A BEHAVIORAL MODEL OF INCOME TAX EVASION

DISSERTATION

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by

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* * * * *

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Introduction

If, as Justice Oliver Wendell Holmes once observed, taxes are the price of civilization, it is a price that many of us pay with at least slightly ambivalent feelings. Taxpaying has been and probably will be for some time to come an important source of potential stress in the interface between a citizen and his government. Of particular concern to tax policy makers and administrators is the point at which such stress reveals itself in the form of tax evasion. Tax evasion is defined here as the reduction of tax liability by illegal or fraudulent means and should be distinguished from tax avoidance, which is the reduction of tax liability by taking advantage of provisions offered by tax law.

Tax evasion is of serious concern for at least three reasons. Firstly, it results in a loss of tax revenue. While exact estimates are hard to come by, according to an IRS sample audit of 1946, 1.4 billion dollars were lost in that year because of underestimates on personal returns of taxes owed to the government (Farioletti, 1952). Secondly, since opportunities to evade taxes differ among taxpayers, tax evasion may impair the chances of realizing the distributional or
equity goals of taxation. Thirdly, if tax evasion becomes widespread, otherwise honest taxpayers may eventually lose faith in tax administration and decide to join the ranks of tax evaders.

Certainly, as far as the United States is concerned, it is commonly held that American taxpayers are among the most honest in the world, and tax compliance has probably not degenerated to the level reached in France, Italy or Spain (Strümpel, 1968). However, it is my view that this should not encourage complacency about American tax compliance. Testifying before the Joint Economic Committee in 1969, Treasury Secretary Joseph Parr warned of a taxpayer's revolt, and the widespread defeat of local property tax levies and bond issues in recent years suggests at least some basis for Parr's fears. Whether taxpayer unrest is taking or will take the form of tax evasion is unclear. However, early in 1974, Congressman Vanik (D., Ohio) warned that the revelations concerning questionable tax practices by higher officials, in particular the President and former Vice-President, could have a damaging effect on future tax compliance. It is my view, therefore, that the subject of income tax evasion in the United States is a matter of significant concern and warrants further investigation.

The purpose of this dissertation is, through a combination of literature review and analysis of original
empirical data, to aid in an understanding of the factors underlying income tax evasion. Since this is supposed to be a dissertation in Public Administration, scholars may no doubt ask if this purpose is appropriate. I would argue that it is for the following reason. Following the decline of the "scientific" analysis of public management in the tradition of Woodrow Wilson, Frederick Taylor and Henry Fayol, public administration has taken several different directions. One of the most important directions has been the application of interdisciplinary theory and methodology to the solution, or at least tackling, of public policy problems. The role of the scholar in public administration is in part to integrate the contributions of many disciplines into a pattern that facilitates an understanding of public policy problems and also hopefully to act as a catalyst in inducing an awareness in scholars from different disciplines of the potential contributions that all disciplines can make in the public policy area. It is my hope that this dissertation is successful in performing such a role with respect to the policy problem of income tax evasion.
Chapter 1

Existing Research

There appear to be basically two different approaches taken in the current literature on the factors underlying tax evasion. The first approach is essentially theoretical and is based on simple micro-economic analysis. The second approach is both theoretical and empirical and seeks using behavioral concepts and methodology to shed light on the factors underlying tax compliance and tax evasion. The purpose of this chapter is to discuss critically both approaches to ascertain how they aid in an understanding of taxpayer behavior. The first approach, while more recent than the second, is essentially an extension of traditional micro-economic analysis to the specific case of tax evasion and will therefore be termed the traditional economic approach. The second will be termed the behavioral approach.

The Traditional Economic Approach

Traditional economic theory views man as seeking to maximize his own self-interest, usually narrowly defined in terms of bundles of goods or income which gives access to such goods. This highly convenient assumption
has enabled economists to model in relatively simple terms the behavior of men in their roles as consumers, producers, taxpayers and political decision-makers.

The application of traditional micro-economic analysis to tax evasion has been undertaken by several writers, including M.G. Allingham and A. Sandmo (1972) and T.N. Srinivasan (1973). All appear to develop essentially similar models viewing tax evasion as a special case of rational economic choice under conditions of uncertainty regarding detection.

Allingham and Sandmo assume the taxpayer seeks to maximize his utility in terms of income, and, given a proportional tax rate and diminishing marginal utility of income, are able to derive mathematically two key if somewhat obvious relationships. The amount of taxes evaded by a given taxpayer is found to be negatively related to the probability of detection by tax authorities and to the size of penalty rates imposed on delinquent taxes. Aware of the limitations of a narrow economic self-interest approach, they also attempt to extend the taxpayer utility function to include the argument of social standing. Assuming that social standing has a positive utility to the taxpayer, is adversely affected by detection of tax evasion, and is a substitute for income, then considerations of possible loss of social standing tend to lower tax evasion.
The model presented by Srinivasan is similar, but assumes simple income maximization rather than utility maximization. In other words, utility here is implicitly assumed to be a linear function of income. With this assumption, Srinivasan is able to extend his analysis to include both proportional and progressive tax and penalty rates, and derives mathematically a negative relationship between the amount of taxes evaded and the probability of detection. He also derives a positive relationship between the amount of taxes evaded and the level of income of the taxpayer.

While the economic approach to tax evasion is characterized by a certain aesthetically appealing neatness, it is subject to several criticisms. Firstly, as most economists would agree, subjectively perceived probabilities of detection and penalties are more important in determining taxpayer behavior than objective probabilities and penalties. Secondly, the economic approach assumes a narrow amoral view of the taxpayer and his behavior. The only constraints on tax evasion seem to be the probabilities of detection and sanctions imposed either formally as penalties or informally as loss of social standing. Sociologists such as Talcott Parsons (1951) have repeatedly claimed that certain norms of behavior or role expectations may become internalized as a result of socialization, so that persons may conform
to certain norms of behavior not out of fear of sanctions but because those norms are consistent with their own. While the impact of internalized norms on taxpayers is uncertain and open to question, such a question is surely of sufficient importance to be considered in developing models to explain behavior that is in violation of legally established norms.

One might argue that it is possible to include the effects of internalized norms along with social standing as arguments in a utility function. Hence an individual's utility function might include material income, social standing and conformity to internalized norms. This approach is open to criticism, however. Clearly, the resulting complication of the utility function would make the mathematical derivation of testable hypotheses difficult, if not impossible. For example, the economic assumption of the diminishing marginal utility of income essential to the derivation of hypotheses in the economic approach may have no real equivalent when one starts to talk about either social standing or conformity to internalized norms. As economists Jesse Burkhead and Jerry Miner (1971, p. 36) note, once the range of relevant choices extends beyond those that deal with alternative uses of scarce resources, the problem of choice takes on an entirely different meaning, since certain choices may no longer imply the impossibility of others.
Given that it is not clear that social standing and conformity to internalized norms are scarce goods in the economic sense of the word, the principle of opportunity cost, fundamental to conventional economic analysis, may be lost in an extension of the utility function. Therefore, while the economic approach to tax evasion provides useful hypotheses linking probabilities of detection and sanctions to tax evasion behavior, it may not be adequate for a full understanding of the important factors underlying tax evasion. What may be needed is an entirely different conceptual framework and it is this type of framework that a behavioral approach may be able to offer.

The Behavioral Approach

The study of different types of economic behavior, such as tax evasion, using a behavioral framework is not new, but dates back at least to the writings of Gabriel Tarde (1902). Tarde used the term "behavioral economics" to refer to the study of the psychological foundations of economic theory and made a significant contribution stressing the social nature of man and importance of social interaction as a foundation for behavioral economics.

In the United States, the term behavioral economics has become almost synonymous with the name of George Katona. According to Katona, the field "concerns itself
with the behavior of human actors - consumers, businessmen, policy-makers - rather than with the interrelations among such results of their behavior as supply, demand, prices, interest rates, etc." (1972a, p. 49). Katona, whose formal training was in the area of psychology, became interested in economic behavior partly as a result of his experiences in post-war Germany (1972b, pp. 11-14). Upon coming to the United States, he focused his attention on the implications of psychological variables for macro-economic policy (Katona, 1942). Following World War II, he became particularly interested in the role of attitudes and expectations in mediating the effects of income changes on consumption. Katona essentially rejects the closed one-to-one relationships between stimuli and behavior, assumed in many areas of economic research, and stresses the need to consider psychological factors as intervening variables of major importance (1963). He notes that the concept of the rational problem-solving man of economic theory does not capture the complexity of human behavior (1953). In particular, he stresses the importance of habits, attitudes and expectations, the multiplicity of motives and the essentially social nature of human behavior (Katona, 1951; 1953; 1963).

While Katona's work reflects a general interest in all types of economic behavior, he is undoubtedly most
well-known for his work in the area of consumer psychology, in which he has reexamined the classical theories of consumption and attempted to formulate new conceptualizations about the mass consumer society (1960; 1964). Katona proposes that, because of new affluence experienced by a large number of consumers, consumption can no longer be adequately predicted by knowing the level of income in a society, but requires also knowledge of the attitudes, aspirations and expectations of people which together determine the overall willingness to buy. The impact of Katona’s research has by no means been limited to the arena of theoretical debate. The regular collection of data on consumer intentions from nationwide samples has made available valuable information for economic policy-makers (Likert, 1972).

