

## TAX EVASION: AN EMPIRICAL STUDY OF TAXPAYERS' BEHAVIOUR

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*"There is a considerable minority of taxpayers who . . . deliberately seek to cheat their fellows by understating their liability to assessment"*  
Royal Commission on Income Tax 1920

In political and economic terms there are few matters as important as the taxes which people pay to their respective Governments [Song and Yarbrough, 1978]. In modern society, taxation is the principal method of transferring purchasing power from the individual to the State. Consequently, all individuals are affected not only by the various taxation measures but also by the degree of tax noncompliance. This latter phenomenon, which is more commonly referred to as tax evasion, has been attracting increasing worldwide attention from economists, social scientists, policy makers and government officials. In a recent book on the underground economy Bawley (1982) argues that tax evasion is an increasingly critical problem facing the democracies of the western world. This paper, which is divided into four sections, attempts to improve our understanding of the phenomenon of tax evasion. In section 1, a brief discussion of the problem of tax evasion is presented. Section 2 suggests a behavioural model which seeks to identify the various influences which determine an individual's motivation to evade taxation. In testing this model we have utilised the measured responses of a group of Irish taxpayers. Section 3 outlines the research methodology. The final section presents an analysis and discussion of the research findings. The findings suggest that Government might do well to assume an educative role in encouraging their citizens toward greater tax compliance, and to redistribute tax burdens in a manner which is perceived to be more equitable.

### 1. The Context of Tax Evasion

The recent focus on the phenomenon of tax evasion originated primarily in the United States in the late 1970s. Much of it can be attributed to

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Professor Peter Gutmann (1977) who estimated the size of the underground economy in the United States for 1976 to be slightly in excess of ten per cent of officially reported Gross National Product for that year. Gutmann's work received widespread attention from the popular media since he was the first to objectively estimate the size of a hidden economy which many people knew existed but whose scope they were unable to quantify. Prior to that time media coverage of the underground economy had been purely anecdotal.

Subsequently, another U.S. economist, Edgar Feige (1979) provided alternative estimates of the hidden economy which were twice those of Gutmann and which suggested a growth rate of 30% per annum. Soon after the American Internal Revenue Service, in partial response to criticism that it was not taking the underground economy seriously, conducted a study of its own [IRS 1979a]. This IRS study produced estimates which were much more conservative. Yet, in a separate publication in the same year, the IRS stated that "there are strong indications that at least 26% of respondents admitted to purposely understating their tax liability" [IRS 1979b].

Following the precedent set in the United States the phenomenon of tax evasion quickly found its way into the public consciousness of other countries. In Ireland there has been a great deal of official concern over tax noncompliance behaviour. An amnesty for tax evaders was announced in 1976, but it produced only derisory amounts of revenue. More recently, the Minister for Finance clearly indicated his "considerable disquiet about the level of tax evasion in particular." [Financial Statement, 1983]. Irish political concern with the problem of tax evasion has been mirrored by those administering the taxation system. The Inspector of Taxes Association considers that "evasion of tax by the self-employed is so widespread . . . that to a very large extent it (the Irish income tax) is a discretionary tax . . . the (self-employed) taxpayer seems to make a judgement as to the amount of tax he is willing to pay and declares his income to the extent required to achieve that result". [Inspector of Taxes Association, 1980].

The phenomenon of tax evasion raises a number of important implications. One is the obvious impact tax evasion has on the tax burdens of others. Because of tax evasion, conventional wisdom suggests that higher tax rates, than would otherwise be necessary, must be imposed upon "honest" taxpayers. Simultaneously, this increase in tax burdens may have a corrupting effect in that it may encourage previously honest taxpayers to engage in evasion [Mason and Calvin, 1978]. Moreover, since tax evasion results in a transfer of disposable income and wealth

from the honest to the dishonest it may therefore be viewed as a highly inequitable feature of a taxation system. This is a serious issue since there is general consensus among taxation theorists that equity is the primary characteristic of a good taxation system. It may also be argued that tax evasion, once rooted, will remain a permanent feature of the tax system in the future, since successful evaders are likely to continue rather than discontinue their illegal practice. Indeed the existence of an underground economy may also involve indirect costs arising from a lower tendency to comply with other types of rules and regulations [Hansson, 1981].

