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TAX POLICY FOR PROMCTING EMPLOYMENT:
THE CHOICE OF A TAX HOLIDAY*

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I. INTRODUCTION

Keeping in mind one of the major interests of Professor A.K. Das Gupta, I am concerning myself in this paper with the unemployment problem of the developing countries, a problem which, it is generally agreed, is not of the same genre as the unemployment problem which the developed countries face from time to time because of the slack in aggregate demand. The unemployment problem of the developing world, it is generally recognised, is more of the 'classical' than 'Keynesian' variety and the solution too of this problem has to be of a 'classical' type, namely the one that attempts to shift the relative cost ratio in favour of labour as against other factors of production, particularly capital. Whatever therefore tax policy can do in this respect can be said to promote employment in these countries.

But I have set myself an even more modest goal for the purposes of this paper, namely to pose a choice between three different forms in which exemption from income tax, usually referred to as tax holiday in the literature on tax incentives, may be offered to business firms with a view to promoting employment. The most common practice among the developing countries offering tax holiday is to confine the tax exemption concession to new manufacturing firms which are usually obliged to incorporate (i.e. form themselves into companies). But in several of these countries tax

holiday is offered also to firms engaged in mining and hotel business and in a few countries (e.g. British Honduras) tax holiday is available to firms engaged in certain types of agricultural activities. For the purposes of this paper we draw no distinction between firms on the bases of the activity they are to engage in. Again while the most common practice is to offer tax holiday to new firms, several countries do offer the same concession to already established concerns when they undertake to expand their activities but the tax exemption is usually available with respect to their profits from expansion. In this paper, while we are not suggesting any departure from the practice, where it exists, of offering tax holiday to expanding as well as new firms, for the purposes of our exercise we have proceeded as if tax holiday is available only to new firms.

The rest of the paper has been divided into four parts. Part II poses both the choice as well as the test to be applied in making the choice in terms of optimising the employment generated by the firms qualifying for tax holiday. In Part III, the test is applied to the three alternative forms of tax holiday amongst which the choice has been posed and we reach the conclusion that the alternative which seeks to link the rate of tax exemption to be allowed to the firms inversely to the capital employed per job by them yields the optimum result in terms of employment. Part IV' deals with the significance, or otherwise, of the assumptions made by us in the preceding section while evaluating the various alternatives. In

the fifth and concluding Part, we touch upon the question of the practicality of introducing the tax holiday of our choice in place of the conventional type that is now generally offered.

II

The three different forms of tax holiday I have in mind are:

- (1) Conventional tax holiday whereunder exemption is granted to a firm for a given period without imposing any specific condition except possibly of the firm's coming into existence because this exemption is usually granted to new firms. The rate of exemption, including the period for which such exemption is available, is uniformly the same for all the firms.
- (2) Tax holiday linked directly to employment, whereunder a firm may be offered exemption from income tax for varying periods, or of varying proportions, depending upon the employment the firm directly generates.
- (3) Tax holiday linked inversely to capital employed per job whereunder a firm may be offered exemption from income tax, again for varying periods or for varying proportions but in a manner whereby the rate of exemption is made an inverse function of the capital employed per job created directly by the firm.

For the purpose of this exercise, we proceed on the basis that the choice to be made is between equi-cost tax holiday measures and also that the problem is one of replacing the tax holiday which already exists with the more preferred one. It must be immediately stated that we are imposing these restrictions on our exercise entirely out of methodological considerations. The first restriction ensures that we are comparing and contrasting comparable *situations* ~~restrictions~~ and the second restriction is being imposed to get away from the problem of matching or off-setting budgetary operation to the granting of tax holiday, namely of making an increase

in other taxes or a reduction in expenditure.