Such has been the impact of Katona’s work concerning consumer behavior, that there is sometimes a tendency to equate behavioral economics with consumer psychology (Wärneryd and Olander, 1972). Yet clearly, as Simon (1963) notes, the challenges to economic assumptions concerning human behavior raised by research in the behavioral sciences apply not only to consumer behavior but to the behavior of entrepreneurs, firms and workers. In particular, the failure of the concept of economic rationality to take account of the multiplicity of motives affecting behavior and the effects of conflicts of
interest, and to distinguish between objective and subjective reality, as affected by perceptual and cognitive processes, represents a major flaw in classical economic analysis in general, not merely in the analysis of consumer behavior.

Writings in the field of organization theory make fairly clear the lack of realism in traditional economic assumptions concerning the behavior of producers, both in terms of individual and organizational behavior. Writers from Mayo (1933) down through Herzberg (1959) and Argyris (1957) have asserted and often demonstrated the importance of non-material sources of individual motivation in work. The research of Herbert Simon, in addition, emphasizes the practical limits to rationality, whatever goal is assumed (1957). With respect to organizational behavior, writers such as Cyert and March (1963) and Thompson (1967) suggest a type of behavior very different from that assumed in the classical economic theory of the firm. Organizations are characterized as adaptive systems of different groups or coalitions, each with its own parochial perceptions and interests, rather than as "single-minded" units obsessed with profit-maximization.

It should be noted that even traditional economists have not been entirely unaware of the weaknesses of their assumptions concerning economic rationality. However, they argue that since economics is concerned
not so much with individual behavior as with the behavior of either large groups or of all of the people as a whole, it is not necessary to account for differences in motives, attitudes or opportunities. This is because, they argue, en masse such differences tend to cancel each other out (Dickinson, 1922). However, as Katona (1951) notes, the law of large numbers applies only to those economic situations where random factors prevail, so that individual differences cancel out. Where the same behavioral factors, such as group influences, affect very many people, the effects of such factors become cumulative rather than self-cancelling, and therefore must be accounted for in attempting to explain and predict the relevant behavior. There appear to me to be signs that the areas where economists can claim that the law of large numbers safeguards their hypotheses are limited and shrinking. The work of Katona and the almost consistent failure of conventional economic analysis to explain and provide effective tools for the control of inflation in the non-communist world during the last few years, suggest that even at a macro level, economics may be in need of a little more behavioral science.

In summary, behavioral economics is far more than consumer psychology but represents rather, if one accepts Kenneth Boulding's (1970) view of economics as the study of the part of the social system that deals with
exchangeables, an attempt to improve understanding of exchange behavior via the use of behavioral constructs and methodology. According to Daniel Katz (1972, p. 51), behavioral economics addresses itself to the behavior of actors in their roles as consumers, producers and key decision-makers and to the conflict and cooperative processes centering around the allocation and distribution of resources. Behavioral economics therefore links economics as a whole to psychology, social psychology, sociology, anthropology, organization theory and political science, building on constructs from these disciplines to assist in the analysis of economic behavior.

The major thrust in applying a behavioral approach to tax evasion has come from the University of Cologne, in particular from Gunter Schmölders and Burkhard Strümpel. Schmölders early survey studies (1960) indicated that while tax evasion was unfamiliar to about 90% of German taxpayers, most people saw tax evaders not as criminals, but as clever businessmen. A later study by Strümpel (1966) indicated that a majority of self-employed approved of minor and moderately grave cases of tax evasion. According to Strümpel (1969, p. 26) these Cologne studies "indicate that the norms and principles of morality do not seem to be applied to taxation, the dividing line between good and evil being rather different from what the ethics of honest behavior in everyday
life prescribes."

With reference to the factors underlying tax evasion Strömpel's analysis of cross national survey data is particularly interesting. Strömpel (1968) studied the relationships between rigidity of tax assessment, taxpayer willingness to cooperate and taxpayer compliance. On the basis of his research in Europe, three patterns of tax administration emerged.

1. Germany has an efficient but expensive administration. Taxation according to law is to a fair extent realized, but at the price of intensive and costly confrontation with tax administration, particularly on the part of the self-employed. The relatively coercive tax administration leads to alienation and lower willingness to cooperate. Cooperativeness as operationally defined and measured by attitudes towards the tax system and tax offenders is comparatively low but compliance is satisfactory.

2. In England, tax administration is far less rigid and coercive, dispensing with every form of administrative auditing, offering a rich reservoir of loopholes, and imposing much less obligatory accounting procedures than the German law.

3. The French, Italian and Spanish tax systems are very similar to each other. Tax administration is lax, and there is a gross discrepancy between tax law
and reality. Such discrepancies aggravate existing tax resistance.

On the basis of these three patterns, Strömpel suggested the following model:

(1) \( C = C(R, W) \)

such that \( \frac{\delta C}{\delta R} \), \( \frac{\delta C}{\delta W} > 0 \)

when

\( C \) = taxpayer compliance of a nation expressed by the acceptance or rejection of certain tax offenses as described in the interview.

\( R \) = rigidity of assessment determined by the amount of tax to be paid, fines, inquisitiveness of assessment techniques, red tape, etc.

\( W \) = taxpayer willingness to cooperate, operationally defined by attitudes toward taxation, perceived equity of the tax system and attitudes toward the tax offender.

In short, Strömpel felt that taxpayer compliance, which may be regarded as a measure of taxpayer behavior, was a positive function both of taxpayer willingness to cooperate, an indicator of attitudes, and of rigidity of assessment, the object of those attitudes. At the same time, taxpayer willingness to cooperate was negatively related to the rigidity of assessment, i.e.:

(2) \( W = W(R) \)
such that \( \frac{\delta W}{\delta R} < 0 \)

It should be emphasized that, in light of the small number of nations studied, Strümpel's results should be regarded as suggestive of rather than as proof of the relationships outlined. Also, his research, while providing a major advance in the area of behavioral economics, is subject to some criticisms.

First, because of the difficulty in directly measuring taxpayer compliance, Strümpel measures it in terms of the acceptance or rejection of certain tax offenses. However, he also measures taxpayer willingness to cooperate partly in terms of attitudes toward the tax offenders. The similarity of these two measures suggests to me that one of the reasons Strümpel observed a possible relationship between taxpayer compliance and willingness to cooperate was that he was measuring to some extent the same set of attitudes for two variables.

Second, his measure of rigidity of assessment is partly determined by the amount of tax to be paid. The amount of tax to be paid in my view is not a good measure of the rigidity of the assessment, but rather a measure of the amount of assessment. It is possible that Strümpel is referring to the amount of tax payment required at one time, thereby attempting to measure the differences in rigidity between taxes collected on a
lump sum yearly basis such as property tax and those collected on an installment basis across a year such as the personal and corporate income tax. Thus, it could be argued that whereas the amount of tax assessed is not a measure of rigidity, the extent to which that amount is spread across time is an inverse measure of rigidity. However, if he is referring to the spread of tax burdens across time, he does not make that point explicitly.

Third, there is a problem in Strümpel's hypothesized direction of causality between rigidity of assessment and taxpayer willingness to cooperate. The inverse relationship found between those two factors may not be an indication that greater rigidity of assessment lowers taxpayer willingness to cooperate, but that lower taxpayer willingness to cooperate necessitates greater rigidity of assessment.

In spite of these weaknesses, Strümpel's research provides a major contribution in establishing the taxpayer's mental system as a major intervening variable. It suggests that taxpayer compliance is a function not only of the rigidity of assessment but also of taxpayer willingness to cooperate and that, given the detrimental effect of rigid assessment on willingness to cooperate, there is a limit on the effectiveness of rigidity of assessment in inducing taxpayer compliance, beyond which a lack of taxpayer willingness to cooperate will lead to
lower compliance. Since sanctions or fines are a part of rigidity of assessment, this implies that there may be a limit on the effectiveness of sanctions in inducing taxpayer compliance.

Such a conclusion is lent some credence by the work of sociologists Richard Schwartz and Sonya Orleans (1967). Using field experiment techniques, they attempted to assess the relative effectiveness of sanctions versus appeal to conscience on taxpayer compliance among groups of taxpayers earning greater than $10,000 a year. Their results, based on actual tax return data, suggest that normative appeals may be more effective than sanction threats in inducing compliance.

The work of Strömpel and of Schwartz and Orleans suggests that tax evasion behavior is more complex than the economic approach would seem to indicate and that a behavioral approach may be more fruitful for the study of the factors underlying tax evasion. Using the latter approach, I shall in the next chapter attempt to explore what appear to me to be some of these factors and to develop a behavioral model of tax evasion.

Obviously this task involves a large amount of interdisciplinary borrowing. The disciplines of the behavioral sciences all contain different approaches or schools and such borrowing must inevitably offend one school or another. Since my training is primarily in
the area of economics, I neither am able nor willing to become entangled very deeply in such intra-disciplinary conflict. I have sought to borrow concepts from the behavioral sciences in a meaningful and consistent manner. It is my belief that this selection provides a clear but not the only explanation for some of the major factors affecting the taxpayer and that the linkages between environment and behavior could be explained using any of several alternative approaches by the behavioral sciences, especially approaches within the disciplines of psychology and sociology.
Chapter 2

A Behavioral Model of Tax Evasion

The development of a behavioral model of tax evasion in this chapter hinges upon the assumption that taxpayer behavior emerges from a complex set of interactions, both past and present, between the internal or mental system of the taxpayer and the external social system. While it is beyond the scope of this work to locate and analyze all such interactions, I hope that I shall be able to locate some of the major interactions that help determine the choice between tax evasion and tax compliance. In order to accomplish this, relevant components of the taxpayer's internal system will first be identified and then linked to behavior and interactions with the social system.

