THE DISTORTIONARY IMPLICATIONS OF THE INDIAN CAPITAL GAINS TAX

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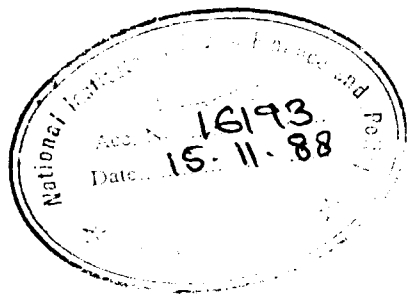

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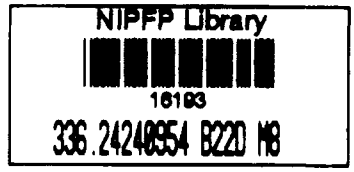

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Abstract

In this paper we use the findings of a companion paper to evaluate the distortionary impact of the Indian capital gains tax. We find that pre- and post-tax asset ranks, in terms of the present value per unit investment, differ due to five factors.

i. The tax base (capital gain) differs in principle from the non-distortionary base.

ii. The method of computation of capital gain is itself inappropriate.

iii. Additional distortion is introduced by differential treatment of long and short term assets.

iv. Differential treatment is accorded to different groups of assets.

v. Provisions governing reinvestment are inappropriate in general and also result in further inter-group bias.

A fall-out of these distortionary features is that assets with identical pre-tax ranks will have different post-tax ranks depending on the fraction of capital gains income in total income. Furthermore, the post-tax rank for assets with different holding periods but the same pre-tax ranks are sensitive to the rate of inflation.

1. Introduction

In a companion paper by one of the authors, (Das-Gupta, 1987), it is demonstrated that, provided assets are evaluated in terms of their present value per unit investment, asset ranks will be changed by a capital gains tax levied on realisation. Also, for a small country with mobile capital that levies a proportional income tax, a tax on the proceeds from the sale of a capital asset or its terminal value with exemption of the fraction of proceeds reinvested (a rollover provision) leaves pre-tax asset rankings unaltered and also leaves the termination date of projects unaffected.[1] Such a tax, with perhaps lower rates applicable to short term cash inflows from a capital project (inclusive of capital gains), is also non-distortionary in the sense indicated, in large countries or without full capital mobility.

In this paper we use the findings of the companion paper to evaluate the distortionary implications of the Indian capital gains tax. Though we analyse the Indian case, the methods used as well as many of the conclusive are of wider applicability and relevance. We find that pre - and post-tax asset ranks differ due to five factors.

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ii. The methods of computation of capital gain is itself inappropriate.

iii. Additional distortion is introduced by differential treatment of long - and short-term assets.

iv. Differential treatment is accorded to different groups of assets.

v. Provisions governing reinvestment are inappropriate in general and also result in further inter-group bias.

A by-product of these distortionary features is that assets with identical pre-tax ranks will have different post-tax ranks depending on the fraction of capital gains income in total income. Furthermore, the post-tax rank for assets with different holding periods but the same pre-tax ranks are sensitive to the rate of inflation.

In the next section the structure of Indian capital gains taxes is described. The third section discusses evaluation methodology and contains an evaluation of the taxes along with lines indicated above. The concluding section summarises our major findings and makes suggestions for reform.

Before proceeding further, it may be pointed out that the objective of this paper is simply to evaluate the distortions induced by the tax system since this is a factor relevant for policy making. That some (though, we believe, not all) distortions may have consciously been introduced to further other objectives is a factor that we are aware of but which is beyond the limited scope of this paper.

2. The capital gains tax in India

Our description of the capital gains tax includes all amendments upto the Finance Act, 1987.

Definition: The Indian Income-tax Act (henceforth referred to as the Act) defines capital gain as profit or gain from the transfer of a capital asset where the term "capital asset" is itself defined implicitly with reference to a definition of non-capital assets (Sections 45 and 2). Since capital gain is defined

to arise only on transfer, gains are taxable only on realisation and not on accrual.[2]

Long term and short gains: Short term gains are defined in the Act as gains from the transfer of a capital asset held for not more than 36 months except for shares where the period specified is not more than 12 months. Gains which are not short-term are defined to be long-term.

Companies versus non-companies: In certain situations different treatment is accorded to companies and non-companies. This paper concentrates only on the latter. More precisely, this paper concentrates on taxation of capital gains for individual assesses only.

