limited.[21] The payrolls resulting from the erection of the plants and their operations, however, brought a dramatic growth in personal income.

Of even more importance in increasing purchasing power during the war period were expenditures made for military training. Because winters of the South were short and mild and military training was possible there for longer periods of the year than elsewhere, military training establishments were numerous in the area. Expenditures for construction and maintenance, payrolls of civilian and military personnel, and allowances to dependents all drew funds from the Federal Treasury to the South.

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[21] F. L. Deming and W. A. Stein, Disposal of Southern War Plants, Washington, 1949. This study was prepared at the Federal Reserve Bank of St. Louis for the Committee of the South of the National Planning Association on the basis of studies made by the Federal Reserve Banks of Richmond, Atlanta, St. Louis, and Dallas.

No estimate of the total amount of Federal funds expended in the South during the war is available, but it is obvious that it vastly exceeded the amount of funds raised there through either taxing or borrowing. Because of progressive taxation, a larger proportion of tax funds in relation to the population came from the more wealthy sections of the country and the great concentration of wealth and financial institutions in other sections concentrated borrowing there.

In the early years after World War II, a study made by McLaughlin and Robock showed that the most important factor in inducing investment in manufacturing in the South was the expanding Southern market,[22] and the high proportion of total investments made in these years in consumer goods industries corroborates this conclusion. Distributors of consumer goods found their sales in Southern markets expanding very rapidly during and after World War II. Many firms thus found it profitable to locate additions to their capacity in the area where their sales were growing. Prior to the war, the South, of course, had manufactured consumer goods, but mostly for export to other sections. It now began to produce for itself.

Thus, what has often been decried as one of the chief handicaps to economic development in an underdeveloped area--a high marginal propensity to consume--in the case of the South was one of the principal factors

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[22] McLaughlin and Robock, Why Industry Moves South, Washington (1949), pp. 26, 32.

reducing opportunity costs and attracting investments to the area. To a major degree during the war years, and almost completely after that, consumers in the South were free to spend their increased incomes as they chose and no legal barriers prevented the importation of the kind of goods they wanted into the region. The resulting capital investment to meet this demand probably exceeded any investment that might have been made out of the increased incomes even if the marginal propensity to save had been higher and savings had been channeled solely into Southern investments. Moreover, the new investment attracted by the market gave jobs to many Southerners, which meant increased income.

The preceding discussion of the barriers to the transfer of the factors of production from less to more productive uses within the South and to the flow of capital from other areas could be greatly elaborated. The details given, however, indicate in general that governmental action has been confined to the channels ordinarily considered consistent with the proper functions of government in a private capitalistic economy. Betterment of education, highways, and municipal services were all financed out of the limited resources of the South.

The improvements that broke down some of the barriers contributing to immobility of labor and capital were not initiated with the primary goal of promoting economic development. Southerners shared with persons in other parts of their country many of the same ambitions, ideals, and wants. The "demonstration effect" of the better quality of public service in other parts of the United States made Southerners willing to tax

themselves heavily in proportion to their incomes so that they could invest in schools, roads, and other civic improvements.

Had it not been for the impetus given to industrial expansion by the growth of the American economy during the war and postwar period, the rate of economic development in the South certainly would have been much less than it was despite the major investment that had been made in social-overhead capital. But, had the character of the South's labor force been the same as it was during the first part of the century and had the level of municipal services remained deficient, it is extremely unlikely that the South's participation in this general economic growth would have been as great as it was. It was fortunate for the South's economic development that the building up of social-overhead capital had already begun to break down the barriers to the necessary resource adjustments so that the South could participate in the general economic expansion.

V

Sources of Capital Investment

It may be well at this point to give attention to the sources of capital invested in the South during its most recent period of economic expansion. In passing, it has been indicated that the major source of funds for industrial expansion came from outside the South, although investment in social-overhead capital came from Southern sources. Because the absence of legal barriers to the free flow of funds between regions in the United States also prevents the amassing of statistics to measure the flow, however, we shall have to rely upon indirect evidence.

To some extent, private capital investments have been derived from the South's savings. Increased savings accompanied the growth in income, but as would be expected, the growth of Southern savings has been less in relation to income growth in the South than in other parts of the country because of the higher marginal propensity to consume.[23] Nevertheless, a somewhat greater proportion of the South's capital investments are now being financed out of savings than was formerly the case.

A study made of the underwriting of state and local government securities in the states located in the Atlanta Federal Reserve District showed, for example, that during 1949 and 1950 most of the small security issues were being underwritten entirely by Southern investment dealers, whereas in 1923-24 even small issues were underwritten by investment firms located outside the South. Moreover, Southern underwriters were participating more and more in the underwriting of major issues. In the field of corporate financing there have been instances when substantial issues of new securities have been launched under the auspices of Southern financial institutions. However, most of the large security issues have continued to be marketed through the large investment centers in other areas.