Internal System

The internal system here consists of postulated explanatory entities linking the independent variables of social interaction causally to the dependent variable of human behavior and as such represents a set of intervening variables. What exactly is the nature of such intervening variables is a subject of some discussion
among psychologists. According to MacCorquodale and Meehr (1948), there are basically two types of intervening variables. The first type are termed "pure" intervening variables and are simply abstractive or summary constructs. Their meaning or constitutive properties are held to be exhausted by their assumed functional relationship to the specified independent or dependent variables. The second type are termed hypothetical constructs, which are held to contain more meaning than is mediated by the specified independent and dependent variables. This distinction is important because the surplus meaning ascribed to hypothetical constructs may represent a confounding influence on the interpretation of hypothesized relationships. In other words, in interpreting empirical observations of the independent and dependent variables, it may no longer be clear that the apparent consistency or inconsistency of such observations with hypothesized relationships result from either the validity or lack of validity of the model rather than from the effect of those "surplus" constitutive properties of the intervening variable.

It would seem clear that the intervening variables used in my model do have some meaning which is not exhausted by the specified overall relationship between social interaction and behavior and such variables are therefore hypothetical constructs rather than "pure"
intervening variables. This "surplus" meaning would include those influences reflected in intervening variables of certain types of interaction with the environment which are not social and also of genetically-determined characteristics. It is the author's view, however, that variations in these factors are not likely to greatly influence variations in taxpayer behavior and that social interaction, both past and present, is therefore the dominant influence on taxpayer behavior.

An additional point of some importance is made by MacCorquodale and Meehr. They assert that since hypothetical constructs have a cognitive factual reference in addition to the empirical data which constitute their task, they ought not to assume inner events which cannot conceivably occur but ought to correspond to some neurophysiological reality. Tolman (1959) takes a somewhat broader view, arguing that hypothetical constructs may be derived from intuition, common sense, phenomenology and very general notions about neurophysiology. Given what Tolman terms "the vast continent of unknowns" in psychology, he feels it is silly "to try to be too precise, too quantitative, too deductive and axiomatic, save in very experimentally overcontrolled and over-limited areas" (1959, p. 98). He develops his own hypothetical constructs on the basis of "temporarily believed-in, inductive, more or less qualitative generalizations"
which sum up for him "varicous empirically found observations" and suggest new behaviors to be looked for (1959, p. 97). He admits, of course, that the nature of the constructs should be subject to change and redefinition in light of empirical findings (1951, p. 283).

Since the purpose of developing intervening variables for my model of taxpayer behavior is not to construct a tight deductive system from which hypotheses can be logically derived, but rather to provide a heuristic framework which provides plausible and understandable linkages between specific types of social interaction and taxpayer behavior, the choice of a Tolman-type approach to hypothetical constructs seems to me to be justified. Indeed, the complexity of economic behavior, in my view, as opposed to that of rats running through a maze, probably renders a highly deductive model of behavior inappropriate for behavioral economics, until such time that there is more consensus within both psychology and neurophysiology as to the exact nature of such a model.

Let us assume initially then that taxpayers, like all human beings, have preferences among particular outcomes or states of nature at any given point in time. For any pair of outcomes, A and B, a taxpayer may prefer A to B, B to A, or be indifferent between the two. As a student of economics, I find the term "preference" quite congenial since it is related somewhat to the eco-
nominal concept of "expected utility." Psychologists have referred to such preferences as valences (Lewin, 1938; Tolman, 1959; Vroom, 1964), incentives (Atkinson, 1953) or attitudes (Peak, 1954). All refer to affective orientations or pro and con feelings about outcomes. It will be assumed for the sake of clarity in exposition that preferences can take on either positive or negative values.

Individuals attach preferences to outcomes because they are in some way anticipated to be either satisfying or dissatisfying. Of course, an outcome may be preferred on the basis of its anticipated satisfaction, but may not actually yield satisfaction to the individual when attained.

How are preferences for outcomes determined? According to Vroom (1964, p. 15), individuals may attach preferences to many outcomes, because they are believed to be instrumental to the attainment of other preferred outcomes. However, preferences and beliefs about instrumentalities obviously cannot form a closed matrix but rather must emerge either directly or indirectly (via other outcomes) from matrices of generalized beliefs and values concerning whole classes of outcomes and behavior (Tolman, 1952, pp. 280-361). These are in turn determined from an interaction between the physiological state of the individual, stimuli from the environment, and the
individual's system of needs, both physiological and psychological.

Specific outcomes attained by an individual are not only dependent on his preferences but also on events which are beyond his control. Most decision-making is characterized by uncertainty. Therefore, whenever an individual chooses between alternative courses of action "it seems clear that his behavior is affected not only by his preferences among these outcomes, but also by the degree to which he believes these outcomes to be probable" (Vroom, 1964, p. 17). Psychologists sometimes refer to these beliefs as expectancies (Tolman, 1959; Atkinson, 1958). The term appears to be related to the economic concept of "subjective probabilities." Expectancy is an action-outcome association and may take value from "0," indicating no subjective probability that an act will be followed by an outcome, to "1," indicating subjective certainty that an outcome will follow an act.

Expectancies associating specific acts with particular outcomes, like preferences and instrumentalities, are derived from the individual's matrices of beliefs and values concerning whole classes of outcomes. They combine with preferences and instrumentalities to produce a force or readiness to perform a specific act, which Tolman identifies as a performance vector (1959). The individual is assumed to choose from among alternative
acts the one corresponding to the strongest positive (or weakest negative) force.

The model of the internal system outlined above is essentially based on that of Tolman (1952). The value of the model, in my view, lies in its focus on preferences and their relationships to beliefs and values and behavior. I believe that by examining these relationships and the interactions with the social system that shape beliefs and values, it is possible, without denying the rationality of the taxpayer, to explain tax evasion with a richness which pure economic models cannot provide and yield testable hypotheses with public policy implications.

The purpose of this section has been to develop certain constructs which are useful in understanding the workings of the internal system. In the following sections, I shall attempt to focus on the outcomes of importance in directing taxpayer choice between compliance and evasion, and to suggest how preferences among those outcomes are determined and how such preferences may affect behavior.

Outcomes

Outcomes relevant to taxpayer choice between tax compliance and tax evasion may be classified into two types, those that are dependent on whether or not tax evasion is detected and those that are dependent only
upon performance of the act of tax evasion itself. The former group of outcomes includes the extra income from undetected tax evasion and the formal and informal sanctions resulting from detected tax evasion. While preferences for these outcomes reflect individual beliefs and values and so vary from taxpayer to taxpayer, it is reasonable to suppose that most taxpayers will generally attach positive preferences to extra income and negative preferences to sanctions. The effect of these preferences on behavior will be mediated by expectancies concerning detection.

Preferences for informal sanctions will probably exert a lesser effect than preferences for formal sanctions. Given the lack of publicity generally surrounding individual tax evaders, it is not very likely that the community at large will detect individual tax evasion even if tax authorities have detected it. Consequently, expectancies for detection by the community will be lower than those for detection by tax authorities.

The second type of outcome stems not from whether or not the act of tax evasion is detected but from whether or not it is performed. According to Tolman (1952, pp. 311-312), there are certain types of behavior concerning which individuals may hold positive or negative values because of their effect on the self-ideal or self-image. Beliefs, values and perceptions concerning the self may
become established as an alter which responds with love or approval to certain acts of the behaving self and also responds by withdrawing love or exhibiting disapproval to certain other acts of the behaving self. Tolman terms this alter the "judging self." The reactions of the "judging self" represent outcomes to which individuals attach preferences derived from values concerning the behavior being considered.

The establishment of a "judging self" concerning certain types of behavior seems to be equivalent to what sociologists, such as Talcott Parsons (1951), have termed norm internalization. Norms are role-expectations and represent beliefs and values concerning certain types of behavior. Where norms concerning a certain type of behavior have been internalized by an individual, conformity to those norms itself becomes a goal for the individual.

According to Parsons and Shils (1952), the internalization of cultural norms is a prime mover in social control, while sanctions represent only a secondary line of defense. Given the illegal status of tax evasion, it is reasonable to assume that there exist certain cultural norms such that, when internalized by the taxpayer, tend to make an act of tax evasion less attractive. It is important however to stress that the internalization of norms does not necessarily block the individual from
undertaking contra-normative behavior (Blake and Davis, 1964), but merely adds disapproval by the "judging self" to the undesirable anticipated outcomes of such behavior.

The internalization of cultural norms as reflected in the tax laws obviously facilitates the task of tax administration. The results of Strümpel (1968), discussed in the previous chapter, suggest that in countries where the normative commitment to tax compliance is very low, such as in France or Spain, tax administration becomes very difficult.

Preferences and expectancies concerning outcomes reflect certain beliefs and values that individuals hold concerning whole classes of outcomes and behavior. Beliefs and values are in turn shaped by the individual's patterns of interaction with the social system. While these patterns are both numerous and complex, it is my belief that concepts drawn from exchange theory and reference group theory provide a good framework for analysis of their effects on taxpayer behavior.