The computation of taxable capital gain under the Indian Income Tax: In the rest of this paper, the following notation is used:

$b = \begin{cases} = 0.5 \text{ for jewellery, bullion, land and buildings.} \\ = 0.4 \text{ otherwise.} \end{cases}$

c : Cost of improvements as a fraction of purchase price.

g : Annual average rate of capital gain.

$\bar{g}$: Taxable short-term capital gain in rupees.

g_{ti} : g_{t1}, g_{t2}, g_{t3}: Taxable long-term capital gain in rupees for different assets as per formulae to be given.

L : Fraction used in computing taxable long-term gain.

n : Period for which the capital asset is held in years.

p : The net acquisition price of the capital asset in rupees.

u : Fraction of sale proceeds of the capital asset that is reinvested.

s : Ratio of sales price net of costs of sale in rupees to purchase price (P) in rupees.

v : Rs. 10,000.

k : Rs. 2,00,000.

Short run capital gain: The taxable short-term capital gain, g, is defined [in section 48(2) (a)] as the net sale proceeds less the cost of acquisition and improvements. No discounting of the cost of acquisition or for expenditure on improvements incurred in different years is permitted. Thus,

$$\bar{g} = \max (0, p(s-c-1)) \qquad (1)$$

Clearly, in terms of the annual average rate of capital gain, we have

$$s = (1+g)^n$$

Long run capital gain: To arrive at taxable long run capital gain, account must first be taken of section 48(2)(b) of the Act. This section includes provisions whereby only a fraction, b, of the total capital gain income in that year over Rs. 10,000 is subject to tax. Thus the base becomes

$$g_{tl} = \max (0, b (L\bar{g}-v))^3 \qquad (2)$$

In equation (2), L=1 except in the case of sale proceeds from a residential house, if no other residences are owned. In this case L=1-(k/ps) (Section 53).

Reinvestment: If a portion of the sale proceeds is reinvested in an approved asset, two types of rollover provisions are in existence [Sections 54(A) to 54(G)]. Either the fraction of capital gain reinvested or the fraction of net sale proceeds reinvested is deductible. The two cases give rise to the formulae

$$g_{t2} = \max(0, b(L\bar{g} - ups - v)) \tag{3}$$

in the case of deduction of the net sale proceeds reinvested, where u is the fraction reinvested, and

$$g_{t3} = \max(0, b(L\bar{g}(1-u) - v)) \tag{4}$$

in the case of deduction of the fraction of capital gain reinvested. Note that these deductions are taken before application of the provisions of Section 48(2)(b).

For reinvestment, the subsequently purchased asset is required to be held for more than 36 months. If this is note done, then the deduction claimed earlier is taxed as capital gain in the current year. The various cases of deductions claimable are given in Table 1.

Reinvestment and tax deferral: A final feature of the taxation of long-term capital gain is that, if reinvestment is contemplated, no tax need be paid for a specified period on the amount that would be deductible, pending reinvestment. The period of such tax deferral varies from one year to three years. However, the amount to be reinvested has to be deposited in a specified financial institution in the interim (presumably at a low rate of interest). In the event that reinvestment is not carried out to the extent initially contemplated, within the

stipulated period, then, tax has to be paid on the uninvested portion. However, in this case, benefits under section 53 and also the initial Rs. 10,000 deduction under section 48 are not allowed. Thus if x is the fraction of the amount to be reinvested that remains uninvested at the end of the 'grace period', xbgu or xbpsu becomes taxable depending on whether g_{t2} or g_{t3} is the appropriate tax base.

TABLE 1

Taxable Capital or Offsetable Loss for Different Categories of Assets[4]

Category of Assets		Base for capital gain taxation or loss offset
1.	**Short-term gains**	p(s-1)
	Long-term gains	
2.	H: R in H	max (0,0.5(s-1)((ps-k)/s-psu-v))
3.	H: R in PS	max (0,0.5(s-1)((ps-k)(1-u)/s-v))
4.	LBJ, AL: R in PS,H	max (0,0.5(p(1-u)(s-1)-v))
5.	AL: R in AL	max (0,0.5(p(1-u)s-p-v))
6.	OA: R in PS, H	max (0,0.4(p(1-u)(s-1)-$\overline{v}$))
	Losses	
7.	Short-term	p(s-1)
8.	H, LBJ	min (0,-0.5(V+p(s-1)))
9.	OA	min (0,-0.4(V+p(s-1)))

Notes: H : Housing
LBJ : Land, Building and Jewellery
R : "Reinvested in"
AL : Agricultural Land
OA : Other Assets, including shares.