Given the policy objective underlying the tax holiday of promoting increased employment, our choice should be made on the basis of the increased employment each of the tax holiday alternatives can generate. Since we have already assumed that the choice has to be made between equi-cost tax holidays, let us start with a situation where already the Government is offering tax holiday of the first type, namely the conventional tax holiday, to firms i.e. the firms are already being offered exemption from income tax for a specified number of years beginning with the year a firm comes into existence or starts operations. Now the grant of this conventional tax holiday must be costing the Government a certain amount of revenue in that so much revenue from income tax is thereby foregone. The test we propose to apply then is that given the cost to Government in terms of revenue thus foregone, the tax holiday of our choice should be one which generates the highest additional employment; such a tax holiday would naturally be one whereunder the cost to Government in terms of revenue foregone, for every job additionally created is the same. If the cost to Government varies from firm to firm there, evidently, is a case for shifting the accent of the incentive thus being offered from the 'high cost' firm to the 'low cost' firm. (Here we are using 'cost' in the narrow sense of the cost to the Government in terms of revenue foregone.)

It is not really material to our exercise whether the revenue thus foregone is considered a genuine cost to the Government or not. But we might as well take note of the argument sometimes advanced,

namely that the revenue thus foregone by the Government is not a genuine cost because such revenue would, in any case, not have accrued had the tax holiday not been offered by the Government for the firms to come up. Even if one accepts this argument there cannot be any dispute that the incentive offered in the form of tax holiday confers a certain benefit on the firms in terms of tax thereby saved by them and that this benefit can be easily quantified and aggregated for the firms thus benefitting in the country. The whole of our exercise can then be carried on in terms of the alternative figure thus obtained of the tax saving made by the firms¹ but such a figure should, in fact, be equal to the cost to Government in terms of revenue loss that we were talking about above. Instead of talking of equi-cost tax holidays, we may then talk of equi-benefit tax holidays.

Let us clarify another issue as well. Where a firm becoming eligible for tax holiday is a genuinely new firm, no problem arises in applying the aforesaid test because the employment it generates can be taken as additional employment except possibly with respect to certain scarce skills in the country. But where an existing firm becomes entitled to tax holiday, on account of the expansion it undertakes, it is clearly the additional employment that it generates which should be taken into account.

III

We shall now attempt to apply our test to the three alternatives posed by us. But before attempting to do that, let us

¹ In fact, I have myself attempted an exercise on those lines in my paper entitled, On the Neutrality of Tax Holiday (to be published).

make clear our major assumptions. Firstly, the capital employed by firms for every job they directly create (i.e. capital cost divided by number of jobs created within the new firm) varies from firm to firm. (This, in fact, is implicit in the very nature of the choice posed by us.) Secondly, the rate of return on capital (i.e. profit divided by capital) is assumed to be uniform for all the firms. Thirdly, all the firms are liable to pay tax on profits at the same rate. Fourthly, the rate of tax exemption is also uniformly the same for all the firms becoming eligible for tax holiday. This means that no distinction is made between one firm and another with respect to either the rate of exemption or the period for which this exemption is available. If the rate of exemption is 100% and the exemption is available for a period of five years, this assumption implies that all firms qualifying for tax holiday will enjoy this concession. We shall abandon this last assumption as soon as we come to the discussion of alternatives (2) and (3) but we shall retain the earlier three assumptions even in the discussion of those alternatives.

Alternative (1):

Let us now take three firms, first one with capital employed per job of Rs.10,000, second with capital employed per job of Rs.50,000 and third with capital employed per job of Rs.100,000. Let us also assume that for all the three firms the annual rate of return before tax is uniformly 15% on capital and the rate at which income tax would have been payable in the absence of tax holiday

is 50%. Then the cost to the Government in terms of revenue foregone, with respect to these three firms in the event of its granting a conventional tax holiday comprising of a 100% exemption from income tax for a period of five years from the date they start their operations, will emerge as is shown in the column, Tax foregone per job by government, in Table I.