Another, but not so obvious impact of tax evasion, is its distorting influence on macroeconomic statistics. If underground activities are conducted on a significant scale and growing more rapidly than legal activity then, if national accountants omit them from their calculations, estimates of national income and subsidiary statistics may be irrelevant as overall measures of economic activity and misleading for purposes of economic analysis [Blades, 1982]. Thus, the size and growth of the official economy may be understated, unemployment statistics may be exaggerated and inflation may be overstated — on the plausible assumption that prices are lower in the hidden economy. Indeed Feige (1980) has suggested that if underground prices and employment were included in official statistics, we might find a sufficient increase in employment and decrease in inflation to explain away the great economic puzzle of “stagflation”. It follows, therefore, that policy makers may be responding to false economic signals and the bias in these signals may lead to misguided public policy decisions. Thus, the O.E.C.D. (1980) expressed the view that the official unemployment rate can no longer be regarded as a good policy indicator. In the succinct words of Henry (1980), “it (tax evasion) makes the conduct of economic policy more difficult if our key economic indicators are biased by large and varying amounts”.

Given these significant problems associated with tax evasion, it is critical that democratic societies acquire knowledge of the size, growth, composition and causes of tax noncompliance. It is particularly important to understand the cause of tax evasive behaviour since this is a prerequisite to developing effective remedies to combat it. This is the primary motivation for the development and testing of the following behavioural model.

## 2. Behavioural Model of Tax Evasion

For tax evasion to occur there are two essential elements, namely, motivation and opportunity. Each of these elements must be present

in generous quantities for tax evasion to flourish. Thus, if it were possible to eliminate the opportunity to evade, for example, by the appropriate deduction of tax at source, then it would be theoretically possible to eliminate tax evasion. Tanzi (1980), stressing that evasion can only occur when the opportunities exist, adds “this last citation is very important and probably much much more important than all the statements about tax morality or national propensities for tax evasion.” Motivation to evade taxation is traditionally explained in terms of economic decision making under uncertainty. The taxpayer has a choice between two main strategies: (1) he may comply with tax legislation and disclose his true income, or, (2) he may declare less than his true income. With this latter alternative his monetary payoff will depend on whether or not he is detected by the taxation authorities.

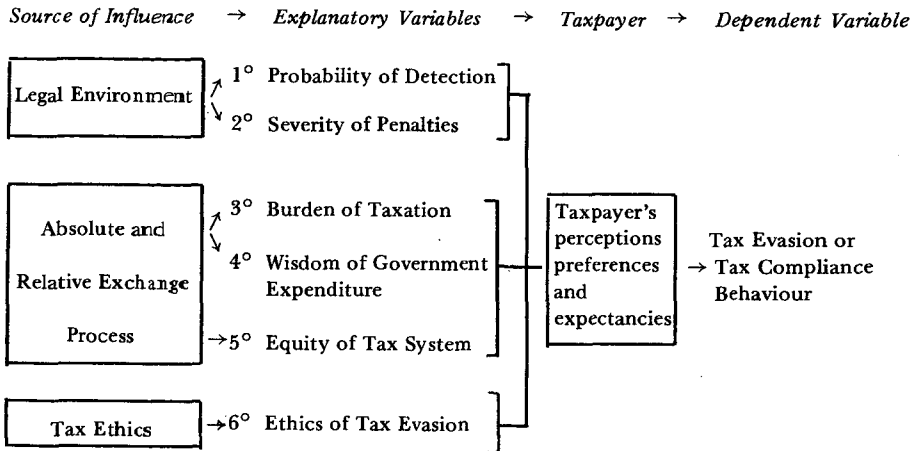
In this context, policy directed against tax evasion behaviour would draw heavily on the deterrence doctrine which is basically a perceptual theory. As a perceptual theory, the fundamental deterrence proposition is that the perception of certain and severe penalties will restrain people from committing sanctionable behaviour. In the classic words of Bentham [Burns, 1970], “if the risk of punishment is sufficient to outweigh the prospect of gain, the potential lawbreaker will, as a rational man, choose to stay within the limits of the law.” Policy directed against tax evasion behaviour would therefore involve increasing the probability of detection and the severity of penalties.