Capital losses: Short-term losses may be set off, first, against any capital gains or only against short-term gains at the option of the assessee (Section 70). After this the balance may be set off against any other income (Section 71). If the entire loss cannot be set off in the year of realisation, the balance not set off may be carried forward for upto eight years for set-off against capital gains only (Section 74).

For long-term loses, set off is allowed on the scaled down amount.

$$g_{tL} = \min (0, -b(v+\bar{g})) \qquad (5)$$

In the year of sale, long-term losses may be set off first against long-term gains and then against any other income. The part of the scaled down amount not set off in the year of sale may be carried forward for upto eight years for set off against capital gain as in the case of short-term gain.

3. Evaluation of distortionary implications of capital gains treatment

Distortionary implications are evaluated in five steps:

i. Deviations from the non-distortionary base due to differential treatment of various groups of assets (i.e., inter-asset distortion),

ii. The pattern of tax favour to long-term assets (i.e., inter-temporal distortion),

iii. Variation in tax favour with the proportion of capital gain in total income and with inflation (i.e., distortion by type of income),

iv. Rollover provisions and lock-in (i.e., distortion due to improper reinvestment provisions),

v. Miscellaneous distortionary features.

The method followed is, essentially, to compare pre-tax asset ranks (or, equivalently, asset ranks with the non-distortionary tax) with post-tax ranks given current tax treatment. Due to lack of data, the economy-wide importance of distortionary features is not estimated. The following assumptions are made:

a. Only one capital asset is purchased or sold per period. Thus, the maximum deduction case per asset, so far as the provisions of section 48 are concerned, is being taken. This also has implications for loss offset in the year of a capital loss.

b. The cost of improvements, c, is zero.

c. The country is small and capital is freely mobile so that the (post-tax) discount rate and inflation rate are unaffected by changes in the tax code.

d. The net sale price of the capital asset is non-negative.

3.1 Deviation of the tax based from the non-distortionary base for different groups of assets

Deviation from the non-distortionary base is measured by the number

$$N = |g_{ti}/ps-(1-u)| \ , \ i= 1,2,3,L \qquad (6)$$

This measure may be derived as follows. Consider an asset holder who sells today to reinvest a fraction u of sale proceeds in an asset yielding w per unit investment. With the non-distortionary sales proceeds tax, this discounted cash flow stream is

$$V = ps(1-u)\ (1-t)+upsw \qquad (7)$$

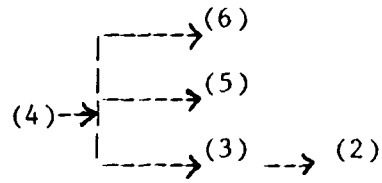
With any other tax base g^*_t and a tax at the same rate (t), the corresponding value is

$$V^1 = ps(1-u)-tg^*_t+upsw \qquad (8)$$

Thus, we see that $N = |V-V'|/tps = |g^*_t/ps-(1-u)|$. Clearly, N is positive if the base varies from the non-distortionary tax base. The function is also linear in the extent of deviation which is useful. To further analyse N, note that, with 100% reinvestment N is simply the ratio of g^*_t to the sale price. This is the case of maximum distortion. Minimum distortion occurs at 0 reinvestment.

Table 2 and 3 give values of N for short and long-term assets of different groups. In the case of gains, a purchase price of Rs 2 lakh and a sale price of Rs 10 lakh is assumed. In the case of loss a sale price of Rs 1.67 lakh is assumed. (These values give the same index value for short-term gain and no reinvestment of sale proceeds and short-term loss with full reinvestment of sale proceeds).

In the case of short-term gain, distortion is zero if the purchase price is reinvested from (6). The pattern of distortion for short-term gain is therefore U-shaped. In all other cases distortion decreases with the amount of reinvestment. Both these conclusions, which can be derived analytically, are illustrated in Tables 2 and 3. The tables also indicate that short-term gains treatment is less distortionary at zero reinvestment but more distortionary at 100 per cent reinvestment. Finally, the following partial ordering of the long-term tax bases (from highest to lowest) is derivable from the formulae in Table 1. (numbers are serial numbers in table 1).



That only a partial ordering of bases is possible is another way of stating that ranks between bases 6,5,3, and 2, and hence the level of distortion, will vary as reinvestment and the sale price vary. Thus asset ranks will show a "criss-crossing" pattern as their characteristics are varied.

For losses, the base for loss offsets is lower for (9) rather than (8). This partial ordering of tax bases is reflected in the distortion index values in Table 3.