Table I: Cost to Government per Job created of Conventional Tax Holiday

Firm	Capital employed per job	Profit before tax per job	Tax payable in the absence of tax exemption	Rate of tax exemption	Tax foregone per job by government (and saved by firms)	Tax saved by firms as a proportion of capital	Net rate of return on capital
	Rs.	Rs.	Rs.	%	Rs.	%	%
A	10,000	1,500	750	100%	750	7.5	15
B	50,000	7,500	3,750	100%	3,750	7.5	15
C	100,000	15,000	7,500	100%	7,500	7.5	15

Thus when the Government announces a scheme of tax incentives whereby all the new firms are offered what we have called conventional tax holiday all the above three firms will be entitled to complete exemption from income tax for the same number of years after they come on stream. But, as can be seen from the above table, the cost to the Government in terms of revenue foregone for generating every additional job is the lowest for Firm A and the highest for firm C even though the tax saved by firms as a proportion of capital and their net rate of return are the same

for all the firms. Firm A is also the one with the lowest capital employed per job and Firm C is the one with the highest capital employed per job.

It can be seen clearly from Table I that the cost per job to the Government varies from firm to firm because while the profit per job increases with capital employed per job, the rate of exemption is uniformly 100% for all the firms.

Thus if as a result of the incentive offered in the form of conventional tax holiday, three new firms came up, Firm A with a capital investment of Rs.100,000, Firm B with a capital investment of Rs.1,000,000, each creating ten additional jobs, the cost to the Government of the conventional tax holiday would amount to Rs.120,000 a year, for the duration of tax holiday, and as a result 30 additional jobs would have been directly created.

Alternative (2):

Suppose now that the Government wishes to switch over from conventional tax holiday ^{to one where tax holiday} is related directly to the generation of jobs. One way of its going about would be to adopt alternative (2) posed by us above, namely to offer 100% exemption from income tax but for varying periods depending upon the number of jobs a firm creates.

Let us say that the Government offers 5-year exemption to new firms creating 10 jobs, 10-year exemption to those creating 20 jobs and 15-year exemption to those creating 30 jobs and over. (I have deliberately chosen discrete figures for the purposes of this exercise in the interest of simplicity.) If as a result of

this announcement the three firms, in our illustration, with different capital cost profiles, which came forward to set up their plants in response to the conventional tax holiday would also come forward now, then the cost to the Government for the creation of 30 additional jobs would work out to be exactly the same as under alternative (1).

Quite interestingly, each of the three firms stands to gain from the tax holiday related directly to generation of employment to the same extent as under conventional tax holiday. The reason for this is that though under the changed tax holiday regime the 100% tax exemption is granted to a firm provided it creates 10 or more additional jobs, the benefit that a firm stands to derive in the form of the amount of tax it saves for every job that it directly creates is still not subject to any limitation so that Firm B can still save through tax exemption five times more than Firm A and Firm C can save through the same tax exemption twice as much as Firm B even though all the three firms create 10 jobs each.

Let us now relax, temporarily though, our restriction with respect to equi-cost alternatives. There is otherwise the danger of our being taken to implicitly assume that on the announcement of the above scheme of tax exemption under alternative (2), which clearly offers higher income tax exemption for larger employment, the firms will not try either to switch over to more labour intensive technology or to mobilise additional capital or even to do both.

True that if each of the firms in our illustration plans to undertake the same level of investment as before, it will stand to gain as much from tax exemption under alternative (2) as it would gain under alternative (1). But now alternative (2) offers additional tax exemption if a firm is able to generate additional employment. Should Firm B, for instance, be able to either switch over to a more labour intensive technology or lay its hand on additional capital (or even work out a combination of both) such that it can now generate employment of 20, instead of the earlier 10, it becomes eligible for a higher level of tax exemption namely 100% tax exemption for a period of 10 instead of 5 years only.

