

CUTTING TAX RATES TO GENERATE SAVINGS: A NOTE ON THE MALAYSIAN ATTEMPT

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Kadar cukai pendapatan telah dikurangkan untuk semua kelas pendapatan dalam belanjawan 1985, terutamanya bagi meningkatkan peringkat tabungan sektor swasta. Sistem pencukaian baru ini lebih menguntungkan mereka yang berada dalam lingkungan cukai marginal yang tinggi. Ini bermakna ianya kurang progresif berbanding dengan sistem pencukaian yang digunakan dahulu. Pendekatan meningkatkan tabungan ini berasaskan dua andaian berkait. Pertama, pemotongan kadar cukai yang memberi faedah kepada mereka yang kaya akan meningkatkan tabungan total kerana mereka lebih bersikap berjimat. Kedua, kesaksamaan dan tabungan tinggi adalah dua matlamat yang bertentangan apabila dilakukan melalui sistem cukai. Rencana ini menerangkan bahawa asas andaian-andaian tersebut tidak semestinya sah.

Income tax rates across all income brackets were reduced in the budget of 1985, primarily to increase the rate of private savings in the economy. However, those in higher marginal tax brackets enjoyed greater tax savings, resulting in the income system being less progressive than before. Two related assumptions underlie this approach to increase savings. First, cutting taxes in favour of the rich will increase total savings because they are better savers. Second, equity and higher savings are conflicting goals when pursued via the tax system. This note clarifies the thinking behind both notions and argues that neither is completely justified.

I. INTRODUCTION

The reduction of income tax rates across income brackets announced in the Budget of 1985 captured public imagination as no other tax measure has done in recent years. Proposed primarily as a measure to increase the rate of savings in the economy, it left more resources in the hands of taxpayers than the previous schedule.¹ However, while every group received a tax reduction, the magnitude depended on the marginal tax bracket of the taxpayer. In effect, those in the higher marginal tax brackets benefitted most by way of "tax savings".² Since the rich were perceived to be better savers, this strategy was seen as consistent with the goal of increasing total savings.³ That these measures made the (nominal) tax rates less progressive was noted but shrugged off as inevitable.

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Two related assumptions underlie this particular approach to generate more savings. First, cutting taxes in favour of the richer taxpayers will increase total savings in the economy, because they will save more of the additional resources so obtained. Second, equity and higher savings are conflicting goals when pursued via the income tax system. The choice between the two is thus guided by perceived priorities. This note seeks to clarify the thinking behind these notions and argues that neither is completely justified.

II. TAX CHANGES

The new income tax schedule announced in the budget reduced the number of income brackets from 12 to 9, with the nominal rates ranging from 5 percent to a maximum of 40 percent instead of the previous range of 6 to 55 percent [5, Table I]. Table I compares the new and old schedules and indicates the "tax savings" (or the difference in tax payable under the new and old schedules) received by each income bracket.

Several observations are worth making. First, the new rates impart savings to all groups subject to tax relative to the previous schedule. This, of course, means lower revenues, and the loss estimated for the cut in tax rates alone is put at \$310 million [6].⁴ Of course, if revenues can be generated through other means, this loss need not be a matter of great concern. Second, it is evident that the equity objective has been left by the wayside, since tax reductions favour those in the higher marginal tax brackets. How serious is the impact of these changes on income distribution? In general, the ability of the income tax system to effect changes in income distribution will depend on its coverage; the wider the coverage, the greater its potential to bring about income changes. It is estimated that only one-tenth of all wage-earners pay tax, and this mitigates, to some extent, the negative impact the new schedule has on income distribution. Even so, this does not conceal the fact that the new changes have watered down perhaps the most progressive component of the Malaysian tax system.

III. THE ISSUE.

It is widely held that a very progressive income tax structure is not conducive to generating savings. Thus, the tax structure must necessarily be made less progressive (or more regressive) if greater levels of savings are to be induced via the income tax mechanism. That this line of reasoning persists in Malaysia is evident from the focus of post-Budget discussions reported widely in local newspapers and business magazines [7] [10] [11] [12]. Commentators chose to dwell on the end-use of such anticipated savings. Thus, many expressed concern that the additional savings rather than being transformed into productive investment, will be squandered in wasteful consumption by the rich. Yet others feared the rich may stash their new-found resources abroad rather than investing these domestically.