The switch in distortion ranks (and also tax bases) at different reinvestment levels between "AL:R in AL" and `OA´ and also between "H:R in PS" and "AL:R in AL" is surely not a consciously introduced policy feature. The maximum distortion values in the table are 0.8 for gains and 1.20 for losses in case of short-term assets and 0.685 for gains and 1.012 for losses in case of long-term assets.

Turning to the magnitude of distortion across assets with different proportions of capital gain, it is easily confirmed that N decreases as the fraction s increases with any of the tax bases in Table 1 except possibly for short-term gains. Thus, distortion decreases with the extent of capital gain except possibly for short-term gains.

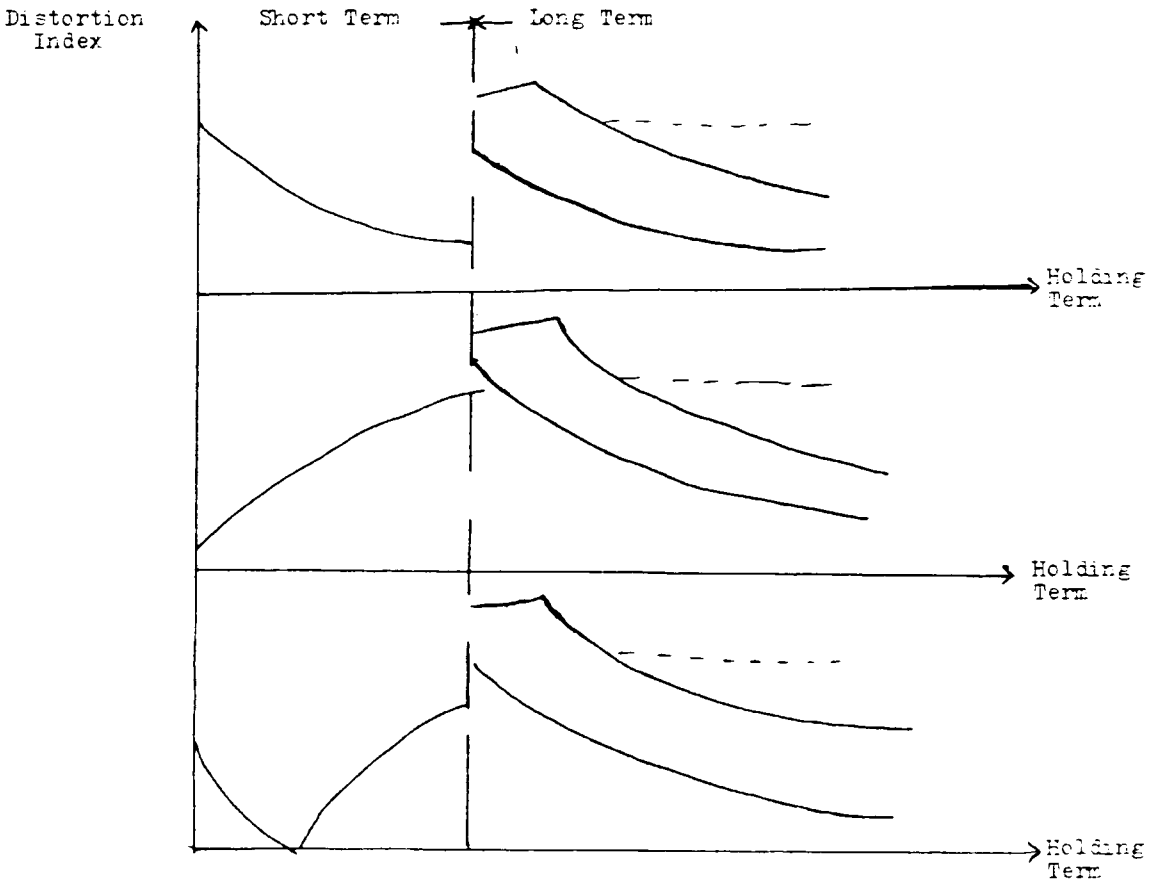


Figure 1: Variations in the Distortion Index With the Holding Period

Our two main conclusions are:

i. Distortionary ranking across asset groups varies with the level of reinvestment and with the percentage capital gain or loss. The least distorted is the unimportant case of agricultural land with reinvestment in agricultural land.

ii. By comparing treatment of both gains and losses simultaneously across asset groups, it may be seen that for a given pre-tax probability distribution of gains and losses, the post-tax distribution of short-term assets displays the least dispersion with long-term assets becoming relatively more risky in the sense of having greater dispersion. In contrast, the sale proceeds tax leaves the relative positions unaffected in terms of both mean and dispersion.