Tax Evasion and Exchange Theory

In light of Boulding's conception of economics as the study of exchange systems (1970), it is not entirely surprising that exchange theory, as developed by Homans (1961) and others, may prove of value in studying taxpayer behavior. However, it should be noted here that
Boulding (1970, p. 79) considers the paying of taxes to be not a part of the exchange system, but a part of the threat and integrative systems. The threat system consists of the essentially coercive relationships between men in the social system. A threat relationship develops when one person says to another, "You do something that I want or I will do something that you do not want," whereas an exchange relationship develops when one person says to another, "You do something that I want and I'll do something that you want" (Boulding, 1970, p. 9). The integrative system consists of those relationships which involve mutual acceptance of status as a role-creating factor, such as occurs in the family. Here the message transmitted from one person to another is, "You do something because of what you are and what I am" (Boulding, 1970, p. 10). The integrative system thus introduces the element of legitimacy into a relationship.

According to Boulding, "tax payments differ from exchanges in that they represent one-way transfers of exchangeables from a taxpayer to a tax receiver, and though it can be argued that something passes in return, what passes in return is usually not regarded as an asset by the taxpayer" (1970, p. 79). Boulding, in my view, is not entirely right on this point. In a democratic society, where taxes are voted on either directly or indirectly (via elected representatives), there is surely
a strong "quid pro quo" element in the relationship between a citizen and his government, at least as perceived by the citizen. Boulding seems to concede at least this much when talking about the "quasi-voluntary" nature of taxes. Furthermore, the opportunity to avoid or even evade taxes introduces an additional element of reciprocity into the relationship in providing the taxpayer some means of adjusting his terms of trade with the government. Therefore, while there are both elements of coercion and legitimacy derived from the threat and integrative systems respectively in the taxpayer relationship with the government, there are surely also strong elements of exchange. Indeed, I would suggest that perhaps the failure of policymakers and administrators to appreciate fully these exchange elements has contributed in part to the present taxpayer unrest, discussed in the introduction to this paper.

Therefore, it is legitimate in my view to regard the citizen, in his role as a taxpayer, as involved in an exchange process with his government. He is foregoing a portion of his purchasing power in the private market in return for government benefits, including goods and services and also perhaps for non-material sources of satisfaction, such as a sense of belonging or affiliation. A distinguishing characteristic of exchange processes is that their resultants have the potentiality of being per-
ceived as just or unjust. Felt injustice is a response to a discrepancy between what is perceived to exist and what is perceived ought to exist.

When, in establishing what ought to exist in terms of resultants from an exchange process, an individual compares his lot with others, it may be said that he holds certain beliefs and values concerning the distributive justice or equity of such resultants. Homans (1961) has developed this concept of distributive justice into a theory of exchange. According to Homans, distributive justice among two or more individuals who are involved in a process of exchange either with each other or with a third party, obtains when the ratios of profits to investments for each party are perceived as equal by all parties. Profits consist of rewards or that which is received in the exchange minus costs or that which is given up in the exchange. Investments in an exchange are the relevant attributes brought by a party to the exchange and include, for example, skill, effort, education, training and experience. When an inequality between these ratios is perceived, participants to the exchange will experience feelings of injustice. Homans asserts that if a state of injustice exists and is to a man's disadvantage in that he experiences deprivation, then that man will display anger (1961, p. 75). If the
injustice is to a man's advantage, then he will experience guilt feelings. To the more cynical reader, the latter proposition may seem questionable, but it is lent credence by Jaques' study of groups of British workers (1961) and Adams' laboratory experiments (1963). Homans implies however that the thresholds for displaying dissatisfaction may be somewhat higher when a man is overrewarded than when he is underrewarded, noting that a man is less apt to make a prominent display of his guilt than of his anger (1961, p. 76).

While Homans, in this theory of exchange, provides a link between perceptions of distributive injustice and satisfaction, it is reasonable to ask if there are any further consequences of unfair exchange and, in particular, if any specific types of behavior are predictable. Adams (1965, pp. 267-299) attempts to address these questions in developing his theory of inequity. Adams uses the term inequity rather than injustice to avoid what he feels is the confusion of the many connotative meanings associated with the term justice. Inequity is said to obtain when Person perceives that the ratio of his outcomes to inputs (or investments) and the ratio of Others' outcomes to Others' inputs are unequal. Schematically, inequality is experienced when either

\[
\frac{O_p}{I_p} > \frac{O_a}{I_a}
\]
or

\[
\frac{O_p}{I_p} < \frac{O_a}{I_a}
\]

where

\(O_p\) = the sum of outcomes to Person as perceived by Person;
\(I_p\) = the sum of inputs to Person as perceived by Person;
\(O_a\) = the sum of outputs to Others as perceived by Person;
\(I_a\) = the sum of inputs to Others as perceived by Person.

The basic model of inequity is almost identical to Homans' theory of exchange. Adams feels however it is possible to predict certain specific actions on the part of Person, given perceptions of inequity. Since inequity is regarded as involving tension between expectations and perceptions, Person is assumed to be motivated to reduce it. Adams asserts that he may attempt to do this through actual and/or psychological changes in the inputs or outcomes of himself or Others. In other words, he will attempt to adjust his perceived ratio to that of Others or vice versa by changing either actual ratios or his perceptions of such ratios. Both Homans' and Adams' theories are derived largely from observations of groups of workers (Homans, 1954; Adams and Rosenbaum, 1962;
Adams, 1963). It is my belief that they may be extended to explain taxpayer behavior. However, such an extension requires in my view a redefinition of the concept of equity as applied to taxpayer perceptions.

Scholars in Public Finance have long been concerned with the concept of equity in taxation. There are basically two approaches taken. One approach is the so-called "benefit" principle, which dates back to Adam Smith and earlier writers. According to this principle, an equitable tax system should ensure that each taxpayer's contributions are in line with the benefits which he received from government. The benefit principle is an extension of the contract theory of the state as understood by Locke and Hobbes. The other approach is the "ability to pay" principle and dates back to Rousseau, Say and John Stuart Mill. Under this approach, the tax problem is viewed independently of expenditures. For a given amount of revenue, each taxpayer should contribute according to his "ability to pay."

Clearly if taxes are defined as inputs and government benefits are defined as outcomes, the "benefit" principle appears to come closer than the "ability to pay" principle to the concepts of equity and justice as defined by Adams and Homans respectively. However, a definition of equity that does not include the "ability to pay" principle, in my view, is far too narrow. A sur-
vey by Elizabeth Likert David (1961) indicates that taxpayers use both the "benefit" principle and the "ability to pay" principle in assessing equity. Indeed, much of the movement for tax reform is an attempt to try and make the tax system conform to the "ability to pay" principle. Therefore, the definition of perceived equity must be extended beyond a simple comparison of outcome/input ratios. Such an extension requires two steps.

Firstly, it is necessary to define inputs to include more than the level of taxes. As Homans notes, perceived inputs or investments include all relevant attributes brought by a party to the exchange which includes therefore not only taxes but certain personal characteristics of the taxpayer himself. What characteristics are perceived as relevant is a function of the values held by the perceiver. If those values reflect the "ability to pay" principles, then a rich man may be perceived to bring to the exchange less investments than a poor man, in terms of personal characteristics. Thus, for the inputs of a rich man and a poor man to be equal, a rich man must pay more taxes than a poor man to offset his greater ability to pay.

However to merely redefine inputs to include personal characteristics is not enough, since all taxpayers are still assumed to compare outcome/input ratios. Therefore, it is also necessary to redefine the concept
of distributive injustice or inequity. Taxpayers who are committed only to the "ability to pay" principle do not consider outcomes or government benefits at all, but are concerned only with the comparative level of inputs. Therefore, the outcome/input ratio is not a measure for interpersonal comparison for these taxpayers, but the level of inputs is. It follows that distributive injustice or inequity will obtain for these taxpayers when they perceive differences in the level of inputs rather than in outcome/input ratios. However, since the level of inputs forms the denominator of the outcome/input ratio, while overreward and underreward may result from the ratio being perceived as too high and too low respectively, the precise opposite is true for perceptions of the level of inputs. Therefore, for purposes of clarity and heuristic convenience, it may be useful to use the inverse of the outcome/input ratio, the input/outcome ratio, as a measure for assessing inequity, so that one can draw similar conclusions for feelings and behavior patterns from a given level of either ratios or inputs.

While I have redefined the concept of inequity, it is my view that this does not necessarily change the postulated linkages between perceived inequity, feelings of relative deprivation or guilt and the motivation to make either real or perceptual changes directed towards achieving parity. If an individual compares inputs
rather than input/outcome ratios, it is reasonable to hypothesize that the resulting feelings and behavior will follow similar patterns to those resulting from a comparison of input/outcome ratios.

Given this rather complex concept of equity, it is possible to explain how perceptions of inequity may lead to tax evasion. If a taxpayer perceives that his input/outcome ratio or his level of inputs is higher than other taxpayers, he may experience feelings of relative deprivation from his exchange with government, and the tension created may motivate him to lower his inputs by tax evasion. In terms of the psychological model developed in this chapter it may be said that beliefs and values held by an individual concerning equity are reflected in a preference for parity in either ratios or input levels between himself and other taxpayers. This preference may affect the relative behavioral forces or performance vectors (Tolman, 1959) surrounding the choice between tax compliance and tax evasion as a means to achieving parity.