While these concerns are all valid, the more fundamental question was side-stepped. The government has opted to forego \$310 million in income tax receipts in order to induce more private savings. But is leaving the bulk of this revenue foregone in the hands of the richer taxpayers the most effective way of attaining that objective?

INCOME TAX PAYABLE UNDER THE EXISTING AND PROPOSED TAX STRUCTURE

Chargeable Income (\$)	Proposed Tax Rates	Tax Payable		Tax Reduction (\$)
		Existing (\$)	Proposed (\$)	
1 - 2,500	5% on the first	150	125	25
2,501 - 5,000	8% on the next on the first	225 375	200 325	25 50
5,001 - 10,000	12% on the next on the first	675 1,050	600 925	75 125
10,001 - 20,000	15% on the next on the first	2,250 3,300	1,500 2,425	750 875
20,001 - 35,000	20% on the next on the first	5,000 8,300	3,000 5,425	2,000 2,875
35,001 - 50,000	25% on the next on the first	6,000 14,300	3,750 9,175	2,250 5,125
50,001 - 70,000	30% on the next on the first	9,000 23,000	6,000 15,175	3,000 8,125
70,001 - 100,000	35% on the next on the first	14,750 38,675	10,500 25,675	4,250 12,375
Above 100,000*	40%			

* Exceeding \$300,000 - Excess Profit Tax at 5%

Source: [5]

It is easy to understand why no one seriously questioned this approach to raising overall savings. There is consistent evidence that savings, as a proportion of income (referred to as the average propensity to save, or APS), rises with the level of income. This is interpreted to mean that the rich save more than the poor. Consequently, a progressive tax schedule, by falling more heavily on the rich, dampens their ability (incentive) to save. In order to reverse the process, the tax schedule must be made less progressive by allowing tax cuts favouring the rich relative to the less rich taxpayers.

But the crux of the matter lies in the fact that it is not the APS but the propensity to save out of each additional dollar of income received (i.e., the marginal propensity to save, or MPS) that is important in this context.

This point is easier to grasp when considered in the context of two alternative tax schedules yielding identical tax receipts. If the MPS is positively related to income level, the less progressive schedule that leaves more resources in the hands of the rich will generate more savings⁵ than the more progressive one of identical yield. This is because those in higher income brackets save more out of each dollar refunded than do those in the lower income groups.

On the other hand, if the MPS remains constant across income levels, moving from a progressive schedule to a less progressive one (yielding identical tax revenue) will have no impact on total savings. The reason is obvious. The increased savings of those in the higher income brackets will be completely offset by the reduction in savings forced on those in the lower income groups by the switch in the progression of the tax rates.

It is also clear that the conflict between raising the level of savings (via tax-cuts favouring the rich) and achieving a more equitable distribution of income only arises in a situation where the MPS rises with income. If this is not the case, such a tax strategy only worsens existing income inequities with no favourable impact on savings.

IV. AN ILLUSTRATION

The argument developed above can be illustrated using some tax and saving functions.⁶ To simplify analysis, a two-person economy is assumed where the second person receives a higher level of income than the first. Using Y to represent income, by definition Y_2 is greater than Y_1 , and the subscripts 2 and 1 denote the richer and poorer taxpayers, respectively.

As an example of a regressive income tax structure, a proportional tax function of the following form may be used:

$$(1) T_i = bY_i$$

where T = tax receipts from individual i ; and Y is the income of individual i .

The tax is considered regressive because the marginal tax rate is invariant to income; i.e.,

$$(2) \quad \frac{dT_i}{dY_i} = b, 0 < b < 1$$

where b is a constant.

Thus irrespective of the income level, tax liabilities are an identical proportion of the income base. Both rich and poor taxpayers face the same marginal (and average) tax rate.

On the other hand, a progressive tax function is one where the proportion of taxes paid rises with income. A simple example is of the form

$$(3) \quad T_i^* = cY_i^2$$

That the marginal tax rate increases with income is shown by taking the first derivative with respect to income

$$(4) \quad \frac{dT_i^*}{dY_i} = 2cY_i, 0 < c < 1$$

Clearly, income increases are paralleled by increases in the marginal tax rate.

