THE MULTIPLIER IN UNDERDEVELOPED COUNTRIES.

It has become an acknowledged understanding that the multiplier is the relationship that, upon the base of the marginal propensity to consume, is established between an increase in investment and the subsequent increase in income, output and employment.

Historically the multiplier was closely related to the cumulative effects of capital formation. The problem was to determine how much an increase in investment would affect an increase in output. The first attemp to solve this problem was made by the german N. Johannsen, but the discussion took a more scientific basis since R.F. Kahn's famous article in 1931. (1) There the author wished determined the relationship between a public works program and the subsequent increase on the level of employment. He tried to find a mathematical formula for this relationsip. Kahn's article is built upon several implicit or explicit assumptions (nine, according to Hegeland (2))These same assumptions were taken up by Keynes, with the exception of one. For while Kahn considered that it is possible to determine the level of income only when the multiplier is smaller than one as an hypothesis, Keynes took this to be a "normal psychological law". In this respect it is necessary to point out, that if the marginal propensity to consume is greater than one, this does not mean that the <u>theory</u> of the multiplier is not valid; it only means that the <u>formula</u> of the multiplier does not work.

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(1) R.F. Kahn. The relation of home-investment to unemployment. Economic Journal, June, 1931.
(2) Hugo Hegeland. The Multiplier Theory. Lund, 1954. Pages 30 and ff.

This theory taken by Keynes in his General Theory, was applied not only to the relationship between investment and national income in highly developed economies, but also to the underdeveloped ones. The Keynesian model of the multiplier has been applied automatically to the underdevelopes countries without seeing that the economic ans social conditions are completely different. Thus, it is not unusual to read that in the underdeveloped countries the multiplier is very high because they have also a very high marginal propensity to consume. Following this line of reasoning Keynes affirms: "This conclusion, however, would overlook the distinction between the effects of the marginal propensity to consume and those of the average propensity to consume. For whilst a high marginal propensity to consume involves a larger proportionate effect from a given percentage change in investment, the absolute effect will, nevertheless, be small if the average propensity to consume is also high." (1)

In other words, since the underdeveloped countries have a high marginal propensity to consume the goal of full employment can be easily reached with a small increase in investment. But as the average propensity to consume is also higher than those of the developed countries, the rate of investment is smaller in the underdeveloped ones. And this, leads us to the conclusion that the economy of the poorer countries is more stable. "Highly developed countries, on the other hand, may have a relatively low average propensity to consume. Such a situation permits rather

(1) J.M. Keynes. General Theory of Employment, Interest and Money. Harcourt. 1936. Page 125.

wide fluctuations in employment." (1) In order to analyse this statement it is necessary to realize that the multiplier "was born" during the great depression and in highly developed countries. It was, perhaps, the right answer to the question of what would happen if the government begins a public works program. But the conditions are quite different among "submerged mankind", to use Myrdal's expression.

After having pointed out this important distinction two questions come to mind: a) is investment the crucial factor in the underdeveloped countries, or is there another factor more important than investment at play? and b) once the crucial factor, whatever it may be, comes into play, are the secondary, terciary, etc. effects going to operate according the Keynesian theory?

Let us considerer this two questions separately.

a) The crucial factor in underdeveloped countries.

According to the Keynesian theory the crucial factor is investment; that is the autonomous element. But generally "the autonomous element in the underdeveloped economies is constituted by the exports, and only to a secondary degree by investments." (2) This situation means instability because the gross national product is supported by the exports, and, in a last instance, by the level of economic activity in the developed countries which

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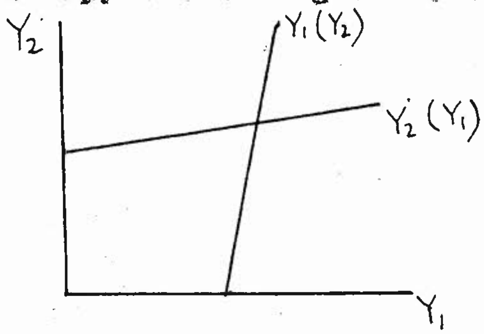
(1) Alvin Hansen. A Guide to Keynes. Paperback ed. 1959. Page 99.
(2) Osvaldo Sunkel. ¿Cuál es la utilidad práctica de la Teoría del Multiplicador? El Trimestre Económico. 1957. Vol. XXIV. Page 270.