3.2 The pattern of tax favour to long-term assets

In this step of the analysis we consider a capital asset with a given rate of capital appreciation per period and examine variations in distortion with the holding period. Attention is restricted to the case of appreciation only since special provisions govern depreciating assets in the Act and since we are not considering such assets in this note. Tax favour to long-term assets arises, first, because of distortions inherent in the tax bases in equations (1) to (4) for any given tax rate. Secondly, taxes may be avoided altogether by investing for three years in an approved security. Finally, tax deferral possibilities result in additional tax favour in some cases.

First, consider variations in the distortion index as the holding period of an asset, with a given rate of capital appreciation, increases. The solid lines in Figure 1 show the possible variations in the distortion index. The graph shows that three possible short-term patterns of distortion are combined with

two possible long-term patterns. Furthermore, the maximum distortion (and maximum tax favour) occurs at the holding period which is the minimum required for long-term benefits. A similar finding (for the US) is reported by Stiglitz (1983).

Turning to the possibility of full tax exemption, this occurs if long-term capital gains are held for three years in a specified security (e.g., Capital Gains Units of the Unit Trust of India). However, an implicit tax liability arises if the interest on the specified security falls short of the investor's opportunity cost. The actual tax rate is given by

$$\bar{t} = \min\ (y(1-(1+r)^{n}I^{n}),\ tg_{ti}/ps),\ i=2,3,L \qquad (9)$$

In (9), y is the fraction of the net sale consideration that has to be reinvested to secure complete tax exemption, n is the number of years for which the specified security has to be held (currently three years), r is the interest rate on the specified security, t is the income and capital gains tax rate and I is the discount factor. In the Indian case, t is less than 25 per cent, far less than the maximum marginal rate of 50 per cent on other income. Clearly, early sale of a currently held asset to ensure a tax write-off by holding a specified security for n years is worthwhile for relatively low yielding assets (those with a high discount factor I). The dotted lines in Figure 1 show the case of an asset with a yield low enough for tax-saving-motivated early sale to be worthwhile.

TABLE 2

Distortion Index for Capital Assets Sold in 3 Years or Less

Type of asset	Per cent reinvested				
	Nil	25	50	75	100
GAINS					
Shares sold in 1 to 3 years	0.684	0.514	0.344	0.174	0.0
Other assets	0.2	0.05	0.3	0.55	0.8
LOSSES					
Shares sold in 1 to 3 years	1.009	0.759	0.509	0.259	0.009
Other assets	1.2	0.95	0.7	0.45	0.2

Note: For an asset purchased for Rs. 2,00,000 and sold for either Rs. 10,00,000 or Rs. 1,66,667.

TABLE 3

Distortion Index for Capital Assets Sold After 3 Years

Type of asset	Per cent reinvested				
	Nil	25	50	75	100
GAINS					
H: R in H	0.685	0.560	0.435	0.255	0.0
H: R in Ps	0.685	0.515	0.345	0.175	0.0
LBJ, AL: R in Ps, H	0.605	0.455	0.305	0.155	0.0
AL: R in AL	0.605	0.480	0.355	0.230	0.0
OA: R in Ps, H	0.684	0.514	0.344	0.174	0.0
LOSSES					
OA	1.009	0.759	0.509	0.259	0.009
H, LBJ, AL	1.012	0.762	0.512	0.262	0.012

Notes: For the same asset as in Table 2.
For abbreviations see Table 1.

Finally, consider the possibility of tax deferral. Consider an individual planning to invest a fraction (u) of sale proceeds in an asset yielding w per unit investment in present value terms. Given an implicit tax rate on sale proceeds T due to the capital gains tax, immediate reinvestment fetches.

$$v = ps(1-u-T)+upsw \qquad (10)$$

Instead, tax deferral with the declared intention of reinvesting the entire sale proceeds fetches

$$v^1 = ps\ I^m(1-u)(1+r)^m-t)+upsw \qquad (11)$$

where m is the maximum number of years for which tax deferral can be obtained, r is the after-tax interest rate paid by the approved deposit institution in which sale proceeds are deposited and t is the penal tax rate on the uninvested portion. Combining (10), and (11) we see that deferral is worthwhile if and only if $(I^m(1-u)((1+r)^m-t)-(1-u-T)$ is positive. Since the derivative of this expression with respect to I is positive, tax deferral is more likely to be attractive for low yielding assets and less profitable investments. In terms of Figure 1, the downward sloping portions of long run distortion curves get flatter.