The tax collected from the two individuals under a proportional tax structure is given as

$$(5) \quad T_1 = bY_1$$

$$(6) \quad T_2 = bY_2$$

The total taxes raised in the economy is, therefore,

$$(7) \quad \begin{aligned} T &= T_1 + T_2 \\ &= b(Y_1 + Y_2) \end{aligned}$$

Similarly, if the more progressive tax system is in effect, the tax liability of each individual is given as

$$(8) \quad T_1^* = cY_1^2$$

and

$$(9) \quad T_2^* = cY_2^2$$

and the total taxes raised is

$$(10) \quad \begin{aligned} T^* &= T_1^* + T_2^* \\ &= c(Y_1^2 + Y_2^2) \end{aligned}$$

If the progressive tax is replaced by a proportional income tax yielding identical tax revenue (i.e., $T = T^*$), it must be true that expression (7) must equal (10), or

$$(11) \quad b(Y_1 + Y_2) = T = c(Y_1^2 + Y_2^2) = T^*$$

It follows from the above that the value of c can be defined as

$$c = \frac{b(Y_1 + Y_2)}{(Y_1^2 + Y_2^2)}$$

$$(12) \quad = \frac{T}{(Y_1^2 + Y_2^2)}$$

where T is identical to T^* .

We now require two types of saving functions: one with a constant MPS, and the other with a MPS that rises with income.

As an example of the former, consider

$$(13) \quad S_i = -B + e(Y_i - T_i), \text{ where } 0 < e < 1$$

Where S is the saving of individual i ; B is the intercept (constant), and $(Y_i - T_i)$ is disposable income of individual i . In the function, saving is postulated as dependent on the disposable income (i.e., income less tax). The first derivative with respect to disposable income yields the MPS, i.e.,

$$(14) \quad \frac{dS_i}{dYd_i} = e$$

where $Yd_i = (Y_i - T_i)$ and e is a constant.

It is clear that while e is not influenced by income, the APS of this function increases positively with the level of income.

As an example of a saving function with a rising MPS, we can utilise

$$(15) \quad S_i^* = -A + f(Y_i - T_i) + g(Y_i - T_i)^2$$

where both f and g are positive but less than one. All other notations are as previously defined. Once again, taking the first derivative with respect to disposable income yields the MPS

$$(16) \quad \frac{dS_i^*}{dYd_i} = e + 2g(Y_i - T_i)$$

The MPS clearly increases with income, and it can be easily verified that the APS does the same, too.

It can now be demonstrated that if the MPS is constant with respect to income, switching from a progressive tax to a less progressive one (i.e., a proportional tax in our example) yielding identical revenue will not raise the level of savings.

Assume that the income tax is progressive and the MPS is constant. The savings generated within this framework is obtained by substituting (3) into (13), for each individual saver.

$$(17) \quad S_1 = -B + eY_1 - ecY_1^2$$

$$(18) \quad S_2 = -B + eY_2 - ecY_2^2$$

The total savings in the economy is given as

$$S = S_1 + S_2$$

$$= -2B + eY_1 + eY_2 - ecY_1^2 - ecY_2^2$$

$$= -2B + e(Y_1 + Y_2) - ec(Y_1^2 + Y_2^2)$$

$$(19) \quad = -2B + e(Y_1 + Y_2) - e(T)$$

Now consider a change in the tax. Assuming that the MPS remains unchanged and the tax is made less progressive through the introduction of a proportional income tax. The saving of each individual (now distinguished by a prime to indicate saving after a proportional tax) is found by utilising (13) again and substituting for tax using (1).

$$(20) \quad S'_1 = -B + eY_1 - ebY_1$$

$$(21) \quad S'_2 = -B + eY_2 - ebY_2$$

The total savings after the proportional income tax is thus

$$S' = S'_1 + S'_2$$

$$= -2B + eY_1 + eY_2 - ebY_1 - ebY_2$$

$$= -2B + e(Y_1 + Y_2) - eb(Y_1 + Y_2)$$

$$(22) \quad = -2B + e(Y_1 + Y_2) - e(T)$$

Since expression (22) and (19) are identical, it upholds the contention that if MPS does not increase with income, making the income tax more regressive will not increase total savings. In other words, sacrificing equity does not generate more savings in this context.

It is easy to see why this is so. Since tax receipts are unchanged, the disposable incomes lost by the poor after the proportional income tax accrues entirely to the rich. However, since their marginal propensities to save are identical, the increased savings by the rich (made possible by the fall in marginal tax rate in their favour) is offset by the dissaving of the poorer taxpayers, who now have less disposable incomes than before.