are the main market for those exports. If we considerer the percentage of the gross national product which is dedicated to gross national investment between, for instance, the USA and Chile we can see that the first invests 21.0% of its GNP and the latter only 10.2%. At the same time, Chilean exports represent 23.9% of all its disposables goods and services. From this 23.9%, 57.9% is bought by USA, and 82% by USA and European countries. Thus, it is clear that the Chilean economy depends not upon investment but rather upon exports. "In the underdeveloped countries investment forms only a small proportion of the gross national product. Fluctiations in private investment cannot therefore affect the level of economic activity to a large extent. Nor is this likely to be a short fall in efective demand due to "over-savings". For these reasons, exports are a more significant determinant of the level of economic activity than investment. Especially in underdeveloped export economies, esports play the same role as investment in more advanced economies in creating instability." (1)

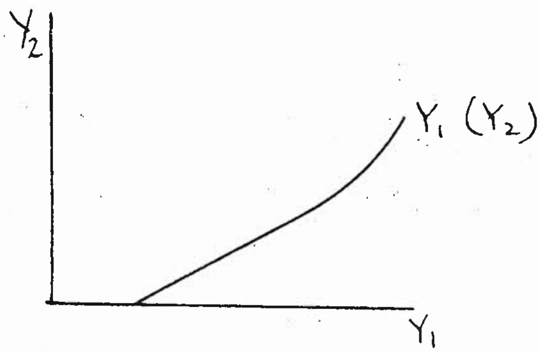
The instability of the economies of the underdeveloped countries is a well known fact. (2) But at the same time, we are not aware of any study that tries to give a formula for the analysis of the degree of dependance. There are several studies about foreign trade multiplier but all of them have very unrealistic assumptions. For instance, "home investment is entirely un-

(1) Raja J. Chelliah. Fiscal Policy in Underdeveloped Countries. George and Unwin. 1960. Page 34.
(2) See, for instance,"Measures for Economic Development of Underdeveloped countries." United Nations. 1951. Page 5. "Taxes and Fiscal Policy in Underdeveloped Countries." United Nations. 1954. Page 11.

affected by the changes in foreign trade" (1) On the other hand Rommey Robinson postulates that the level of income in one country is determines, to a degree, by the level of income in another, and vice versa. (2) Now, Robinson may be correct when his assumptions are taken into account in the consideration of highly developed countries, but that is not the case when a developed country and an underdeveloped are in question. Robinson says that income in country 1 depends on the income in country 2, and vice versa, as it appears in figure A. (3)



A



B

However it must be realized that when one highly developed and another underdeveloped country are compared the income of the developed country is autonomously determined, and the income of the underdeveloped depends upon the level of income in the developed one. Moreover, the fluctuations in income in the developed country affect the income of the underdeveloped in a direct increasing porportion, according to multiplier effect. If country 2 is developed and 1 underdeveloped, the only curve

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(1) Fritz Machlup. "International Trade and the National Income Multiplier." The Blakiston Co. 1943. Page 19.
(2) Romney Robinson. "A graphical analysis of the foreign trade multiplier." Economic Journal. 1952. Vol. LXII.
(3) Ibid, p. 548.

that we can plot in the figure is that one which indicates the influence of country 2 upon country 1, e.g. in figure B.

In conclusion, we can say that in the underdeveloped countries the crucial factor is exports, and not investment. Therefore underdeveloped countries do not enjoy economic stability, as the exponents of the Keynesian theory would have us believe. When exports is seen as the crucial factor we come nearer to reality, since underdeveloped countries have a very unstable eco- nomy due to fluctuations in prices and demand of their exports.

b) Real and nominal multiplier.

One of the most important considerations in the Keynesian theory is full employment. Therefore, during a depression when there is unemployment and idle productive capacity, in order to fight the depression there must be an increase in investment which makes possible a real increase in income, output and employment. However, deficit spending can produce the same result. In this case the multiplier means an increase in the real national income. Only when full employment is reached, there begins to appear inflationary pressures, since the supply curve looses its elasticity. But, if at the moment of investment or before reaching full employment, the supply curve was inelastic, the multiplier will effect an increase of the national income in a nominal sense, that is, the multiplier will produce inflation. This last result, is the most usual situation in the underdeveloped countries. The causes for it are several.

In the first place in the underdeveloped countries "the limiting factor is capital and it is the disposable amount of this factor that determines the posibilities of employment for the labor force." (1) In other words, full employment is determined by the most scarce factor, and in those countries this factor is not the labot force but the capital. Then the poor countries can have all their productive capacity in use, but at the same time the country may have uemployment. In this connection the problem of "disguised unemployment" (2) is to be considered also. It is possible that in the Keynesian sense a country seemingly enjoying full employment may actually suffering from "disguised unemployment". In this situation it is very difficult for the secondary, terciary, etc. effects of the multuplier to work in respect to the employment because workers under "desguised unemployment" "are not really involuntarily unemployed in the Keynesian sense." (3) Therefore the multiplier does not apply to them, since it operates only in cases of involuntary unemployment.