Let us assume that all the three firms in our illustration, Firms A, B and C are able to switch over to a technology that enables them to avail themselves of the highest available tax exemption, namely 15 years' tax holiday, without having to mobilise additional capital. What it would mean is that as against the total capital investment of Rs.1,600,000 the numbers of jobs would increase to 90 but the cost to the Government would now amount to Rs.120,000 a year for a period of 15 instead of 5 years. (Assuming no discounting for time, the total cost to the Government in terms of revenue forgone thus increases three-fold. It goes up from Rs.600,000 (Rs.120,000 x 5) to Rs.1,800,000 (Rs.120,000 x 15)). But the cost to Government for every additional job created remains the same. (According to the above calculations, the cost to the Government per job remains Rs.20,000.) Also, and much more importantly, the differential in gain from tax exemption for every job thus created remains the same for more capital intensive investments as compared to less capital intensive investments.

But if we assumed that in switching over to a more labour intensive technology each of the firms has, at the same time, to increase the size of its investment, though at a uniform rate, then while the differential in terms of the gain from tax exemption might still remain the same, in relative terms, as between capital intensive and less capital intensive investment, the cost to the Government for every job thus created will go up.

Thus in terms of the test we have proposed the position under alternative (2) remains basically the same, or becomes worse, with the relaxation of the budget restriction; it certainly does not improve.

Alternative (3):

Let us now examine what our alternative (3) seeks to achieve. Between three firms, A, B and C in our illustration, the benefit of tax holiday would now be available in inverse relationship to the capital cost per job of each firm. If a firm's capital cost per job is higher, its rate of exemption is correspondingly lower. This would mean that if C employs 10 times the capital employed per job by A, C is entitled to one-tenth of the exemption allowed to A. This is unlike alternative (2) where under entitlement to tax exemption is at the same rate (and for the same period) if the jobs created by the firms are the same. Thus, in our illustration, the differential might take either of the two forms. One way of introducing the differential under alternative (3) would be that if Firm A is granted twenty years' tax holiday, Firm B would be given 4 years' tax holiday, and Firm C only two

years. Here again, we have not made any allowance for discounting of time. The second way of introducing the same type of differential would be that if Firm A is granted 100% exemption from income tax for, say, a 5-year period, Firm B would be entitled to a 20% exemption and Firm C for a 100% exemption for the same length of years.

Let us say that income tax exemption is granted differentially according to the second method indicated above. As can be seen from Table II, when the rate of exemption is inversely related to the capital employed per job, the tax saving per job which each firm makes, regardless of its capital intensity is the same. But the net rate of return increases for investments of labour-intensive type relative to those which are capital-intensive. While the net rate of return for firm C will now be 8.25% that for Firm B will work out at 9% and for Firm A, the most labour-intensive Firm, at 15%.

Table II: Net Rate of Return from Tax Holiday Offering
Tax Exemption in Inverse Relationship to Capital
Employed per Job

Firm	Capital employed per job ₹	Profit before tax ₹	Tax payable in the absence of tax exemption ₹	Rate of exemption	Tax saved per job ₹	Profit after tax ₹	Net rate of return on capital employed %
A	10,000	1,500	750	100%	750	1500	15%
B	50,000	7,500	3,750	20%	750	4500	9%
C	100,000	15,000	7,500	10%	750	8250	8.25%

We would be perfectly justified to expect that normal profit maximising behaviour on the part of the firms would impel a shift from capital-intensive to labour-intensive investment when the latter offer much higher net rate of return. If, in spite of this introduction of differential in the system of tax holiday, all the three firms in our illustration establish themselves in their respective businesses in the same manner as before, i.e. their scale of operation remains unaffected, this would only mean that business investments are insensitive to changes in net rates of return - which is a rather extreme situation. Moreover, it undermines the whole rationale behind the grant of tax incentives, especially income tax incentives, which is that business operations, particularly investments, are quite sensitive to changes in net rates of return.

Supposing all the capital available for investment in our illustration of three firms, namely Rs.1.6 million, gets diverted to the most labour-intensive operations of the type of Firm A, so that it could avail itself of the highest net return, then though the cost to the Government in terms of revenue foregone would still be Rs.120,000 a year the total employment generated in the economy directly as a consequence of the shift to more labour intensive operations would be as high as 160 instead of only 30.