Now consider the case where the MPS is positively correlated with income. In such a situation, a less progressive tax (a proportional tax in our example) will foster greater savings than a more progressive tax of identical yield. This is shown by the example that follows.

Using (3) and (15), the savings of individuals in the economy may be derived, given a progressive tax function and a variable MPS.

$$(23) \quad S_1^* = -A + fY_1 - fcY_1^2 + g(Y_1 - cY_1^2)^2$$

Similarly

$$(24) \quad S_2^* = -A + fY_2 - fcY_2^2 + g(Y_2 - cY_2^2)^2$$

Total savings is therefore

$$\begin{aligned} S^* &= S_1^* + S_2^* \\ &= -2A + f(Y_1 + Y_2) - fc(Y_1^2 + Y_2^2) + g(Y_1 - cY_1^2)^2 \\ &\quad + g(Y_2 - cY_2^2)^2 \end{aligned}$$

Using (11), and simplifying the last two terms gives

$$(26) \quad S^* = -2A + f(Y_1 + Y_2) - f(T) + gY_1^2(1 - cY_1)^2 + gY_2^2(1 - cY_2)^2$$

If an identical revenue is raised via a proportional income tax instead, the saving of individual taxpayers is found using (1) and (15). Note that S'' indicates the level of savings after the proportional tax.

$$(27) \quad S_1^{*'} = -A + fY_1 - fbY_1 + g(Y_1 - bY_1)^2$$

Similarly

$$(28) \quad S_2^{**} = -A + fY_2 - fbY_2 + g(Y_2 - bY_2)^2$$

And total savings is

$$S^{**} = S_1^{**} + S_2^{**}$$

$$(29) \quad = -2A + f(Y_1 + Y_2) - fb(Y_1 + Y_2) + g(Y_1 - bY_1)^2 + g(Y_2 - bY_2)^2$$

Again using (11) and simplifying the last two terms yields

$$(30) \quad S^{**} = -2A + f(Y_1 + Y_2) - f(T) + gY_1^2(1 - b)^2 + gY_2^2(1 - b)^2$$

Is expression (30) larger in value than expression (26)? If it is, overall savings will increase. Stated differently, total savings will rise if

$$(31) \quad gY_1^2(1 - b)^2 + gY_2^2(1 - b)^2 - gY_1^2(1 - cY_1)^2 - gY_2^2(1 - cY_2)^2$$

Rearranging the above yields

$$(32) \quad gY_2^2(1 - b)^2 - gY_2^2(1 - cY_2)^2 - gY_1^2(1 - cY_1)^2 + gY_1^2(1 - b)^2$$

That the expression above will hold under reasonable assumptions is readily established as follows. We know that relative to the progressive tax, the proportional tax decreases the disposable incomes of the poorer taxpayers but increases the disposable incomes of the rich. However, since total tax revenues are unchanged, the disposable incomes lost by the poor are identical to the gain in disposable incomes accruing to the rich (in absolute value). In our example

$$(Y_2 - bY_2) - (Y_2 - cY_2^2) = (Y_1 - cY_1^2) - (Y_1 - bY_1)$$

or

$$(33) \quad Y_2(1 - b) - Y_2(1 - cY_2) = Y_1(1 - cY_1) - Y_1(1 - b)$$

The expression on the left represents the gain in the disposable income of the richer taxpayer and that on the right indicates the loss suffered by the poorer taxpayers as a proportional tax replaces a progressive one of identical yield.

It must be true that the after-tax income of the richer taxpayer remains larger than that of the poorer taxpayer after a proportional tax; that is,

$$(34) \quad Y_2(1 - b) > Y_1(1 - b)$$

Similarly, it is reasonable to expect the disposable income of the rich will exceed that of the poorer taxpayer after a progressive tax; that is,

$$(35) \quad Y_2(1 - cY_2) > Y_1(1 - cY_1)$$

If the above are plausible assumptions, it follows that squaring the terms in (33) gives⁷

$$(36) \quad Y_2^2(1 - b)^2 - Y_2^2(1 - cY_2)^2 > Y_1^2(1 - cY_1)^2 - Y_1^2(1 - b)^2$$

Multiplying throughout by g establishes the validity of expression (32) derived previously.