To sum up:

i. Tax favour and distortion is normally greatest for a holding period equal to the threshold for long-term treatment.

ii. Tax deferral and tax exemption possibilities ensure that additional tax favour and increased distortion results for low yielding long term assets.

3.3 Income composition, inflation and asset ranks

Taking assets with the same pre-tax value from each tax category, the following questions are now studied:

i. Does the ranking of assets depend on the fraction of interest income to capital gain income in present value terms?

ii. Does the ranking vary with inflation?

Again, luckily, these questions can be studied analytically. Taking any one type of asset, what are the consequences of an increase in the fraction of interest income? Per unit investment, if x is the fraction of interest income, then we have the post-tax value of an asset with pre-tax value V given by:

$$x(v+1)(1-t)+(1-x)(v+1)(1-ta_1)+I^n t(a_1+a_2)-1 \qquad (12)$$

where advantage has been taken of the linearity of the tax functions (1) - (4) in $\bar{g}=(1+V)(1-x)/I^n-1$, given that the capital gain is positive, and where the tax function is on capital gain $t(a_1\bar{g}-a_2)$. The derivative of this with respect to x is:

$$-(v+1)t(1-a_1) \qquad (13)$$

For short-term gains (but not losses), $a_1=1$, and there is no change in asset ranks. Long-term assets with a higher proportion of interest earning drop in the ranking, as would be expected.

The inflationary impact on asset ranking enters due to the deductibility of the nominal purchase price and the initial Rs 10,000 (v) in computing gain or loss for long-term assets. Since assets are ranked by the real post-tax value per unit investment, it is easy to show that medium-term assets gain relative to short-term assets, which in turn may gain relative to long-term assets. This reinforces the finding that assets which are held for the minimum period of eligibility for long-term treatment are highly favoured.

To demonstrate the contention, consider the case of two assets with the same present value of interest income and the same pre-tax unit value but differing holding periods. With a price level of i^T in period T we require

$$I^W \, sp/i^W = I^T \, s^1p/i^T \, , \; W<T \qquad (14)$$

where W and T are the respective holding periods, sp and s^1p the sale prices and i is one plus the inflation rate which is assumed to be constant. Since the short-term capital gains tax is t(sp-p) and the long-term tax is bt (Ls^1p-p-V) with zero reinvestment, the short-term asset's post-tax rank exceeds the long-term asset's post-tax rank if and only if

$$(I/i)^W \, (sp-tsp+tp)>(I/i)^T \, (s^1p-bt(Ls^1p-p-V)) \text{ or}$$

$$1>s(1-bL) + (I/i)^{T-W} \, b(1+v/p) \qquad (15)$$

For T sufficiently close to W, this inequality fails to hold, thus demonstrating the tax favour to assets just beyond the long-term threshold. Also, clearly, the inequality is more likely to be satisfied for large T given that I/i is a fraction. However, long-

term assets will remain better than short-term assets if s is sufficiently large.

To sum up: The tax system discriminates against assets with a low proportion of capital gains income in total income among long-term assets. Inflation reinforces the bias in favour of the threshold period for long-term treatment and leaves short-term assets preferable to very long-term assets if the total capital appreciation is not too large.

3.4 Rollover provisions and lock-in: 'Lock-out', given that reinvestment in a desired asset would have taken place in the absence of taxes, is now studied. Lock-out is studied in preference to 'lock-in' since it not only includes lock-in but also includes distortions induced by limitations in the class of assets for which rollover benefits are given - if the class of assets does not include the desired asset. To examine lock-out, the minimum pre-tax interest rate necessary to induce the investor to reinvest the same fraction as in the no-tax case is examined. If this interest rate exceeds the no-tax interest rate, we conclude that there is lock-out. For this exercise, various categories are looked at and the assumption of an infinite planning horizon is made.

To derive the minimum required pre-tax interest rate referred to above, consider the equation:

$$Z = (1-u)\, sp + urspI/(1-I) \qquad (16)$$

Z equals the discounted sum of cash flows obtainable from a given asset where r the rate of interest obtainable from an alternative asset. The first-term on the right represents cash obtainable

today when a fraction u of the sale price is reinvested and the second term represents the present value of an infinite stream of future cash flows from holding an alternative asset. Thus, the equation itself may be solved for the rate of interest, r, at which an investor is just indifferent between "holding" and "switching". Note that the 'equilibrium' situation is where sp=z in which case r equals the discount rate. Outside equilibrium, r may be less than the discount rate if the sale price is temporarily higher than Z.