Empirical tests of this deterrence proposition are now common, but researchers have found that in addition to penalties there are other important influences in explaining various forms of criminal behaviour. Some research has been conducted into tax evasion behaviour. Schwartz and Orleans (1967) concluded that appeals to conscience and to civic responsibility were more powerful than the threat of penalties in bringing about tax compliance. Likewise, Dornstein (1976) found that conformity to tax regulations was influenced by basic orientations (including morality) of taxpayers toward taxes and the tax system. Moreover, Spicer (1975) found that perceptions of inequity were significantly associated with tax evasion behaviour. Indeed Mason and Calvin (1978) found that the specific link between tax evasion and general deterrence was uncertain at best.

In view of these findings it appears to be more fruitful to explain motivation to evade taxation from a wider perspective than just the notion of deterrence. As Dean *et al* (1980) remark: “it is more appropriate to learn about taxpayers’ attitudes towards the tax system rather than economists’ myths about taxpayers.” The behavioural model of

tax evasion, which is subject to empirical testing, is presented in Figure 1. In brief, it recognises six explanatory variables as having potential influence on the taxpayer's motivation to evade taxes. These six variables are the probability of detection, severity of penalties, burden of taxation, wisdom of government expenditure, equity of the taxation system, and finally, the ethics of tax evasion.

Figure 1: *Behavioural Model of Tax Evasion*



The first two variables are associated with the administrative and legal environment of the taxpayer. The outcome relevant to the tax non-compliance decision is whether or not evasion will be detected. If evasion goes undetected there is extra income to be retained by the taxpayer as opposed to the various penalties imposed on detected tax evaders. It is reasonable to assume that detection and the imposition of penalties are dissatisfying to the individual. Thus, the individual will have perceptions about the probability of detection and negative preferences regarding penalties. Both of these factors should be negatively correlated with the individual's evasion decision.

The next three variables, the burden of taxation, the wisdom of government spending and the equity of the taxation system, are ones which reflect the degree of the taxpayer's satisfaction with the tax system. In this context one can view a tax system as a process of reducing private consumption and investment in order to enable the government to fulfil its social and economic objectives [Allan, 1971]. This view portrays the tax system as an exchange process in which the individual foregoes purchasing power in return for benefits provided by the state. This exchange process can initially be viewed as a direct relationship between

the individual and the state. Thus, taxpayers might be less willing to comply with tax legislation if they perceived the burden of taxation to be excessive, or if they felt that tax revenue was spent unwisely or inefficiently. There is evidence which indicates that the burden of taxation has increased rapidly in the past decade for Irish citizens [Clarke, 1981]. This is largely due to bracket creep and the interaction of inflation with a progressive rate structure.

An individual's satisfaction with the exchange process with government can also be viewed in a relative context. This consideration represents the important dimension of "equity". It is inevitable that taxpayers make judgements, no matter how casually, about their exchange process relative to other individuals. This may be particularly relevant for an individual who is a member of an economic group which makes frequent comparisons with more favoured groups in society. Indeed, much of the demand for tax reform in Ireland is a result of trade union concern with the unfair burden of tax paid by its members. Consequently, a taxpayer's perception of the degree of equity in the taxation system could have a significant impact on his compliance decision.

The final variable included in this model represents the individual's tax ethics or morality. Tax ethics refers to the norms of behaviour governing citizens as taxpayers in their relationship with government [Song and Yarbrough, 1978]. It seems reasonable to suggest that human behaviour in the area of tax compliance is affected by the moral consideration of what is good or bad behaviour. Thus, strong moral principles concerning honesty and a sense of public responsibility toward paying taxes should have a very positive effect in promoting tax compliance. This dimension is important for two reasons. Firstly, "tax ethics" is a social asset and just like business goodwill, once lost may be extremely difficult to regain. Conversely, it might be possible for government, by appropriate educational policies, to create a tax mentality favourable to tax compliance and this process might be cumulative.