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[23] There is a substantial amount of indirect evidence that the propensity to consume of Southerners is higher, as would be expected on the basis of lower incomes, than in other parts of the United States. See for example, B. A. Wapensky, "A Decade of Consumer Spending," MR, FRB Atlanta, (1952), pp. 45-47; C. T. Taylor, "District Long-Term Personal Savings," op. cit. (1951), p. 90, and "Voluntary Savings and Consumer Behavior," Southern Economic Journal, X (1944), pp. 239-245.

Between 1930 and 1952, deposits of commercial banks in the South increased more than 450 percent, whereas deposits at banks in the rest of the United States expanded at a rate of about 230 percent. Savings held by Southerners in the form of savings deposits, U. S. savings bonds, shares in savings and loan associations, life insurance equities, and the like also increased at substantially higher rates than elsewhere. Despite the higher comparative rates of growth, however, financial resources were entirely inadequate to take care of the investment needs of such a rapidly developing economy.

The financial resources of the South's commercial banks have been used chiefly to satisfy the working capital needs of business and agriculture. When commercial banks have provided long-term credit, it has been chiefly for residential mortgage financing, although there are certain exceptions. Term lending continues to be much less common at commercial banks in the South than elsewhere in the United States although some term loans have been made to small business concerns--most of them trade and service enterprises.

In the case of agriculture, commercial banks provide approximately 60 percent of the production credit. Of late, however, bankers have made loans with longer maturities in order to assist in the shift from the production of cotton and other cash crops to enterprises requiring more capital investment, such as livestock. Commercial banks have also helped finance the purchase of farm machinery.

Individual savings in the form of savings and loan shares have, of course, been almost entirely used to finance residential building. Insofar as savings in the form of life insurance equities have been entrusted to Southern companies, they have also been directed toward residential mortgage financing. The greater part of savings in the form of life insurance equities continues to be controlled by insurance companies located in financial centers outside the South.

Southern savings, however, have not been sufficient to finance even the major part of the mortgage financing of the residential building in the postwar period.[24] Large national insurance companies have provided more of the mortgage funds for residential construction in the South than any other type of financial institution.[25] Furthermore, about a fifth of the farm mortgage debt in that part of the South included in the Atlanta Federal Reserve District is held by national insurance companies.

Savings accumulated by individuals living in the South have been used to finance small enterprises developed within that area although the exact amount or extent is unknown. In recent studies made by the Federal Reserve

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[24] "A notable feature of the construction done in the Southeast was that its share of total national new construction (19 percent) put in place in the 10 years 1940-49 inclusive, exceeded by a fairly wide margin its share (14 percent) of the 10-year aggregate increase of the nation's income above the 1939 total. This suggests that capital was flowing into the Southeast from other regions," U. S. Department of Commerce, Regional Trends in the U. S. Economy, Washington (1951), p. 34.

[25] C. T. Taylor, "Structure of District Mortgage Holdings," MR, FRB Atlanta, (1951), pp. 89-93.

Bank of Atlanta it was discovered that this was apparently the case in the development of the South's rapidly growing agricultural equipment industry which is composed of many small units started in the postwar period. Such has also been the case in the development of small apparel plants in the South during the same period.[26]

But in the case of the new and expanded manufacturing plants involving large amounts of capital per worker and consequently large investments, it is obvious that most of the capital investment came from outside the South. Practically all of these plants have been erected as branch plants of large corporations. Except to the extent that Southerners were stockholders in these corporations, the investment has been "foreign" investment.

It is sometimes believed by those concerned with the economic development of a backward area that large-scale foreign investment will eventually lead to difficulties because repayment of loans and interest and payment of profits to the foreign capitalists will constitute such a drain on the area's resources that it will create balance of payments difficulties. During the period under consideration, certainly, continued investment and the inflow of funds from other sources have been sufficient to offset any such financial drains upon the South. Since there are no legal barriers to the movement of funds within the United

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[26] B. A. Wapensky, "From the Factory to the Farm, An Appraisal of the Farm Equipment Industry," MR, FRB Atlanta, (August 1953), pp. 3-6, and "Apparel Manufacturing in Dixie," op. cit., (February 1954) pp. 3-6.

States, a reversal of these circumstances would lead to a balancing of accounts through a reduction in Southern income rather than to a formal "dollar gap."