The reason why total savings increases is clear; although the proportional tax reduces the disposable income of poorer taxpayers and impairs their ability to save, the dissaving from each dollar lost remains small because their MPS are low. On the other hand, the proportional tax puts more resources in the hands of richer taxpayers who also are assumed to save more out of each dollar received. Although the disposable incomes lost by the poor are equal to the incomes gained by the rich, more savings are generated because of the higher MPS of the rich. In other words, the increased savings of the rich may be expected to offset the dissavings of the poor, resulting in a higher overall level of savings.

V. IMPLICATIONS

The essence of the illustration yields some implications about the budget strategy of the Malaysian government.

Unlike our example, total tax receipts are not constant, but are expected to fall with the switch from the progressive to the less progressive schedule. While the tax liabilities of the low income taxpayers are not expected to change much, that of the high income groups decrease substantially. Consequently, the loss of revenue finances primarily the increased resources accruing to the rich.

If the MPS is invariant with respect to income, the strategy will still increase overall savings, but only because more resources are in the hands of taxpayers *per se*, and not because these resources were primarily channelled to the rich. Stated differently, if the MPS is constant, an identical increase in savings can just as easily be obtained if the tax breaks are given entirely to the low income taxpayers instead. Thus a less progressive tax schedule is not crucial to generating more savings in this context. In fact, such an approach needlessly aggravates existing income inequities.

On the other hand, if the MPS does vary positively with income, the same loss of receipts will generate more savings (than in the situation discussed above), if these resources are redirected to the rich. In such a context, the government strategy is properly conceived to attain the target of higher savings. Note that in this instance, granting the tax breaks to the poor will not generate as much savings because of their lower MPS. In addition, the conflict between the saving and equity objective becomes real.⁸

VI. FRAGMENTARY EVIDENCE

From the foregoing discussion, it is evident that the behaviour of the MPS

with respect to income determines the success of the adopted approach. This, of course, is an empirical issue and it is uncertain if planners had firm information on this aspect. Yet what limited evidence there is, affords no clear-cut conclusion.

To the best of our knowledge, the only countrywide survey on household saving (HSS) was conducted in 1960, and yielded usable responses from 5,147 households. The published data present average savings for seventeen average income categories and allow us to test the behaviour of the MPS across the income groups surveyed at a given point in time.⁹

To test the hypothesis of a rising MPS, the following savings function was estimated:

$$(37) \quad S = -A + bY + cY^2 + e$$

where S is household savings (excluding consumer durables) and Y is the annual income before tax, both measured in Malaysian dollars.¹⁰ The Y term is added to the equation as an independent variable to test for non-linearity.¹¹ However, the function is non-linear only in the independent variable, not in the coefficients.

If the MPS moves positively with income, we expect *a priori* that the coefficients of Y and Y^2 will be positive and significant. The result from our cross-section data (i.e., regressing savings against income for groups at different levels of income) is as follows:

$$(38) \quad S = -743.6^{**} + 0.3115Y^* - 0.0000001Y^2$$

$(-2.44) \quad (7.11) \quad (-0.14)$

$$R^2 = 0.972$$

Note: Figures in parentheses are t values.

*Significant at 0.01 level.

**Significant at 0.05 level.

The coefficient of the Y^2 term has the "wrong" sign and is not significantly different from zero; taken together with the positive and significant coefficient of the Y term, it suggests a constant MPS. It is worth noting that in the United States, cross-section data have been found to generally support the hypothesis of a rising MPS [9, p. 232].

The evidence is indicative but not conclusive, especially since twenty-six years have elapsed and saving patterns may have changed.

More recent data comes from the Household Expenditure Survey, 1973 (HES), which covered over seven thousand households [13, Appendix Table A.1] Average income and consumption data for twenty broad categories covering urban and rural households are available.

Since what is not consumed (and paid out in taxes) is assumed saved, the behaviour of the marginal propensity to consume (or the additional

consumption incurred out of every dollar gained) can be used to deduce how the MPS moves with respect to income. Both concepts are inversely related.

Regressing consumption against income for groups at different points on the income scale, a consumption function of the following form was estimated:

$$(39) \quad C = \beta_0 + \beta_1 Y_1 + \beta_2 Y^2 + \mu$$

Where C is average household consumption expenditure per month and Y is average monthly income. Since data on tax payments are not available, gross income rather than disposable income was used.