### 3. Research Methodology

In testing this model it was decided that the survey (questionnaire) method represented the best approach of obtaining the required data with which to test the six behavioural hypotheses. The study was carried out in the Spring of 1983 on a sample of adults registered for evening classes in the Commerce Faculty of University College, Dublin. The criterion for administering this questionnaire was that each respondent had full-time jobs. While this sample choice was not representative of taxpayers in general, it was justified due to the sensitive nature of the

topic involved and the rapport which existed between the author and participants. In addition, the group setting guaranteed individual confidentiality of their completed questionnaires. We believe this approach produced far more honest answers than might be obtained from a more formal method of questioning.

The six independent or explanatory variables were measured by questions posed to respondents regarding probability of detection, perceived equity of the tax system, etc. Participants were asked to place their responses along a five point Likert-type attitude scales with "disagree strongly" at one end and "agree strongly" at the other. These values were, in turn, assigned a numerical score. The dependent variable, namely tax evasion behaviour, was measured according to three separate scales. The first scale was intended to reflect the individual's propensity to evade rather than actual evasive behaviour. The second scale was developed to measure actual tax evasion behaviour. Nine items were used to ascertain the respondent's own behaviour regarding the reporting of taxable income and the claiming of allowances and deductions. A third scale was derived representing the aggregate score on the previous two scales.

The questionnaire was administered to 131 subjects. Of those completing the questionnaire, 127 produced responses that were selected for further processing. Thus the response rate was a highly satisfactory 97%. The respondents were predominantly single with 88% of the sample being less than 25 years of age.

#### 4. Results of the Research and Tests of Hypotheses

Three separate scales of tax resistance (dependent variables) were constructed, namely, propensity to evade, actual evasive behaviour and total tax resistance. By way of preliminary analysis each of these three scales were cross-tabulated by each of the six explanatory variables which were hypothesised to be significant in determining an individual's compliance decision.

The significance of Chi-square was used to test the potential relationship at a 95% confidence level. The significant relationships are summarised in Table 1.

Specifically, the Chi-square tests indicate that propensity to evade was significantly related to both perceived inequity of the taxation system and the ethics of tax evasion. Actual tax evasion behaviour was significantly related to the ethics of noncompliance. Finally, total

Table 1: *Chi-square Results of Testing Differences between Compliance and Noncompliance Behaviour*

Behavioural Influence	Propensity to Evade	Actual Tax Evasion	Total Tax Resistance
1. Ethics of tax evasion	9.044**	7.53**	11.58**
2. Perceived inequity of tax system	4.48*	I	6.02*
3. Burden of taxation	I	I	I
4. Wisdom of government expenditure	I	I	I
5. Perceived severity of penalties	I	I	I
6. Probability of detection	I	I	I

\*Chi-square significant at the .05 level with 1 degree of freedom

\*\*Chi-square significant at the .01 level " " " " "

I Chi-square value insignificant at the .05 level.

tax resistance was also significantly related to tax ethics and perceptions of inequity. The remaining hypotheses such as the probability of detection, severity of penalties, burden of taxation and the perceived inefficiencies of government expenditure were not supported by this preliminary analysis. While this nonparametric method of analysis has particular advantages over parametric methods it also has its own limitations. Chiefly, the partitioning of responses is inevitably arbitrary. Accordingly, noncompliance behaviour was further investigated using multiple regression analysis. Ideally, the results for each regression should be broadly comparable and consistent with the findings obtained through cross-tabulations.

Each scale of tax resistance was regressed against all six explanatory variables. The results of the multiple regression are presented in Table 2. This table indicates the size and significance (using the t-test at 95% confidence level) of the multiple regression coefficients. For sake of clarity only the significant relationships are tabulated. The results of these regressions indicate that the lack of tax ethics and the perceived inequity of the taxation system are the most important factors in explaining both the propensity to evade and actual tax evasion behaviour.