What happens if a taxpayer in comparing his ratio or level of inputs to those of others perceives that he is overrewarded? Exchange theory suggests he may incur feelings of guilt. However, as noted previously, the threshold for the display of feelings of guilt is higher than that for the display of feelings of relative depriva-
tion. Therefore, he will be less likely to adjust his ratio or level of inputs than will the underrewarded taxpayer. It does seem plausible to hypothesize that if adjustments are made by an overrewarded taxpayer, they are more likely to involve a change in perceptions rather than in the real ratios or levels. Although there appears to be no research to substantiate this proposition, it is lent credence by some "casual empiricism." Perhaps, the overrewarded taxpayer will rationalize the inequity in terms of the need to provide incentives for work or investment, which represent competing values, arguing that his entrepreneurial talents or industriousness are inputs or investments and justify a lower level of taxation than would otherwise be appropriate. The reader has no doubt heard such arguments and possibly they do represent an attempt to change perceptions of input/outcome ratios or levels of inputs on the part of the overrewarded.

The extension of exchange and inequity theory is subject to at least two serious objections. Firstly, given the complexity of the concept of equity, one may argue that it is not reasonable to assume that taxpayers have sufficiently precise perceptions of inequity to enable a comparison of their lot with others. Second, the application of exchange theory or inequity theory does not make it at all clear with whom the taxpayer com-
pares his lot in assessing its equity.

In answer to the first objection, I would argue that the previously cited David study and the tax reform controversy suggest that taxpayers do compare at least inputs in assessing equity. The second objection to the application of exchange theory and inequity theory concerns the social object of comparison. With whom does a taxpayer compare his lot? It is my view that the present controversies over tax reform and over cases of tax avoidance and tax evasion by higher government officials suggest that the taxpayer's object of comparison includes all other perceived taxpayers, at least within a given country. Also the values implicit in both the "benefit" principle and the "ability to pay" principle suggest that equity will be assessed in comparison to all other perceived taxpayers.

In summary, it is my belief that a modified form of exchange or inequity theory may be used to explain linkages between perceptions of inequity and tax evasion, whether those perceptions of inequity are based on input/outcome ratios or simply on the level of inputs alone. However, the preferences for parity either in input/outcome ratios or input levels does not determine itself the choice between tax compliance and evasion. The effect of all the other preferences and expectancies, previously discussed, must also be considered. Nonetheless, it is
my view that exchange and inequity theory provide a useful framework for examining some of the major effects of social interaction on taxpayer preferences and behavior.

Tax Evasion and Reference Group Theory

Theories of group behavior in addition to exchange theory also may aid in an understanding of taxpayer behavior. Research on group behavior suggests that certain groups may have a significant impact on individual values, preferences, and behavior. (For a discussion of this research, see Cartwright and Zander, 1968; Collins and Raven, 1969). Groups having this type of impact are often termed reference groups (Hyman, 1942; 1960). Merton (1957) defines a reference group as a group the individual takes as a frame of reference for self-evaluation and attitude formation. A major function of the reference group is to set and enforce standards of conduct and belief (Secord and Backman, 1964, pp. 209-212). Individuals may conform to reference group standards of conduct because they seek approval or acceptance. There is also evidence to suggest that they may internalize values relating to standards of conduct. Studies of voting behavior indicating reference group effects may be particularly relevant here since individual voting behavior cannot usually be detected (see, for example, Berelson, Lazarsfield and McPhee, 1954; Campbell, Gurin and
Miller, 1954). Standards of conduct held by reference groups may be either consistent or inconsistent with general cultural values and so may reinforce or weaken the individual's commitment to such values.

Reference groups, through their effect on values, may shape the preferences and hence affect the behavior of taxpayers. It was noted earlier that expectancies with respect to detection by the community are probably relatively low. Therefore, the normative impact of reference groups on taxpayer behavior is more likely to make itself felt via internalized values than via a fear of informal sanctions. Salient reference groups may include the taxpayer's family, his circle of friends and acquaintances, his workmates, or any group which he takes as a frame of reference. He need not even be a member of this group but may merely aspire to become a member.

Of particular importance may be the number of friends and acquaintances whom he believes evade their taxes, since the standards of conduct clearly revealed by their behavior may lead to a weakening of his own commitment to overall cultural values reflected in the tax laws.

In summary, both a modified form of exchange theory and reference group theory appear to provide a framework for the examination of the effects of taxpayer interaction with the social system. This framework com-
bined with the psychological model developed earlier to provide at least a good starting point for developing an integrated behavioral model of tax evasion.

The Model

In the previous four sections of this chapter, I have attempted to identify and examine the preferences and related beliefs and values of potential importance in determining taxpayer choice between tax compliance and evasion. Figure 1 represents an attempt to integrate these preferences, beliefs and values into a model of tax evasion. Four basic preferences are identified: a preference for extra income, a preference for sanctions, a preference for approval by the "judging self," and a preference for parity either in input/outcome ratios or in the level of inputs.

The preference for extra income from tax evasion is derived from beliefs and values the individual holds concerning money, and is assumed to be positive. Preferences for sanctions are related to general beliefs and values concerning sanctions and may be assumed to be usually negative. Preferences for approval by the judging self are assumed to be positive and are derived from beliefs and values internalized by the individual concerning taxpayer behavior. It is further hypothesized that such beliefs and values will be affected by beliefs
concerning the behavior of other taxpayers. This linkage represents the reference group effect on internalized values. The preference for parity is derived from beliefs and values concerning the equity of either input/outcome ratios or levels of inputs. These are in turn derived from beliefs concerning the inputs and outcomes of other taxpayers.

The effect of these preferences for outcomes on behavior will be mediated by expectancies. The effect of preferences for extra income, sanctions, and parity will be mediated by expectancies concerning detection of the act of tax evasion by tax authorities. The effect of preferences for approval by the judging self are not affected by detection since the outcome is certain for any given taxpayer act of compliance or evasion.

The beliefs and values of the taxpayer are determined by social interaction and the taxpayer's system of needs. While needs may be both physiological and psychological, the latter type of needs, which include affiliation and self-esteem, are more likely to have impact on beliefs and values relevant to tax evasion behavior.

Given this basic model of taxpayer choice between tax compliance and evasion, I shall now derive some hypotheses, which are to be tested using my own empirical survey data. There are four hypotheses derived here, and
they concern respectively perceptions of equity, sanctions, probabilities of detection and reference group behavior.

1. Perceptions of equity

Perceived equity in input/outcome ratios or levels of inputs is held to affect preferences for parity which in turn affect the choice between tax compliance and evasion. **The higher an individual perceives his input/outcome ratio or level of inputs to be relative to other taxpayers, the more likely he is to attempt to adjust them in a downward direction by tax evasion.**

2. Sanctions

Sanctions are assumed to represent generally dissatisfying outcomes for the taxpayer. Therefore, the more severe that a taxpayer perceives the sanctions against tax evasion to be, the less likely he is to evade taxes.

3. Probabilities of detection

Given that detection is associated with undesirable outcomes, the higher an individual perceives the probability of detection to be, the less likely he is to evade taxes.

4. Reference groups, as noted, may weaken or strengthen the taxpayer's normative commitment to tax compliance and thereby affect the anticipated outcome with respect to approval by the "judging self." While reference groups for a taxpayer may be difficult to identify,
it is reasonable to assume that friends, relatives and acquaintances will be a part of such groups. Therefore, one may deduce that the more people a taxpayer knows who evade a part of their taxes, the weaker will be his normative commitment to tax compliance, and the less likely he will be to incur disapproval of an act of tax evasion by the "judging self." Therefore, the more tax evaders a taxpayer knows, the more likely he is to evade taxes himself.

The testing of these hypotheses obviously involves many methodological problems. The purpose of the next chapter is to indicate both the successes and failures that I experienced in addressing such problems.
Chapter 3
Methodology

The purpose of this chapter is to discuss the methodology used in testing or at least in shedding light on the hypotheses derived from the model. Given the substantial inherent difficulty in measuring many of the variables and the time constraints on this study, the methodology was quite frankly somewhat crude in parts. Nonetheless, it is my belief that it was appropriate for what was essentially an exploratory study.

Overall Approach

A behavioral scientist, wishing to generate data to test hypothesized relationships, faces basically two choices: the use of an experimental methodology or a non-experimental methodology. An experimental methodology involves the deliberate introduction of a stimulus, representing the independent variable, to a certain group of respondents and the observation of its effects on the dependent variable, usually a specific type of behavior or preference within this group. Such observations are usually compared with observations of the dependent variable in a control group, which was not

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subject to the stimulus. By attempting to ensure that groups differ only in their exposure to the stimulus, the investigator is able to isolate the effect of that stimulus on a dependent variable. Such a methodology may be applied either in a laboratory or a field setting.

An investigator, using non-experimental methodology, does not attempt to introduce the independent variable, but merely attempts to examine how individuals or groups differing in the extent to which they display the presence of the independent variable also differ in the extent to which they display the presence of the dependent variable. By observation or by using correlation methods, he attempts to assess the strength of the relationship between the two variables. Such a methodology would be used in a field setting.

