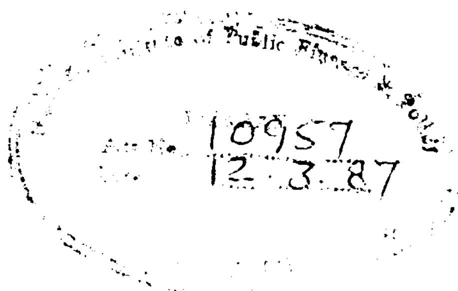
A NEW MEASURE OF FISCAL PRIVILEGE

A DAS-GUPTA

No. 27 FEBRUARY 1987



NATIONAL INSTITUTE OF PUBLIC FINANCE AND POLICY
18/2, SATSANG VIHAR MARG
SPECIAL INSTITUTIONAL AREA
NEW DELHI-110067

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1. The Concept of Fiscal Privilege

The notion of fiscal privilege is finding increasing acceptance in comparing the distortionary effects of personal taxes on rates of return to capital assets. Loosely, an asset is fiscally privileged if the portion of an individual's personal tax base related to that asset is taxed at a lower effective tax rate than the individual's marginal tax rate. The pioneering work of Hills (1984) introduced the 'Degree of Fiscal Privilege' (DFP) as a measure of fiscal privilege. Hills used his measure to analyse the distortionary effects of capital taxes in Britain. More recently, Kay (1986) has used the DFP in a comparison of current British tax treatment of saving with expenditure tax treatment of saving.

In order to justify the need for a measure of fiscal privilege, one can do no better than quote from Hills (1984):

".....it is clear that there is little or no logical structure underlying the existing taxation of savings in the U.K.

"The pattern of fiscal discrimination described is arbitrary in its effects between people saving through different institutions, in different assets and at times of differing inflation. The principles underlying the privileges granted to certain assets and the penalties applied to others are obscure and confused; indeed in most cases it is clear that the discrimination is entirely accidental rather than the object of conscious policy." (P.14)

Since this could easily have been said of most personal tax systems of the world, a measure of fiscal discrimination is an invaluable tool in analysing the distortionary impact of taxes on saving and in assesssing tax reform measures.

2. Requirements for a Measure of Fiscal Privilege

The following properties are clearly minimal requirements for an acceptable measure of fiscal privilege:

a. The measure should provide information on the overall tax treatment accorded to an asset by the personal tax system. In particular, it should allow discrimination between four cases:

   i. the post-tax return exceeds the pre-tax return on the asset due to subsidies from the tax system;

   ii. the post-tax return differs from the pre-tax return by less than the difference implied by the asset holder's marginal tax rate (i.e., the normal case of tax concessions);

   iii. the asset enjoys no special tax privilege; and

   iv. the asset is subject to fiscal penalties in that it is taxed at a rate higher than the holder's marginal tax rate.

b. The measure should be non-arbitrary: the extent of measured fiscal privilege should not vary along with specific assumptions required to be made by researchers.

c. The measure should be well defined over all possible rates of return and whenever an asset holder is taxed or receives subsidies from the tax system.

3. Shortcoming with Hill 'Degree of Fiscal Privilege'

Unfortunately, there is no such thing as "the DFP". A close reading of Hills (1984, especially pages 6 and 29) shows that at least four measures are consistent with what Hills defines as the DFP. Denoting the nominal return on the asset being considered by r, the marginal tax rate by t, the effective tax rate on the asset by s the rate of inflation by p and an (arbitrarily) assumed "underlying real rate of return" by R, the four measures may be written as:

$$DFP1 = (r(t-s) - tp)/(r-p) \times 100$$
$$DFP2 = (r(t-s) - p(t+rs))/(r-p) \times 100$$
$$DFP3 = (Rt(1+p) - rs)/R(1+p) \times 100$$
$$DFP4 = (Rt - rs)/R \times 100$$

The formulae are arrived at by considering four different ways of defining the effective tax rate on the asset consistent with Hills' verbal descriptions[1] These are:

a. The difference in real pre and post-tax rates of return divided by the real pre-tax rate of return: $(r-r(1-s))/(r-p)$.

b. The difference in nominal pre and post-tax rates of return divided by the real pre-tax rate of return: $(r-r(1-s))/(r-p)/(1+p))$.

c. The same as (a) except that the denominator is R: $(r-r(1-s))/R(1+p)$.

d. Same as (b) except that the denominator is R: $(r-r(1-s))/R$.

The real rate of return is, of course, $(x-p)/(1+p)$ for any nominal rate of return, x.

All four formulae suffer from drawbacks in the light of the requirements laid down above. The more serious limitations are that:

i. DFP1 and DFP2 cease to be defined at $r = p$. Furthermore, assets receiving fiscal concessions will end up with negative DFP1 and DFP2 if p exceeds r. Thus, requirements (i) and (iii) fail to be met.

ii. Though Hills attaches great significance to the DFP values + 1 and - 1, DFP3 and DFP4 can always be made to attain one of these values by a suitable choice of R. Thus, they are arbitrary and also fail to satisfy requirement (i).

iii. The ranking of assets by fiscal privilege depends on the particular DFP indicator used (See Table 1 below). Thus Hills' (1984, P.29) claim of consistent rankings is unjustified.