Thus, according to the employment test we have proposed, of the three types of tax holiday between which the choice has been posed by us, it is only the third type of tax holiday where the rate of exemption from income tax is inversely related to the capital employed per job which yields the best results in terms

of employment generated relative to the cost to the Government in terms of the revenue that it foregoes by granting tax holiday.

Although the test we have proposed above for the choice of tax holiday looks out for the type which confers on the firms the same amount of tax saving for every job they create, our express objective was to optimise employment as related to the cost the Government would be incurring by granting tax holiday to firms. But it cannot be overlooked that from the point of view of equity also it is important that firms should be entitled to the same, and not different amount of tax saving for each job they create. Viewed thus, under the first and second alternatives the firms enjoy different amounts of tax saving for creating the same number of jobs whereas under alternative (3), all the firms enjoy the same amount of tax saving for every job they create. Therefore, from the point of view of equity also, alternative (3) should commend itself over alternatives (1) and (2).

Our conclusion above clearly challenges the 'established' belief that the tax holiday of the conventional variety is neutral or non-discriminatory between capital intensive and labour-intensive investments.² All that this so-called neutrality of the conventional tax holiday really amounts to is that the rates of return for various types of investments, be they labour or capital intensive, remain relatively unaffected as is shown in Table I above. Incidentally, it could be argued that even capital allowances such as development rebates and initial allowances are neutral in the same sense although it is generally believed that these allowances

² See I.S.Gulati, On the Neutrality of Tax Holiday (to be published) for a fuller discussion.

affect the relative factor costs adversely for labour.³ It is overlooked altogether that under the conventional tax holiday regime the cost to Government in terms of revenue foregone (or the benefit to the firm of tax saved) for every job created is higher with respect to capital intensive than labour intensive investment.

IV

Let us now come to the assumptions made by us in the preceding section and examine to what extent our conclusion rests on these assumptions. Our first assumption was with respect to variable capital intensity between firms. This, as we have stated already, is implicit in the very nature of the choice posed by us. If capital intensity is the same for all the firms, the problem of choice posed by us does not arise. Therefore, there is no question of our droppings or relaxing this assumption.

A doubt might be raised all the same regarding the assumption of variable capital-intensity between firms on the ground that implicit in our calculations is a further assumption with respect to the uniformity in the ratio of fixed to working capital for all types of investments, whether labour intensive or capital intensive. Now, if the tendency is for more labour-intensive investments to have a lower ratio of working to fixed capital than less labour-

³ See L.C.Gupta, Development Rebate, Capital-Intensity and Employment, in Economic and Political Weekly of January 6, 1973. Gupta's argument is that since development rebate is available with respect to plant and equipment at a uniform rate regardless of whether they are employed in more or less capital-intensive technology, the rebate can be said to be neutral between such different technologies, Gupta then goes on to argue that given this neutrality "development rebate is unlikely to have had any significant influence on the choice of capital intensity in general".

intensive investments, the disparities in terms of cost to Government for every job created will become even wider than what our calculations in Table I suggest. However, if, as is far more likely, the tendency is in the opposite direction i.e. for the labour intensive investments to have higher ratio of working to fixed capital, the disparities will certainly become narrower.

But the basic conclusion of this paper remains unaffected namely that in the choice of tax holiday to be offered, it is the tax holiday under alternative (3) which should be offered in order to optimise the results in terms of additional employment vis-a-vis the cost to Government in terms of the revenue it forgoes in the grant of tax holiday. The only modification - if it is a modification at all - called for to the earlier argument would be that the rate of tax exemption should be inversely related not just to fixed capital employed per job but to total capital, including working capital, employed per job.