Both experimental and non-experimental methodologies have their advantages and disadvantages. An investigator using experimental methodology has control over the introduction of the independent variable and can thus demonstrate fairly clearly any causal relationships. He also, through the use of control groups, can control for the effect of confounding variables. All of this is particularly true in a laboratory setting, but may also hold fairly well in a field setting provided that experimental and control groups are selected carefully.

The investigator using non-experimental methods has
no control over the introduction of the independent variable and far less control over confounding variables. He is limited to observing how the hypothesized independent and dependent variables vary together, and while his methodology allows him to measure the strength of such covariants, it does not itself enable him to infer unambiguous causal relationships between his variables. An observed relationship between X and Y alone may mean that X may cause Y, Y may cause X, or X and Y may be caused by some other variable Z. This brings me to the problem of confounding variables, which may either tend to obscure or exaggerate the relationship between X and Y. The investigator may, using statistical methods, attempt to control for some of these variables, but he must first be aware of their influence to do this. The identification of all confounding variables may be a difficult if not impossible task.

Experimental methodology thus more closely approximates the ideal scientific method than does non-experimental methodology. The experimental methodology is not however without its drawbacks. Firstly, because of the effects of the artificiality of the laboratory setting, it is far more difficult to generalize conclusions to everyday life. Secondly, even if the experiment is undertaken in a field setting, one can raise serious questions concerning the artificiality of the stimulus introduced
as an independent variable. Does the stimulus really represent the independent variable?

The non-experimental methodology, while it may contain elements of artificiality, particularly if questionnaires are used, usually permits more ready generalization to everyday situations, since the individual or group and the dependent and independent variables are observed in a natural setting.

Both methodologies therefore have their strong and weak points and the choice of methodology should be dictated by the problem under research. Given that the purpose of this dissertation is to study actual tax evasion, a field setting is to be preferred to a laboratory setting where one could only examine cheating or deception in a very general manner. This essentially limited the choice to one between a field experiment and a survey. The former approach was rejected because of the difficulty of designing stimuli which adequately represent all the independent variables included in my hypotheses. While Schwartz and Orleans (1967) have demonstrated that one may design stimuli within a questionnaire to stimulate the effects of sanction threats and normative appeals, there are some serious questions concerning the artificiality of such stimuli. Furthermore, in my view, it is really very doubtful whether one can design a stimulus to accurately simulate
the effects of perceptions of inequity on tax evasion behavior.

Therefore, I decided that the survey method represented the best means of testing or at least shedding light on the hypotheses derived in the last chapter, although investigators including perhaps myself may hopefully be able to introduce in due course an experimental element into studies of tax evasion which is not overly artificial. The survey methodology involved essentially four elements: item design, sample selection, data gathering, and data analysis.

**Item Design**

The items represent essentially instruments which are supposed to measure the variables in which an investigator is interested in terms of verbal or written responses. Given the hypotheses stated, the variables that had to be measured were: income tax evasion, perceptions of inequity with regard to input/outcome ratios, or levels of inputs, the perceived severity of sanctions, the perceived probability of detection by tax authorities and the number of tax evaders that the respondent knew personally.

Selection of items to measure the particular variables inevitably raises questions concerning both the validity and reliability of such measures. The
question of validity concerns the extent to which the item or items selected really measures the variable under consideration rather than some other variable, while the question of reliability concerns the extent to which repeated measurements can be expected to yield similar results (Green, 1954, pp. 338-341). Of course, one way of avoiding at least gross invalidity or unreliability of measures is to design carefully items so that they appear to reasonably represent the appropriate variables (face-validity) and to be as unambiguous as possible, and most items were selected on this basis. However, it was felt that, in measuring tax evasion, additional steps should be taken, since research has demonstrated that actions often cannot be predicted very accurately from elicited verbal attitudes or responses (La Piere, 1934).

1. Income Tax Evasion

One could argue that, given that tax evasion is to some extent socially undesirable, responses on a questionnaire cannot accurately measure this variable. However, there seems to be no other means of measurement available. Individual tax records are usually confidential, and, even if they were available, could only be used to measure detected tax evasion.

Thus, the problem becomes to design questions which will bring forth the most honest responses and yet will still provide a valid measure of the behavior to be
studied. Schmölders has suggested that the only way to measure the degree of tax evasion is "to compose a true picture of the tax-mindedness of an individual" (1959, p. 342). Such a picture is composed by attempting to assess the individual's general attitudes toward taxes and towards specified cases of tax evasion on the part of others. Both Schmölders and Strümpel (1968) do use such measures in their empirical studies of tax evasion, on the assumption that, at least on a group basis, these measures provide an indication of behavior.

It is my belief that responses more directly related to the individual's own propensity to commit tax evasion may be obtained by guaranteeing clearly to the respondent complete confidentiality and by allowing respondents to place their responses along an attitude scale which differentiates between moderate and extreme rejection of socially undesirable behavior on the part of the respondents. Thus while any individual response on items or questions may not quite honestly reflect his own orientation toward the commission of tax evasion, it is reasonable to assume that variations in responses across respondents should correspond fairly closely to variations in the true propensity of individuals to evade taxes.

Therefore, I sought to construct a Likert-type attitude scale (or in terms of my model, a preference
scale) which would include items that reflected as closely as possible the individual's own propensity to evade taxes. Firstly, a general inventory of forty-five items was selected reflecting various orientations toward income tax evasion (see Appendix A) and allowing for extreme and moderate responses along a five-point scale. Fourteen of the items were phrased such that increasing acquiescence with the statements reflected declining rather than increasing approval of tax evasion behavior, so that a check might be provided on the extent of acquiescence bias. Acquiescence bias refers to the tendency of some individuals to acquiesce or agree with positively worded statements (Crane and Brewer, 1973). These items were tested with the cooperation of 130 Ohio State University students. Their responses were subjected to an item analysis using the techniques of factor analysis. Factor analysis, as a tool of item analysis, enables an investigator to select items for a scale which most clearly reflect a given dimension or variable, included in an overall orientation towards an object or behavior. Items are analyzed in terms of their loadings or correlations on hypothetical factors which are generated by the technique. By attempting to judge the meaning of items loading more heavily on a given factor, it is often possible to make a reasonable estimate as to the variable reflected by those items. (For a non-tech-
nical explanation of factor analysis, see Blalock, 1960.)

Using factor analysis, it is possible to build a scale of items thus which appears to best measure the variable under consideration. As such, factor analysis represents a check both on the reliability and internal validity of items. In this particular case, I looked for items loading on a factor which appeared to me to best reflect the individual's orientation toward committing an act of tax evasion. On this basis, fifteen out of the forty-five items were selected and are shown in Figure 2. Since two of the fifteen items loading on this factor were phrased such that acquiescence with the statements reflected rejection rather than acceptance of tax evasion, and the loadings of these items were opposite in sign to those of the other thirteen items, it seems reasonable to conclude that acquiescence bias did not represent a serious threat to the validity of the scale. The scale has been termed a tax resistance scale, since it reflects a relative propensity to evade income taxes rather than tax evasion itself. Nevertheless, it is my belief that the scale more closely approximates measurement of true behavior than the general "tax-mindedness" approach taken by Schmölders and Strümpel.

In addition to the scale, the following items were also used in an attempt to provide an indication of true
behavior.

Which of the following statements best sums up your behavior with respect to taking tax deductions?

a. I never take a deduction I don't believe is justified

b. I will occasionally take deductions that I don't believe are justified

c. I often take deductions I know are not justified

Which of the following statements best sums up your behavior with respect to reporting taxable income?

a. I always report every cent that I know I have earned

b. I will occasionally omit to report some income that I have earned

c. I often omit to report parts of my income

It was hoped that by allowing intermediate responses to these items (alternative b in both items), respondents would be able to provide some indication of their behavior without feeling that their responses were too incriminating. Together with the tax resistance scale these items, in my view, can aid in an assessment of taxpayer behavior.

2. Perceptions of Inequity

The concept of inequity as noted in the last chapter is somewhat complex and includes values reflected in both the "benefit" principle and the "ability to pay" principle. Thus, items were selected which would reflect both principles and thereby hopefully measure feelings of
Figure 2
Tax Resistance Scale

I have here a number of items which reflect what some people think about certain aspects of taxation, especially Federal Income Taxes, their experiences with taxes and their behavior with respect to taxes. I would like you to tell me how well each statement fits your own feelings, experiences and behavior. Does the statement fit:

a. Extremely well
b. Very well
c. Fairly well
d. Not well
e. Not well at all

Given present tax burdens, one can hardly blame tax evaders.

Given the easy availability of opportunities to evade taxes, one can hardly blame tax evaders.

If in doubt about whether or not to report a certain source of income, I would not report it.

Since the government gets enough taxes, it does not matter that some people evade taxes.

Taxes are so heavy that tax evasion is an economic necessity for many to survive.

If I received $2,000 in cash for services rendered I would not report it.

Cheating on taxes is justifiable in light of the unfairness of the tax system.

I would never pad my deductions.

Taxes are something which are taken away from me.

Since everybody evades taxes, one can hardly be blamed for doing it.
I would never evade taxes.

When it comes to paying taxes, I say take the Internal Revenue Service for what you can get.

There is nothing bad about underreporting taxable income on one's tax return.

If a man intentionally lists less income on his tax return than legally required, more power to him.