In the case of a consumption function, significant negative coefficient of the Y^2 term would be consistent with the hypothesis of a falling marginal propensity to consume, which in turn suggests a rising MPS, with respect to income.

The estimated function is as follows:

$$(40) \quad C = 21.125* + 0.856Y* - 0.0000951*Y^2$$

$$(7.20) \quad (85.93) \quad (-21.10)$$

$$R^2 = 0.99$$

Note: Figures in parentheses are t values.

*Significant at 0.01 level.

Both the coefficients are significant and the negative sign associated with the coefficient of Y^2 suggests that the MPC declines as incomes increase. In other words, these data support the hypothesis of a rising MPS.

How representative are the data of taxpayer behavior? Unfortunately, the HES data underrepresent households that fall within the income tax liable categories. The mean income generated from the survey data is about \$366 per month. For income tax laws prevailing in 1973, an average-sized household must earn over \$396 a month before it becomes liable for income tax.¹² In fact, 70 percent of the households in the sample earned below this income threshold.¹³

In this connection, it is worth noting that the saving survey (HSS) discussed earlier is more representative of taxpayer behaviour. The mean income for the entire sample was \$845 per month, and only about 13 percent of the households in the sample earned less than \$500 per month.

It is tempting to infer that saving habits may have changed between 1960 and 1973 and that the recent data reflect this change. But such a conclusion amounts to mere speculation. It must be pointed out that it is not inconceivable for consumption (and saving) patterns to change substantially at income levels beyond those covered by the HES. Thus extrapolating

consumption beyond the range used to construct the regression line is hazardous.

The limited empirical evidence offers no firm conclusion on saving behaviour at the margin. It is instructive, therefore, to look at evidence elsewhere where the data are stronger. In the United States, attempts at studying the behaviour of the marginal propensity to consume (MPC) have yielded contradictory results, depending on whether cross-section or time series data are used. Time series studies often suggest a constant MPC, while cross-section studies yield a declining MPC [2, pp. 76-77]. However, when the data have been consistent with a rising MPS (or a declining MPC), the differences in propensities to save across incomes have been small [2,8]. In fact, Musgrave [8, pp. 45-143] concludes that tax structure changes within feasible bounds are not likely to significantly increase savings since the differences in propensities to save are slight.

The evidence--although scanty--does not allow for optimism about the final outcome of the budget strategy.

VII. CONCLUDING COMMENTS

In light of the above, it appears fair to conclude that an approach of providing direct incentives to save is more likely to be effective. In the past, several measures have been introduced to encourage saving, like limited tax exemptions on saving and fixed deposits, and total exemption for interest on government securities. But these do not go far enough--complete exemption of interest on savings would be a bolder step that undoubtedly favours the rich but provides a direct incentive to both rich and poor to increase savings.¹⁴

A sizeable proportion of private saving is in the form of corporate retained earnings, contributions to pension schemes and private housing. Incentives directed at these sources will certainly have a more immediate impact on overall savings. Furthermore, the impact of the corporate tax on corporate saving has been found to be high in developed countries and may affect saving negatively more than most other taxes [1]. Thus, a growth-oriented strategy suggests the need for lowering the tax on business profits.¹⁴

A final comment on the changes in the personal income tax rates is necessary.

The reduction of the maximum marginal tax rate from 55 percent to 40 percent corrected a long-standing discrepancy between the income tax schedule and the corporate tax rate of 40 percent. The recent adjustment finally harmonised the two, eliminating tax avoidance through the formation of "companies of convenience."

Furthermore, because past inflation had pushed many taxpayers into higher tax brackets, an overall reduction in rates had become imperative. However, the amendments could have been better planned to distribute tax savings more evenly across income groups, more so because evidence on the behaviour of the MPS remains inconclusive.

Tax burdens are lowered more equitably when tax reliefs are deducted from tax liabilities rather than chargeable incomes. This approach ensures that savings imparted to taxpayers will not increase with their level of income.¹⁵

Of course, granting reliefs in this manner leaves the marginal (nominal) tax rates unaffected, although total tax burdens are reduced. It is often argued that if the marginal rates are not reduced, work incentive is dampened. However, what is true for an individual need not necessarily be true for taxpayers as a group.¹⁶ The net effect hinges on the response of taxpayers at different points on the income scale. There is some evidence to suggest that the disincentive effect is usually cancelled out, and that this effect, in any case, is strongest amongst low income workers who fall outside the income tax net.