Strong support is found therefore for the hypotheses that lack of tax ethics and the perceived inequity of the taxation system are important determinants of an individual's noncompliance decision.

Table 2: *Multiple Regression Results of Behavioural Model*  
(Regression coefficients and t-values in parentheses)

Hypothesised Variables	Propensity to Evade	Actual Tax Evasion	Total Tax Resistance
1. Ethics of tax evasion	.667 (6.47)**	.515 (2.62)**	1.12 (4.47)**
2. Perceived inequity of tax system	.338 (2.84)**	I	.165 (2.11)*
3. Burden of taxation	I	I	I
4. Wisdom of government expenditure	.649 (2.54)**	I	I
5. Perceived severity of penalties	I	I	I
6. Probability of detection	I	I	I
R <sup>2</sup>	.32	.09	.18
F statistic	9.51**	1.90	4.48**

\*t-value significant at the .05 level  
 \*\*t-value significant at the .01 level  
 I t-value insignificant at the .05 level

Only weak support was found for the perceived wisdom of government expenditure. Surprisingly, no support could be found for the other three behavioural hypotheses, namely, probability of detection, the severity of penalties, and the burden of taxation in explaining non compliance behaviour.

The limitations associated with this research methodology are obvious. The present study is limited in what it tells us about the general tax evasion process because it uses a rather select sample of respondents. In addition, only one data collection point was used whereas several measurement points would have been preferable. Chi-square testing is limited by the arbitrary partitioning of responses. The coefficients of determination obtained through multiple regression were of lower proportions compared with other studies on social control. Yet the model seems intuitively complete and the coefficients were of the hypothesised directions.

In generalising our results, subject to the usual limitations, strong support is found for the hypothesis that lack of tax ethics is a very important factor in determining tax evasion behaviour. Significant support was also found for the hypothesised relationship between the

perceived inequity of the taxation system and noncompliance. No consistent support could be obtained for the remaining hypothesised relationships of probability of detection, severity of penalties, burden of taxation and wisdom of government spending.

A number of significant implications arise from this study. First there is a widespread perception in this country that the burden of taxation is inequitably distributed. Whether this perception is accurate or not, it is not the concern of this study. In this context it is the perception rather than reality which influences behaviour. In addition, tax evasion behaviour was significantly associated with those respondents who did not consider tax evasion to be morally wrong. When one considers that these were the two most important explanatory variables and that each can be assumed to change slowly, then noncompliance can be predicted to remain a significant phenomenon in our society. The current burden of taxation was not found to be an important variable but this may change in future years as tax burdens inevitably increase in response to eliminating current budget deficits. Thus the growth of future tax burdens could compound the problem.

The results of this study suggest that policy directed against tax evasion should urgently address the complex issues of tax ethics and the perceived inequity of the taxation system. Tax evasion could primarily be a reflection of low moral standards throughout society. If this is true it may be argued that control of tax evasion transcends the power and competence of the tax authorities. If perceived inequity generates the motivation to evade, but if these perceptions are incorrect, then government policy should be directed towards correcting these perceptions. On the other hand, if the perceptions of inequity are accurate and supported by economic reality, then government must urgently redistribute the burden of taxation in a more equitable manner and therefore reform our taxation system. The perceived probability of being detected was not found to be a deterring factor in the noncompliance decision. This suggests that the absolute probability of being caught as a tax evader is extremely low which is reflected by the respondents' perceptions at the time of the study. However, any policy to combat evasion and/or reform the tax system can only be eliminated if government displays courage and determination to carry out its proposals. It is this dimension of political will which is the crucial issue in directing taxation policy.

The issues raised in the study await confirmation or otherwise from additional research using larger and more representative samples of taxpayers and using improved methodology. Nevertheless the objective

of this study will have been achieved if the arguments presented are adequate to convince others that the phenomenon of tax evasion deserves far greater attention than previously obtained. To ignore the issues raised in this study is to abandon them to mere speculation which can only restrict the introduction of more appropriate economic and taxation policies.

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