I would feel no qualms at all about not reporting all my income to the Internal Revenue Service.
inequity concerning both input/outcome ratios and levels of inputs. (See Figure 3.)

Items (i), (iv), (v) and (vi) were designed to measure individual feelings concerning input/outcome ratios. It was assumed that individuals feeling that their input/outcome ratios were higher than equitable would feel both taxation in light of services and public spending were generally too high and would not feel that they received fair value for their tax dollar.

Items (ii), (iii) and (vii) reflect more general perceptions of inequity in the tax system and allow for feelings of inequity based both on the "benefit" principle and the "ability to pay" principle. It could be argued that perceptions of inequity, reflected in items (ii) and (iii), could arise either from feelings that the ratio or level of inputs was relatively low or feelings that they were relatively high. Given the higher threshold for display of feelings by the overrewarded, as noted in the last chapter, I felt however that feelings of inequity would probably be far more likely to come from those who felt their ratio or level or inputs to be too high than from those who felt them to be too low. Nonetheless, to the extent that items (ii) and (iii) do not explicitly discriminate between feelings of inequity derived from underreward and overreward, they represent conceptually weaker measures than the other items.
Figure 3

Inequity Related Items

(i) \(^{a}\) How do you feel about the level of taxation nowadays in light of services provided. Do you feel taxes are:

a. far too high
b. little too high
c. about right
d. little too low
e. far too low

(ii) Some people say that the Federal Income Tax is a fair tax. Others disagree. What do you think? Do you think it is a fair tax? Why?

(iii) What about taxes in general. Do you think that on the whole the burden of taxes is:

a. very fairly distributed
b. fairly distributed
c. not too fairly distributed
d. unfairly distributed
e. very unfairly distributed

Why do you feel this way?

\(^{a}\) Roman numerals are used here to avoid confusion with item numbering used in the list of items in Appendix B.
Inequity Related Items

(iv) With respect to defense, do you feel government expenditures are:
    a. far too low
    b. a little too low
    c. about right
    d. a little too high
    e. far too high

(v) With respect to social services, do you feel government expenditures are:
    a. far too low
    b. a little too low
    c. about right
    d. a little too high
    e. far too high

I have here a number of statements that reflect what some people think about certain aspects of taxation, especially Federal Income Taxes, their experiences with taxes and their behavior with respect to taxes. I would like you to tell me how well each statement fits your own feelings, experiences and behavior. Does the statement fit:

    a. Extremely well
    b. Very well
    c. Fairly well
    d. Not well
    e. Not well at all
(vi) I get fair value for my tax dollars.\textsuperscript{b}

(vii) Compared to other taxpayers, I pay no more than my fair share.\textsuperscript{b}

\textsuperscript{b}Listed in the questionnaire along with items in the tax resistance scale.
Given the complexity of the concept of inequity accurate measurement of the feelings of inequity is difficult. Better measurement probably lies in the development of attitude scales, designed to measure the different dimensions of these feelings. However, it is my belief that the items selected represent a good first step in attempting to assess feelings of inequity and probably should, in a modified form, be included in any scales which purport to measure such feelings.

3. Perceived Severity of Sanctions

The following item was used to provide a measure of the perceived severity of sanctions:

What do you think would happen to a taxpayer like yourself if the Internal Revenue Service were to find that he/she had either concealed part of his/her income or claimed invalid deductions? Would he/she have to:

a. pay all taxes due plus interest
b. pay taxes due, interest and a small fine

The item unfortunately does not discriminate between different acts of tax evasion, but, nonetheless, hopefully provides some general indication of the perceived sanctions which may be considered by a taxpayer in deciding whether or not to evade taxes. A scale should probably be devised including items relating to various specific acts of tax evasion and perceived penalties for
each act.

4. Perceived Probability of Detection

While expectancies or perceived probabilities can be expressed in terms of percentages, I felt that more general language was appropriate for attempting to measure this variable. The following item was used.

What do you think are the chances that the Internal Revenue Service will examine your return to find out whether you paid all taxes due?

a. it's a sure thing
b. chances are so-so
c. unlikely
d. very unlikely
e. no chance

5. Number of Tax Evaders Personally Known by the Respondent

The following item was used to measure this reference group variable.

How many people do you know personally who evade a part of their taxes?

These then are the items used to measure the variables in the hypotheses developed in the last chapter. In addition to these items, questions were also asked relating to certain background characteristics. The purpose of such questions was to search for other factors possibly affecting taxpayer behavior and, in doing so, to improve the control of factors not directly considered in the hypotheses. Questions were asked concerning the
occupation, age, education level, income and political party affiliation of the respondent.

Of particular interest were questions concerning the occupation and income composition of the respondent, since these factors affect the individual's opportunity to evade taxes. Taxpayers who are self-employed or receive significant additions to their income in non-salary or non-wage form, generally have more opportunity to evade taxes. Therefore, these factors should probably be examined and controlled for.

In addition, questions were also asked concerning any personal contact the respondent had with the Internal Revenue Service, with particular emphasis on whether or not the respondent had been audited. The purpose of these questions was to examine how previous audits might affect taxpayer behavior.

Sample Selection

The size of the sample was limited to 130. Clearly, the use of such a small sample introduces a large element of sampling error. Sampling error lowers the precision or reliability of the sample estimates for each variable measured and consequently for each measure of association used in testing relationships, thereby limiting the extent to which findings may be generalized. However, the choice of a small sample was felt to be justified for at least two reasons. First, a small sample
survey does enable more intensive and personal interviewing (Wärneryd and Olander, 1972). Such interviewing was in my view absolutely necessary to this study in order to build up the rapport which was needed in collecting valid data concerning such a delicate matter as tax evasion, an illegal and probably socially undesirable form of behavior. Therefore, while some reliability was lost by the use of a small sample, the loss in my view was worth the gain in validity of measures obtained by improved rapport. Second, given the essential exploratory nature of this study, a small sample survey cannot be considered an entirely inappropriate means of examining the hypotheses developed in the model and suggesting hypotheses for future research. The exact strength of relationships at this preliminary stage of research was not considered to be as important as the general direction of such relationships and therefore the precision of those estimates was not quite as important. It can be observed from the discussion in Chapter 1 that behavioral research on tax evasion is limited at this point in time, and so there is in my view great value in this type of exploratory research.

Nonetheless, the use of a small sample raises a particular problem, where the relative occurrence of some characteristic may be low. Clearly where a characteristic is shared by only a small number of the population, the
relative error in sample estimates increases (Backstrom and Hursh, 1963, p. 31). Indeed, the given characteristic may not show up at all in the sample. For example, a sample of 100 voters in the 1972 presidential election could easily miss all voters who voted for Benjamin Spock and, even if some of these voters were included, the relative error in the sample estimate would be high.

Since tax evasion is probably socially undesirable and certainly illegal, and since the opportunities for tax evasion are open only to those who either itemize deductions or receive at least some income in a form other than salaries or wages, the characteristic of tax evasion behavior may be also rare in the whole population of taxpayers. Therefore, it was decided to restrict sampling to taxpayers in moderately affluent and more affluent neighborhoods, since it seems reasonable to assume that opportunities for tax evasion are usually limited to taxpayers in the middle and upper income brackets. It was felt that such a sample would tend to produce a higher proportion of tax evaders than a sample of all taxpayers, and thus would lead to less relative error in estimates of tax evasion and its relationships with other variables. However, it should be noted that this sample therefore is representative of only a certain group of taxpayers, namely those in middle and upper income brackets, and that one can only generalize sample
findings to this group.

A list of random sample dwellings in the Clintonville and Upper Arlington areas was obtained by selecting randomly households from larger samples of the same areas kindly provided by Jeffrey Spencer of the Department of Economic and Community Development. These latter samples were part of an area sample of the Columbus Metropolitan Area and were considered to be representative of moderately and more affluent taxpayers in this area. Columbus itself is a center for test marketing and its residents may therefore be considered somewhat representative of the national population.

Data Collection

The data, for reasons noted in the last section, were collected by means of a personal interview. The designated respondent was the head of the household, since it was felt that this person would be most likely either to handle the tax matters or at least to play a major role in handling them. The alternative procedure would have been to ask to speak to the person who handled tax matters, which would in my view have provided a cue to the respondent as to the exact nature of the data to be collected and thus would have made difficult the establishment of rapport considered necessary to the validity of measurement in this study. In attempting to gain access to the household, the following procedures
were followed. No advance notification was given to the respondent of the interview either by letter or by telephone, since such notification might have cast serious doubts in the respondent's mind concerning the confidentiality of his responses, and thereby threatened the validity of the responses on tax evasion. Therefore, the initial contact was made on the respondent's doorstep. Having established such contact, the respondent was informed as to the general purpose of the interview. While he was informed that the interview was designed to find out what he thought about certain aspects of the tax and political system, no specific mention was made of tax evasion or compliance. Such mention would clearly have put the respondent on his guard, threatening the validity of responses, and might even have made the respondent unwilling to participate in the interview at all. The respondent was handed a copy of a letter of general introduction signed by the Chairman of the Division of Public Administration, which indicated only that the interview was a part of my doctoral studies. The use of such a letter provides a source of legitimacy to the interview process. This legitimacy is almost essential nowadays in light of the practices of numerous unethical sales organizations, which employ pseudo-interviews to gain access to potential customers. While in light of these distasteful practices, it was often difficult to gain
access to particular households, once access had been gained, respondents were most cooperative.