NOTES

¹Another reason cited is "to reduce tax rates for all categories of taxpayers" [5, pp. 20-21]. This aspect is touched upon in the last section of this note.

²"Tax savings" may be defined as the reduction in tax payable as a result of the switch from the old to the new tax rate schedule.

³The deputy secretary general of the Treasury revealed the thinking of policy-makers when he expressed the hope that the tax reductions to the middle and higher income groups will be used "for greater savings and investment rather than consumption" [quoted in 12, p. 21].

⁴All dollars refer to Malaysian currency.

⁵The underlying assumption here is that saving behaviour of both groups is a positive function of disposable income (defined as total income less tax liabilities). The assumption is probably sound in most instances. But it is worth adding that if one is saving for a fixed future income target, a tax that reduces disposable income may well induce greater thrift and force greater individual saving.

⁶The tax functions used here are guided purely by convenience. They are not meant to approximate forms that are empirically realistic in the Malaysian context.

⁷Note that if $(A) - (B) = (C) - (D)$, such that $A > D$ and $B > C$, it must be true that $(A)^2 - (B)^2 > (C)^2 - (D)^2$ for all values of A, B, C and D.

⁸This is not to suggest that cutting taxes favouring the rich represents the best way of generating savings. Given that this objective is sought through this particular approach a greater measure of success is obtained when the MPS rises with income level.

⁹Data are drawn from [4, p. 36].

¹⁰It is conventional to use disposable income, but using gross income need not be a serious distortion. There is not much gained by subtracting taxes from total income when other fixed contractual payments (like rent, food and educational expenses) which reduce income left over are not isolated [4, p. 34]. Besides, a significant positive correlation exists between gross incomes and disposable incomes.

¹¹See [2] for a similar approach.

¹²The calculation is based on a household of two adults and three children. Only standard deductions were taken into account. If other incidental deductions are included, the threshold may be even higher.

¹³The mean income for the highest income category was about \$2,230 per month.

¹⁴This, for instance, was implemented recently in Singapore.

¹⁵For example, subtracting child relief from the total tax payable yields an *equal increase* in the disposable income to both the rich and poorer taxpayer if they have the same number of children. The current method of subtracting these allowances from the chargeable income grants more benefits to those in the higher marginal tax brackets.

¹⁶Empirical evidence on the impact of tax on work is often inconclusive or reveals only modest effects [3].

REFERENCES

1. Brittain, J.A. *Corporate Dividend Policy* (Washington: Brookings Institution, 1966).
2. Hubby, R.D. "A Nonlinear Consumption Function Estimate from Time-Series and Cross-Section Data." *Review of Economics and Statistics*, Vol. 53, February 1971, pp. 76-79.

JETHA, N. "Taxation and Economic Behavior: A Review of Recent Literature," *Bulletin for International Fiscal Documentation*, Vol. 34, No. 4, April 1980, pp. 156-60.
3. Lee, Hock Lock *Household Saving in West Malaysia and the Problem of Financing Economic Development* (Kuala Lumpur: Faculty of Economic and Administration, University of Malaya, 1971).
5. Ministry of Information *The Budget 1985* (Kuala Lumpur: 1984).
6. Ministry of Finance *Memorandum to the 1985 Budget* (Kuala Lumpur: 1984).
7. Munir, Majid "Budget Talk", *Malaysian Business*, Nov. 1, 1984, pp. 12-22.
8. Musgrave, R.A. "Effects of Tax Policy on Private Capital Formation", in Commission on Money and Credit, *Fiscal Debt and Management Policies* (Englewood Cliffs, New Jersey: Prentice Hall, 1962) pp. 45-143.
9. Pindyck, R.S., and Rubinfeld, D.L. *Econometric Models and Economic Forecasts* (New York: McGraw Hill, 1962).
10. The STAR (Kuala Lumpur: October 25, 1984).
11. The STAR (Kuala Lumpur: October 26, 1984).
12. The STAR (Kuala Lumpur: October 29, 1984).
13. Visaria, P. "Incidence of Poverty and the Characteristics of the Poor in Peninsular Malaysia, 1973", *World Bank Staff Working Paper No. 460*, May 1981.