4. A New Measures of Fiscal Privilege

In view of these shortcomings, we define a new measure of fiscal privilege, dubbed the Index of Fiscal Privilege (IFP), which is free of these defects and which possesses several desirable properties.

The IFP is defined as:

$$IFP = 100 \times \frac{r_{po} - r_{nc}}{r_{pre} - r_{nc}} = \frac{t - s}{t} \times 100,$$

where r_{po} is the post-tax rate of return
r_{nc} is the rate of return, post-tax, in the absence of special tax concessions or penalties and r_{pre} is the pre-tax rate of return.

Either all real or all nominal rates of return may be used. The IFP may be interpreted as "the tax revenue sacrifice expressed as a percentage of tax revenue that could have been collected in the absence of special tax treatment, per currency unit of asset purchased." It has the following properties:

i. It takes on values exceeding 100 whenever subsidies which cause post-tax rates of return to exceed pre-tax rates of return are present; a value of exactly 100 when pre- and post-tax returns are equal; values between 0 and 100 whenever there are partial fiscal concessions; and negative values for fiscal penalties. It therefore meets requirement (i).

ii. It is unique and furthermore, well defined provided the asset holder's marginal tax rate is non-zero, thus satisfying requirements (ii) and (iii).

iii. It facilitates comparison with the non-distortionary or proportional expenditure tax regime (expenditure tax treatment implies a value of 100).

iv. It is invariant with the rate of inflation being a ratio of rates of return.

5. Comparison of Measures

We now compare the performance of the four DFP measures and the IFP in measuring fiscal privilege. To do this we draw on a study of rates of return on financial assets in India (Das-Gupta, 1987). Financial assets in India enjoy tax concessions of four types though these concessions are not uniformly applied to all assets. The concessions are:

i. Deductibility for income tax of the amount invested in one or more designated assets such as National Savings Certificates, Life Insurance or Employee Provident (i.e., Retirement) Funds. Deductibility is available in slabs ranging from 100 per cent to 40 per cent with an overall ceiling. A separate ceiling is applicable to certain new equity issues.

TABLE 1

Comparison of Alternate Measures of Fiscal Privilege for India, 1986

Name of Asset	FP1		FP2		FP3				FP4		IFP
	I=3%	I=9%	I=3%	I=9%	I=3% R=3%	I=9% R=3%	I=3% R=5%	I=9% R=5%	R=3%	R=5%	
NSC VI (National Savings Certificate, VI Issue)	113.59	266.33	121.73	291.14	309.47	293.81	195.60	[illegible]	318.00	200.80	373.59
PPF (Public Provident Fund)	60.56	131.67	61.82	141.27	128.86	122.86	87.14	83.72	131.67	89.00	194.18
CFD (Private Sector Company One Year Fixed Deposits)	[illegible]	(14.64)	(6.95)	(39.80)	(101.21)	(94.27)	(50.73)	(46.56)	(1.05)	(53.00)	0.0
PSB (Public Sector Bonds)	[illegible]	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	100.0
NSC VI	[illegible]	101.49	290.88	760.12	758.41	724.42	475.05	451.65	779.67	487.80	447.69
PPF	26.0[illegible]	303.33	144.98	326.13	295.95	282.42	197.57	183.45	303.33	202.00	213.43
CFD	(11.[illegible])	68.60	(13.80)	79.27	(201.78)	(187.92)	(101.07)	(92.75)	(209.33)	(105.60)	0.0
PSB	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	100.0

Notes:
1. Negative figures in parenthesis.
2. NSC VI: Limited deductibility of investment and limited yield deductibility for income tax, limited wealth tax exemption.
   PPF: Limited deductibility of investment and total yield exemption, total wealth tax exemption.
   CFD: No tax deductions.
   PSB: Either limited or total yield deductibility/exemption. Total wealth tax exemption.
3. I: Inflation rate; R: Assumed real rate of return.

ii. Deductibility or exemption from income tax of earnings from designated assets. There is an overall ceiling on the amount of earnings that is deductible, though exempt assets have no ceiling applicable.

iii. Income tax concessions for long-term capital gains (applicable to assets held for more than 36 months).

iv. Deductibility for wealth tax purposes for designated assets. Specific assets enjoy such deductions without any ceiling while another (designated) group of assets has a separate ceiling.

Table 1 presents results for five assets for the various DFP measures and the IFP drawing on rates of return computed in Das-Gupta (1987). It is immediately obvious from the table that:

i. DFP and IFP ranking may not coincide across assets. (Compare DFP1 and DFP2 ranks for both tax brackets and DFP1 and IFP for the 50 per cent tax bracket).

ii. The magnitudes of DFPs differ widely for the same tax bracket and asset. In particular, DFPs can be either negative or positive for the same asset and also disagree on whether the DFP exceeds 100 or not.

iii. Without additional information it is difficult to interpret DFPs with regard to current tax treatment as compared to expenditure tax treatment. The IFP, of course, easily takes care of this problem.