Secondly, the characteristic inelasticity of agriculture, at least in a short period, is to be considered. In a poor country a great percentage of the increase in the income is dedicate to increase the demand for foods and if the supply is inelastic,

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(1) Sunkel, op. cit. p.271
(2)"The disguised unemployment are those persons who works on their own account and who numerous relatively to the resources with which they work, that if a number of them were withdrawn for work in other sectors of the economy, the total output of the sector from which they were withdrawn would not be disminished even though no significant reorganization occurred in this sector, and no significant substitution of capital." Nat. Un. "Measures for..." op.cit., p. 7.
(3)V.K.R.V. Rao "Investment, Income and the Multiplier in an Underdeveloped Economy" Indian Ec. Rev. 1952. Vol. I, p. 63.

inflation begins.

Thirdly "the more inequal the distribution [of income] is, the more difficult it will be to forecast the total effect of a given change in income, since there are many possibilities of a large variety of different numerical values of the average marginal propensity to consume." (1) And one of the characteristics of the underdeveloped world is the very bad distribution of income which means that in the short run the supply curve is going to be inelastic and, again, inflation begins.

Lastly, if the capital is the limiting factor we may assume that the multiplier will work in real terms until the full use of the capital factor is reached. Until that point there is an increase in the real national income, output and employment. After that point, inflationary pressures appear. But usually in underdeveloped countries capital is not being used fully, therefore there is inflation before that point is reached. In Chile, for instance, during 1958 there was an inflation of, about 35%, unemployment runned at about 10% and the factoties were producing only at the 75% of their full productive capacity. This situation which Keynesian theory thinks impossible, can be explained according to Sunkel's article by the following reasons:

1) An adequate supply in some inputs for production is not steady. Thus, bottlenecks are formed. In a developed country bottlenecks are no problem. "As a rule, the existance of bottlenecks must be of very little importance during a depression and

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(1) Hegeland. Op. cit., p. 111.

the early phases of the upswing." (1) But in an underdeveloped country this is a structural problem: imports are not enough for the needs of industry; some basic sectors, like transportation, are in a bad position compared with industry. Even the supply of internal raw materials, specially agricultural, is inelastic. "The conclusion which emerges is that the existence and persistance of bottlenecks even in a small part of an economy will lead to significant increases in the general prive level..." (2) and the rise of the prices may begin before full use of capital is reached.

2) Another factor which bars the full use of capital is " the conditions of imperfect competition that prevail in the underdeveloped economies." (3) Industry tries to augment its profits by raising the price and restricting the production and then does not use its full productive capacity. This situation is more usual in the underdeveloped countries than in the advanced countries due to the low purchasing power of the population which facilitates the control of the market by very few enterprises. This imperfect competition is found to a degree, in Chile where 70.6% of all the capital invested by the corporations belongs to eleven economic groups, which in turn have interlocking directories.

3) The shortage of skilled labor impedes many industries the full use of their productive capacity.

In view of this presentation we may conclude "that in

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(1) Ibid, p. 134.
(2) John H. Adler. "Deficit Spending and Supply Elasticities." The Indian Journal of Economics. 1956. Vol. XXXVII, p. 32.
(3) Sunkel. Op. cit., p.272.

the underdeveloped economies inflationary pressures begins to operate not when the level of full use of the capital is reached, but much earlier. In other words the curve of aggregate supply in these economies becomes completelly inelastic not only before full employment of labor is reached, the point which determines the elasticity of supply in advanced economies, but it becomes completely inelastic before full use of capital is made. Therefore, it could be said that in the underdeveloped economies there is not only structural unemployment, but also a structural lack in the full use of capital, which is the limiting factor." (1) Therefore, in the underdeveloped economies the multiplier may be used only when some modifications are introduced. Full employment, in the Keynesian sense, may no longer be a worthy goal in these economies since it would mean that "desguised unemployment", whose marginal productivity equals zero or almost zero, would continue to exist. Rather these economies must have as their objetive the accumulation of capital and a better integration of the productive system. We do realize, however, the limitations involved in this statement.

Therefore our main conclusion may be considered to be the realization that it is impossible to apply wholesale a theory formulated in the framework of an advanced economy to underdeveloped economies.

It must be remembered that "from the point of view of the periphery [i.e. the underdeveloped world] one of the most

(1) Ibid, p. 273.

conspicuous deficiences of general economic theory is its false sense of universality." (1)

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(1) Raúl Prebisch. "El Desarrollo Económico de América Latina y alguno de sus principales problemas." El Trimestre Económico. 1949, Vol. XVI, p. 358 ff.