However, there seems to be grounds for not expecting such difficulties to arise any more than they did for the United States as a whole after the period of heavy foreign investment prior to World War II. The private investment being made by "foreign capital" in the South is being made in productive enterprises. Unless the judgment of the investors is wrong, the resulting increased productivity should be more than sufficient to offset any possible drain from remittances.

At the moment, two other major sources of income contribute to the maintenance of a flow of funds toward the South. One of these has been the development of tourism not only in Florida but in other Southern states as well. Concrete evidence of how this activity brings funds into the South is the extent to which the net inflow of currency of other Federal Reserve Banks adds to the reserves of the Federal Reserve Bank of Atlanta greatly exceeds the value of the notes of the Atlanta Bank presented for redemption outside the Atlanta District.

Another major factor directing a flow of funds into the South stems from the pattern of Federal taxation and expenditures. As Nurske has pointed out, expenditures for public works and welfare made by a central government are likely to be made on the basis of the population of the different areas, whereas taxation varies with the income of the population.[27]

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[27]Ragnar Nurske, Problems of Capital Formation in Underdeveloped Countries, New York (1953), pp. 77-79.

Consequently, there is a tendency for the automatic transfer of public funds from the richer to the poorer regions within a country. This transfer has undoubtedly contributed to the increase in purchasing power of Southerners, although it has been of minor importance in creating permanent capital investment. The inflow of government funds into the region has had a tendency to offset to some extent the flow of funds out of the region because of commercial and financial transactions, according to analyses of the inter-District transfer of payments through the Southern Federal Reserve Banks.[28]

The importance of government payrolls and transfer payments as a source of income in the South does not result from a deliberate policy of economic development, but rather from the comparatively lower level of income from other sources in the South which increases the relative importance of government expenditures. As total income expands, the relative importance of government payments to total income will probably diminish. Moreover, the ability of the Southern economy to adapt itself to reduced Federal Government expenditures was demonstrated immediately after the end of World War II.

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[28]Although, as indicated previously, no completely satisfactory data on the inter-regional movement of funds exist, the balance of payments for the Richmond Federal Reserve District has been derived indirectly by J. Dewey Daane in The Fifth Federal Reserve District, A Study in Regional Economics, Doctoral Dissertation, Harvard University, Cambridge (1948). A somewhat different approach has been used by the research staff of the Federal Reserve Bank of St. Louis to trace inter-regional flows through the use of input-output analysis and Inter-District Settlement Fund transfers.

The omission of an extended discussion of the role of the regional central banks in the economic development of the South shows the minor role they have played as initiating agents in Southern economic development. As part of the Federal Reserve System, the Federal Reserve Banks serving the South could take no action specifically aimed at fostering economic development in their own Districts involving monetary and credit policy decisions contrary to those of the System as a whole. Their role as regional banks has been to facilitate the flow of funds and the operation of sound banking systems in their areas. Their principal contribution to the economy of the South has been to facilitate the adjustments. In this respect, they have fallen into the role that would be assigned them under the assumptions of neo-classical theory.

VI

Artificial Stimulants to Economic Growth

The thesis of this paper has been that the economic development of the South resulted from the major shifts in resource use. Observation of what has taken place in the South provides ample basis for this conclusion. There are, however, many people in the South who do not share that view or share it only to a minor degree. They would, perhaps, wish to take more direct action to promote economic development. Fortunately, we believe, the political organization of the region has limited their actions. When they have undertaken to promote economic development by artificial stimulus, the results have been minor as the following will illustrate.

The period of 1932 through approximately 1940 was one in which there was a great deal of discussion of how "planning" might solve the South's problems of economic development. During the early years of the Roosevelt administration, numerous unofficial planning agencies were created in the hope that voluntary planning might provide a substitute for the regional governmental unity needed to execute economic programs that was absent. Federal grants stimulated the development of these agencies, and most states set up state planning boards. One regional Southern planning unit was organized, and some reports were drawn up on a regional basis.[29]

The planning agencies were soon confronted by their inability to execute their plans by the use of the existing powers of Federal and state governments. The Federal Government's agricultural adjustment and soil conservation programs at first seemed to provide models for indirect controls, but the program developed into primarily a price-support program. The TVA was set up as a model of total resource-use planning but with wartime induced demands for electric power, emphasis shifted to electric power production. Attempts at over-all economic planning have been completely abandoned since the end of World War II. Since Federal funds were no longer available to finance planning agencies, many of them were disbanded. Individual state planning boards have largely become promotional agencies.[30] Many of the things that the planners felt desirable occurred, but not as a result of actions that they recommended.

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[29]For example see, U. S. National Resources Planning Board, Regional Planning, Part XI, The Southeast, Washington (1942).