Let us now introduce an income tax at rate t and rollover benefits. In order that no lock-in bias exists we must have the following equality.

$$(1-t)Z=((1-u)sp-\text{Tax on capital gains})+ups.\bar{r}\sum_{i=1}^{3} I^{i}$$

$$\frac{+usp.(1-t)I^{4}}{1-I}\ .\hat{r} \qquad (17)$$

$\bar{r}$ is the post-tax rate of interest from holding a specified security for the prescribed three years and $\hat{r}$ is the minimum rate of interest required from an alternative asset to prevent lock in. It is of interest to see by how much r deviates from r to gauge the extent of lock-in. Denote the tax on capital gain in (17) as (1-u)spT, and let $(1-t)\tilde{r}=r(1-I^{3})+r(1-t)I^{3}$. Clearly, if T=t and the three-year investment in specified securities is absent, we have the non-distortionary sale proceeds tax so that $r=\tilde{r}=\hat{r}$. Thus, no lock-in or lock-out results. Since, in India, T<t is usual, $\tilde{r}<r$. Thus 'negative' lock-out results from the lower tax rate on capital gains: asset holders are induced to sell long-term assets earlier than in the absence of taxes.[5] Once again, when account

is taken of both short - and long-term treatment of gains, the bias in favour of the minimum eligibility period for long-term treatment becomes apparent. To compare r with $\hat{r}$, combine (16) and (17) to get

$$r \gtreqless \hat{r} \text{ as } (1-I)^3(\bar{r}-r(1-t))I\ u/(1-I)(1-u)+t \gtreqless T. \quad (18)$$

Furthermore, if the discount rate is r, this simplifies to $r \gtreqless \hat{r}$ as $(ty(1-ul^3)+(1-y)(1-I^3)u)/y(1-u) \gtreqless T$ (19)

where $\bar{r}y=r$.

The first term of (18) is non-negative provided r is at most $\bar{r}/(1-t)$[6]. Thus, if the alternative asset has a low return in the no-tax regime, an even lower rate of return is required in the presence of taxes. This tendency is clearly strengthened if u is small. We may conclude that capital gains provisions are biased in favour of unprofitable assets and sale of assets for current expenditure rather than reinvestment. Equation (19) supports this finding even though the discount rate now varies with the interest rate, r.

A final point emerges from an examination of the expression for $\hat{r}$ on solving (16) using (15) and the expression for the capital gains tax. We obtain

$$\hat{r} = r/I^3-t(1-c)(1-u)(1-I)/(1-t)uI^4-r(1-I^3)/I^3(1-t) \quad (20)$$

where c=T/t.

Since (1-c) is positive, $\hat{r}$ is a decreasing function of t. The problem of negative lock-out is more serious for those in high tax brackets.

To sum up: Rollover provisions and the capital gains tax lead to negative lock-out and favour low yielding assets. Benefit to persons in high tax brackets and thus the severity of lock-out is likely to be higher than for low tax brackets.

3.5 Additional remarks on distortionary features of the Indian capital gains tax

A few other distortionary features are as follows:

i. Computation: Since no discounting for cost of improvements is permitted in computing capital gain, this interferes with the pre-tax ranking of assets. In terms of the present value at the time of purchase, if I is the discount factor, then I^n c is the amount deductible from the discounted net sale proceeds whereas, if the improvement is carried out m years after purchase, its present value is I^m c. For it to be given the same treatment as the purchase price, I^{m+n} c should be deducted. Therefore, the tax code increases the attractiveness of assets for which expenses on improvements have to be made subsequent to purchase. In inflationary situations, the bias is even more pronounced.

ii. Rollover provisions: For `like investments' in housing and agricultural land, rollover benefits are treated more leniently than for other forms of reinvestment. This leads to the locking up of funds

formerly invested in housing or agricultural land in the same type of assets. Secondly, the taxation of capital gains income rather than sale proceeds creates the need for a minimum reinvestment period for assets in which sale proceeds are reinvested - a further source of distortion. In the absence of such a provision, sale proceeds could be invested for a minimal period in an asset with low or zero capital gain to avoid the earlier capital gains tax liability. Thus it is clear that a tax on the sale proceeds of all capital assets with rollover given on the basis of reinvested sale proceeds would not only reduce distortion but also result in administrative simplicity.