It is quite conceivable that for an investment which is less capital-intensive in terms of the ratio of fixed capital to labour the ratio of working to fixed capital might be so much higher than the corresponding ratio for what is a more capital intensive investment again in terms of the ratio of fixed capital to labour that the overall figure of total capital employed per job for the former is equal to or even higher than that for the latter. In that case, the inverse linking of the rate of exemption to total capital employed per job could have an adverse impact on the rate of return on the former relatively to the latter

investment. Even then, the situation emerging as a result of the inverse linking of the rate of exemption to capital employed per job would pass our test which is that the cost to Government, in terms of revenue foregone for every job created should by being uniform secure the highest additional employment.

Our next assumption is with respect to the uniform rate of return on capital for all types of investment. There can be no denying that given the market imperfections of the real world different rates of return could, and probably would, actually obtain. To what extent one may ask, does our conclusion regarding the choice of alternative (3) rest on this particular assumption? Frankly, it does rest importantly on this assumption of a uniform rate of return in that otherwise the fixation of the rate of exemption in inverse relationship to the capital employed per job by a firm might not pass the test prescribed by us.

What is important to know then is whether the rates of return on capital are uniformly lower or higher for labour-intensive investments as compared to capital intensive investments. If the rates of return tend to be lower for labour intensive than for capital intensive investments, then the cost to Government, in terms of tax revenue foregone, for every job under the conventional tax holiday, will be still smaller for labour intensive investments compared to that for capital intensive investments. Even inverse linking of the rate of exemption to capital intensity will entail higher cost, in terms of revenue foregone by Government, for every job created by capital-intensive investments than

that for every job created by relatively less capital intensive investment.

If, on the other hand, the rates of return tend to be higher for labour intensive investments than for capital intensive investments the relative position with respect to the cost to Government of a conventional tax holiday will be less disparate than is suggested by our earlier calculations and inverse linking of the rate of exemption to capital intensity would mean that the disparity in the cost to Government for every job created in more capital intensive firms as compared to that in less capital intensive firms will also be narrower.

The basic point remains however. So long as the profit per job varies in the same direction with capital employed per job, the cost to the Government of a conventional tax holiday in terms of revenue foregone is higher for more capital intensive operations compared to less capital intensive operations. The case would still therefore exist for giving tax exemption in a manner that firms with lower capital per job are eligible for higher exemption than firms with higher capital ^{per}/job. But if it is desired to equate the cost per job to Government of employment in order to optimize results this would then be possible to achieve by relating the rate of exemption inversely not to the capital employed per job but to the profit earned per job.⁴

⁴ See I.S.Gulati, On the Neutrality of Tax Holiday (to be published) for an elaboration on this point.

As for the third assumption regarding the uniform rate of tax on profits, this accords with the standard Anglo-Saxon practice of taxing company profits at a uniform rate and there is no question of dropping or relaxing it. Our fourth assumption regarding the uniform rate of exemption has been relaxed already in the course of our discussion. On the whole, therefore, we are on safe grounds to say that our conclusion as to the right choice of the tax holiday should generally hold.

V

Finally, let us come to the practicality of linking the rate of tax exemption for each firm under a tax holiday inversely to capital employed per job. There really is no strong basis to entertain any great doubt on this score. It has to be remembered in this context that in almost all developing countries offering tax holiday the concession is available to only incorporated firms (i.e. companies) which are obliged to maintain, and even publish, their records on a uniform basis. Also, laws and regulations relating to income tax on companies the maintenance and submission of information on a standard pattern. Additionally, labour legislation in most of these countries already requires recording of information with respect to employment of and payments to workers by firms of a minimum size and above. Given this background, it should not present much problem for a Government to ascertain separately for each firm qualifying for tax holiday of the proposed type the capital employed per job - the information which is crucial to the operation of this type of tax holiday.

Also it might be worthwhile referring here to the one particular problem of capital valuation which arises because of the differences in age of a firm's capital assets. What we are really concerned with in connection with tax holiday is new investment in capital assets and the related incremental employment it generates. Therefore the problem of valuation associated with age differences of a firm's capital assets need not arise at all in the context of the tax holiday of our choice, namely the one that links the rate of exemption inversely to the capital employed per job.

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