6. Assessing Fiscal Privilege of Financial Assets in India

Table 2 compares the fiscal privilege of selected financial assets under the current tax system in India with that which would obtain under a non-distortionary proportional expenditure tax regime. Fiscal privilege for a given asset may vary across (income-cum-wealth) tax brackets and deduction slabs. Only the maximum fiscal privilege is reported.

The table documents the fiscal bias in the tax system against private sector financial assets. Furthermore, the table shows the wide variation in fiscal privilege across assets with tax revenue sacrifice ranging from zero to 7.33 times the normally collectable tax revenue. These facts coupled with the variation of rates of return across tax brackets provides evidence of the highly distortionary nature of current Indian personal tax treatment of financial assets in comparison with proportional expenditure taxes.

7. Conclusion

In this note a new measure of fiscal privilege, the Index of Fiscal Privilege, is proposed which overcomes some of the defects of the earlier, pioneering measure developed by Hills (1984). The new measure is also more

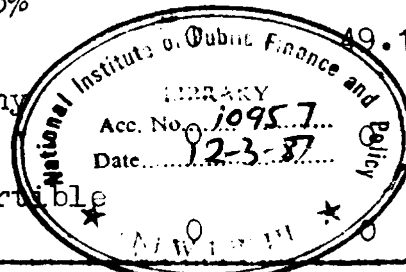
TABLE 2

Ranking of Assets by Maximum Index of Fiscal Privilege After Income and Wealth Taxes: Assessment Year 1987-88

Sl No.	Name of Asset	Fiscal Privilege Minimum	Fiscal Privilege Maximum	Compared to expenditure taxes current fiscal privilege
	(1)	(2)	(3)	(4)
1.	20-year money back policies of the Life Insurance Corporation**	100	733.33	At least as good
2.	20-year endowment policies of the Life Insurance Corporation**	100	490.62	"
3.	National Savings Certificates (VI Issue)*,**	100	447.69	"
4.	National Savings Certificates (VII Issue)*,**	100	419.35	"
5.	10-year Unit Linked Insurance Plan*,**	100	293.55	"
6.	15-year Public Provident Fund	100	213.43	"
7.	New equity issues (7.8% assumed capital gain rate)**	100	189.10	"
8.	New equity issues (15% assumed capital gain rate)**	100	161.88	"
9.	Contributory Provident Funds**	100	154.17	"
10.	Post Office Savings Bank Accounts	100	100	As good
11.	National Savings Certificates (II Issue)	100	100	"

TABLE 2 (Contd')

(1)		(2)	(3)	(4)
12.	Post Office Time Deposits	100	100	As good
13.	Post Office Recurring Deposits	100	100	"
14.	10-year social security certificates	100	100	"
15.	10% tax exempt bonds of public sector undertakings	100	100	"
16.	Special bearer bonds, 1991	100	100	"
17.	Units Scheme, 1964 of the Unit Trust of India	0	100	As good at maximum
18.	Commercial Bank Savings Deposits	0	100	"
19.	Commercial Bank Fixed Deposits	0	100	"
20.	14% tax deductible bonds of public sector undertakings	0	100	"
21.	National Deposit Scheme (Series I and II)	0	100	"
22.	7% Capital Investment Bonds	0	100	"
23.	Long Term Equity Shares (7.8% capital gains rate)	0	84.15	Worse
24.	Long Term Equity Shares (15% capital gains rate)	0	77.48	"
25.	Short Term Equity (7.8% capital gains rate)	0	64.80	"
26.	Indira Vikas Patra	0	63.08	
27.	Short Term Equity (15% capital gains rate)	0	49.15	"
28.	Private Sector Company Fixed Deposits	0	[illegible]	"
29.	Private Sector Convertible Debentures	0	0	"



Notes: 1. *: Fiscal privilege becomes lower if limits of yield exemption under section 80L are crossed and zero if wealth tax exemption limits are crossed.

2. **: Fiscal privilege reduces below 100 if limits of immediate deduction under section 80C or 80CC are crossed.

informative than Hills' measure and has an intuitively appealing interpretation. It is shown that, even in practice, rankings by Hills' DFP measure and the new IFP may differ. The new measure is applied to personal tax treatment of financial assets in India and the wide differences in fiscal privilege received by different financial assets is documented.

Foot Note

1/ Hills, it appears, actually uses measures (3) and (4). Details of the exact formulae used are given in his studies, asset by asset.

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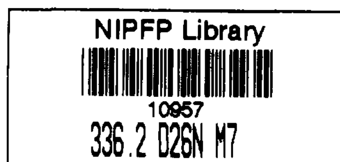
3. Kay, J.A., (1986). "Approaching an Expenditure Tax?", <u>Fiscal Studies</u>, 33-37.



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