[30]For a description of the activities of such agencies see Albert Lepawsky, State Planning and Economic Development in the South, Washington, (1949).

Attempts to offer specific inducements have been made by a number of states and municipalities, but most students have concluded that the result of such inducements has been minor. In the state of Mississippi, the state government has authorized municipalities to issue tax exempt bonds in order to finance the erection of manufacturing plants in their communities. These plants are leased to manufacturing firms and it is hoped that the rentals will amortize the bonds.[31] The final results of this program will not be known, of course, for several years. So far the program has attracted principally the types of manufacturing plants that use little fixed capital investment, such as apparel plants. Interestingly enough, the rate of growth in the apparel industry in that state has also been lower than in some Southern states offering no special inducements. The wisdom of such policies is severely questioned by many students of Southern economic development and they have not been widely adopted throughout the South.

Granting tax exemptions in various forms as a special inducement to new industries is authorized by seven of the state governments in the South. A study recently made of the experience of the tax exemption program in Louisiana, where it is administered by a central authority, concludes that its effects have been extremely limited.[32] Out of the total

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[31] A description of the early experience with this plan is found in E. J. Hopkins, Mississippi BAWI Plan, Federal Reserve Bank of Atlanta (1944).

[32] W. D. Ross, Louisiana's Industrial Tax Exemption Program, Louisiana State University, Baton Rouge, (1953), p. 47.

of $355,000,000 of new investments made in the state between 1946 and 1950, only $25,000,000 of it could be attributed to the existence of the tax exemption laws.

Other types of special inducements have come from unofficial community action. Under one type of program, local businessmen have organized Community Development Corporations.[33] Most of these corporations have been created in small communities for the purpose of erecting plant facilities to be leased to manufacturing concerns. The corporation expects to recover its investment, either by sale of the properties to the manufacturing concern over a period or by rentals. The funds recovered will be further invested in new plants. The stockholders of a corporation do not expect to receive any more than normal direct returns on their investment, but since they are businessmen in the communities, they expect to receive indirect benefits from the expansion of payrolls. This program has been especially advocated as a help to the development of small manufacturing concerns which often have difficulty in securing capital. Although important to many local communities, the overall effect of this program has been comparatively small.

Other types of inducements characteristic of economic development in the South may perhaps be classified under the general heading of "persuasion."

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[33] For early experience see, E. J. Hopkins, Louisville Industrial Foundations, Federal Reserve Bank of Atlanta (1944) and C. H. Donovan, "The Spread of Development Corporations," MR, FRB Atlanta, (1946), pp. 105-109.

Practically all Southern states have promotional agencies financed out of state taxes. Many of these organizations as well as local Chambers of Commerce carry on advertising programs in national magazines and newspapers, pointing out the advantages of industrial locations in their areas. The net benefit of such advertising programs is doubtful because the decision to invest is not ordinarily based on the same motives that induce consumers to purchase goods. Perhaps more important have been the programs of state planning boards and other bodies who have provided the information on physical characteristics of the area, transportation, raw materials, community facilities, and labor supply, that is required in reaching a decision to invest. Practically all large public utilities as well as railroads provide this type of service. At the most, such persuasive activities have facilitated the making of decisions that were based on economic factors.

VII

Implications of Southern Economic Development

The economic history of any region or country is more complex than even the most elaborate economic model. Consequently, economic development in the South has not conformed perfectly to the assumptions of neoclassical theory. In broad terms, however, it has followed that pattern. The pattern of growth was so strong that although the events of World War II may have accelerated growth it is still possible to discern the general pattern in the South's economic history.

Seemingly, the rate of development and income growth has been particularly rapid in the period since the beginning of World War II. Yet we have seen that changes making that rapid rate of growth possible started many years before. It may turn out that after all, the South's experience provides no clue to a method for rapid economic development of an underdeveloped area that omits the painful and slow steps that lay the necessary foundations for growth.

This paper has described a particular type of economic development--the economic development of the South. In few, if any, underdeveloped areas of the world are the circumstances duplicated under which this development occurred. Few underdeveloped areas have as wide a free market open to them as does the South, nor do they have machinery and institutions for the free inter-change of goods, capital, and labor that exists between the South and the rest of the United States. Because of the political structure of the United States, a program to foster economic development by governmental direction and control through the use of the measures often advocated for promoting economic development was impossible in the South and the development, by and large, depended upon the actions of the forces of the market. The experience of the South suggests that its economic development would have been hindered rather than promoted had these governmental powers existed and been exercised. It suggests that some of the difficulties of economic development in other underdeveloped areas may perhaps arise from too much rather than too little control.

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February 23, 1954