Finally, the limited class of assets in which sale proceeds or capital gains can be reinvested leads to a `lock-out´ effect for other assets.

iii. Reinvestment and tax deferral: In order to prevent advantage being taken of the grace period for reinvestment to get a tax deferral, there exists a scheme of penalties (ineligibility for certain benefits normally given to long-term capital gains) and a requirement that funds be deposited in specified institutions pending reinvestment. Given Indian conditions, this is likely to be a source of harassment for taxpayers and litigation though it certainly curtails the benefits from tax deferral. A much simpler solution would appear to be the charging of interest at penal rates on taxes deferred due to a declared intention to reinvest (with such a declaration being required). A time limit for reinvestment may also be specified though this would be

unnecessary if the interest rate was sufficiently high.

iv. Loss provisions: Taxation of sale proceeds implies that, provided the asset is sold for a non-negative price, it should bear tax. Thus loss offset provisions which give tax relief in the case of capital losses are (we find) unduly generous and, therefore, distortionary. Such provisions decrease "down side risk" relative to the non-distortionary situation and therefore may be desirable. However, short-term losses can avail of greater benefit than long-term losses which may vitiate the incentive to take long-term risks.

4. Conclusions and proposals for reform

The following are out main findings:

i. The three-year and one-year provision after which assets become eligible for long-term treatment are the most distortionary features of the capital gains tax since assets held for one or three years enjoy the greatest tax favour.

ii. Rollover provisions in the current tax system provide an easy escape from the bulk of tax with a short postponement in the asset sale date for low yielding assets.

iii. The tax base is least distortionary for short-term capital assets with positive gain when reinvestment is not contemplated.

iv. Tax deferral provisions provide additional favour to long-term assets with low yield.

v. Between different categories of long-term assets, residential housing and the residual category `Other Assets´ have the most distorted ranks.

vi. The capital gains tax system discriminates against relatively profitable projects.

vii. Additional bias to assets in inflationary regimes is forthcoming for medium-term assets held for the threshold period for eligibility for long-term benefits.

viii. Reinvestment provisions lead to a negative lock-in effect for long-term assets so that capital gain taxes encourage premature termination of capital projects.

In the light of these findings, there is a clear case for examining the possibility of replacing the capital gains tax by a tax on sale proceeds (and redemption values) at the same rate as on other income.[7] Such a tax, in effect, would tax all cash inflows from an asset at the same rate in a proportional income tax regime.[8] Since, in India, special concessions exist for interest and dividend income along with progressivity, a full fledged cash flow tax on capital sale receipts would however be distortionary. While further analysis is therefore required, a provision along the lines of section 80L of the Income Tax Act (which confers limited yield exemption benefits) would perhaps be appropriate. Furthermore, since a wealth tax is levied and estate duties are not, it may also be appropriate to give tax relief in, say, five year slabs, to cash inflows from an asset occurring in years far removed from the purchase date. However, regardless of special provisions which may be introduced in the light of further study, simple replacement of the capital gains tax by a tax on sale proceeds would go a long way towards removal of unintended and arbitrary distortions between assets of different types and of different vintages.[9]

NOTES

1. In a small country with capital mobility, prices including interest rates are pegged to world prices. The conclusion also requires appropriate tax treatment of negative cash flows from an asset or project.

2. An exception is made for the conversion of capital assets into stock-in-trade [Section 45(2)].

3. The Rs. 10,000 deduction is first allowed on assets for which b=0.5. Only if the taxable gain falls below zero for these assets may the remainder of the Rs. 10,000 be set off against other assets.

4. Agricultural land transfers are not taxable in India unless the land lies within eight kilometers of the municipal limits - or within the limits - of a town of more than 10,000 persons. Thus, this provision merely closes a possible loophole in urban land acquisition possibilities. For full details see section 2(14) of the Act.

5. Tax progressivity or interest and dividend income deductibility - as is given to a limit under the Act - will weaken this conclusion especially with low yield relative to the sale price.

6. r cannot be less than $\bar{r}$ - otherwise the specified security would be held in preference to the asset paying $\bar{r}$.

7. Retention of a provision as in Section 45(2) - See note 2 - must continue. We are indebted to K.N. Balasubramanian for pointing out this potential loophole.

8. Such a tax is akin to a "stamp duty". We are indebted to A. Bagchi for pointing this out.

9. Chamley (1981) argues that inter-asset distortions of the type caused by the capital gains tax have much higher welfare costs in a growing economy than inter-temporal distortions.

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