The interview itself is obviously a source of potential bias, and is thus a threat to the validity of responses. Interviewing is probably more of an art than a science, but it is believed the following steps were effective in reducing bias. First, it was made clear to each respondent that all responses were completely confidential and no note was made on the individual questionnaire of either the name or the address of the respondent for whom it was used. Indeed, at no point in the interview was the individual even asked his name. Where such information was volunteered, first names were usually used, while where the information was not volunteered, the terms "sir" or "ma'am" were used.

Second, the interview was structured in the following way. In addition to closed-ended questions, some open-ended questions were asked in the initial stages of the interview, relating to general attitudes toward taxes (see Item 1, Appendix B), and also probing responses given on closed-ended questions (see under Items 3 and 4, Appendix B). These provided an opportunity for respondents to collect their thoughts on the subject of taxes, a means of establishing some rapport with respondents and also a source of information in addition to that provided by closed-ended questions. It is my belief that
the function of establishing rapport here is especially important, because open-ended questions help communicate to the respondent that the interviewer is genuinely interested in his responses as a person and not simply as a source of data, an impression which may perhaps sometimes be conveyed by overzealous and exclusive use of closed-ended questions. The more sensitive closed-ended questions concerning tax were asked midway through the interview after respondents had voiced their attitudes concerning the level and fairness of taxation and the level of government expenditures (see Appendix B). Questions were read mainly as indicated in Appendix B so that general uniformity in the wording of questions and connecting sentences was preserved. The questionnaire had been memorized before interviewing, so that the reading would sound as natural and spontaneous as possible.

Fourth, the interview was conducted in what might be called an atmosphere of "friendly permissiveness" as recommended by Maccoby and Maccoby (1954, p. 465). While the giving of approval or disapproval of responses is obviously to be carefully avoided, the interviewer should never remain so aloof, impassive or non-committal that rapport suffers. As Maccoby and Maccoby (1954, p. 465) note, one "laughs at the respondent's jokes, exclaims when the respondent says something evidently intended to be astonishing ('really,' 'you don't say'), makes support-
ive statements such as 'I see your point,' 'that's understandable,' and in other ways allows himself some of the emotional expressiveness which would be normal in the situation." The building of a supportive atmosphere was hopefully accomplished by using these different types of "techniques," although the word "techniques" is not completely appropriate as far as this student is concerned. So long as an interviewer is keenly aware that he is a guest in the respondent's household, he should treat the respondent as a host and an individual, and, provided he holds back only explicit or implied approval or disapproval of responses, these "techniques" should then come fairly naturally. This is not to imply that one should not be aware of the possible biasing effects of interviewer responses, gestures and posture, but merely to suggest that the appropriate interviewer attitude toward the respondent may be an important factor in establishing the rapport so necessary for valid responses to rather personal questions.

In conclusion, the above steps taken hopefully led to a reduction in the biasing of responses by the data collection process itself. Clearly the total elimination of bias is impossible so long as respondents are aware that their responses are being observed. Nonetheless, it is my belief that reasonable steps were taken here to ensure the validity of responses.
Analysis of Data

The data collected were analyzed in the following manner. Firstly, data were coded as indicated in Appendix B. Then simple two-way tables were constructed to suggest potential relationships of the tax resistance scale and the two tax evasion behavior items with items relating to hypothesized independent variables, and also background variables.

Two multiple regressions were then completed in order to attempt to ascertain sources of variance in tax resistance and tax evasion responses. The dependent variables were the total score on the tax resistance scale and the combined score of the tax evasion items. The latter score represents an index of tax evasion behavior. The independent variables were the combined score on inequity related items and individual item scores for perceived severity of sanctions, the perceived probability of detection, the number of tax evaders known personally to the respondent, his age, income, occupation, composition of income, education level and party affiliation. An \( F \) test was performed to determine the total significance of each regression and Student's \( t \) test was performed on each coefficient.
Chapter 4

Analysis of Results

In this chapter the results obtained from the data collected will be presented and analyzed with a view to testing the relationships hypothesized in Chapter 3 and to seeing what other relationships appear to exist. Before doing this, however, I would like to discuss how I attempted to assess the reliability of the tax resistance scale.

The reliability of the scale, as noted in the last chapter, is an index of the extent to which repeated measurements yield similar results (Green, 1954, p. 338). Obviously, if chance fluctuations produce relatively large shifts in an individual's score on a scale, then it becomes difficult to interpret any meaning from these scores. The Kuder-Richardson test provides a fairly good means of assessing reliability, by indicating the internal consistency of the scale or the extent to which items all reflect the same underlying variable. Using Cronbach's version of the Kuder-Richardson test (1951), a reliability coefficient of 84% was calculated from the data, which suggests that the scale is fairly reliable in its present form and that variations in the scale scores do indeed
reflect variations in underlying attitudes and preferences.

For purposes of description and preliminary analysis the average per item scores on the tax resistance scale and scores on other items were grouped into high and low scores, and two by two tables were constructed. This simple format was used to facilitate description and interpretation, although, as noted later in the chapter, such interpretation may be misleading. Relationships were tested using a one-tailed Chi-Square test with a 95% confidence level. I shall first discuss the results obtained using the tax resistance scale and then, for purposes of comparison, discuss results obtained using the two items reflecting reported tax evasion behavior with respect to the claiming of deductions and the reporting of income.

Tax Resistance and its Relationships to Other Variables

A Chi-Square test suggested that tax resistance, measured by the average score per item, was significantly related to perceptions of inequity, as reflected in scores on two of the inequity items, the number of tax evaders known personally by the respondent and also certain background characteristics of the respondent.

The inequity items (see items 4 and 7 in Figure 3) represented feelings concerning the fairness of the overall distribution of the burden of taxation and value.
received for tax dollars.

As Table 1 indicates, while only 30.6% of those who felt that the distribution of the burden of the taxes was either very fair or fair, had a high average score (greater than one) on the tax resistance scale, 52.1% of those who felt the distribution to be not too fair, unfair, or very unfair had such a score. It is interesting to note that of all those respondents who felt the distribution to be not too fair, unfair or very unfair, 75% cited tax avoidance by the more wealthy or by corporations as a major reason for their feelings.

Also, as Table 2 indicates, while 41.6% of those who agreed they received fair value for their tax dollars scored high on the tax resistance scale, 62.1% of those who disagreed scored high on the scale. Given that this latter item appears to reflect feelings about the input/outcome of the taxpayer, it would seem that perceptions of inequity and relative deprivation as defined by Adams may be positively related at least to the propensity to evade taxes reflected in the scores on the tax resistance scale.

The hypothesis derived with respect to reference group effects is also lent support by the data. Table 3 indicates that of those who knew no tax evaders personally, only 40.2% scored high on the tax resistance scale as opposed to 58.1% of those who personally knew one or more
### Table 1

**Tax Resistance by Feelings**

**Concerning the Overall Burden of Taxes**

Average per item score on the tax resistance scale

<table>
<thead>
<tr>
<th></th>
<th>Low (1)</th>
<th>High (2-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentages (and numbers) of respondents feeling that the burden is distributed:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fairly or very fairly</td>
<td>69.4 (25)</td>
<td>30.6 (11)</td>
</tr>
<tr>
<td>Not too fairly, unfairly, or very unfairly</td>
<td>47.9 (45)</td>
<td>52.1 (49)</td>
</tr>
</tbody>
</table>

Chi-Square = 4.045 with 1 degree of freedom

Significance = 0.0222 (One-tail)
### Table 2

**Tax Resistance by Feelings**

**Concerning Value Received for Tax Dollars**

**Inequity item:** I get fair value for my tax dollars.

Average per item score on the tax resistance scale

<table>
<thead>
<tr>
<th>Low (1)</th>
<th>High (2-5)</th>
</tr>
</thead>
</table>

Percentages (and numbers) of respondents who felt that the above statement fitted them:

<table>
<thead>
<tr>
<th>Extremely well, very well or fairly well</th>
<th>58.4 (69)</th>
<th>41.6 (42)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not well or not well at all</td>
<td>37.9 (11)</td>
<td>63.1 (18)</td>
</tr>
</tbody>
</table>

Chi-Square = 3.025 with 1 degree of freedom

Significance = 0.0410

(One-tail)
<table>
<thead>
<tr>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tax Resistance by Number of Tax Evaders Known Personally</strong></td>
</tr>
</tbody>
</table>

Average per item score on the tax resistance scale

<table>
<thead>
<tr>
<th>Low (1)</th>
<th>High (2-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Percentages (and numbers) of respondents knowing personally</strong></td>
<td></td>
</tr>
<tr>
<td>No tax evaders</td>
<td>59.8 (52)</td>
</tr>
<tr>
<td>One or more tax evaders</td>
<td>41.9 (18)</td>
</tr>
</tbody>
</table>

Chi-Square = 3.028 with 1 degree of freedom
Significance = 0.0414 (One-tail)
tax evaders. The remaining hypotheses, concerning perceived severity of sanctions and the probabilities of detection, were not supported by this preliminary examination of the data.

Three background variables were found to be significantly related to scores on the tax resistance scale. The first related to whether or not the respondent's taxes had been audited. Those who had been audited at least once had significantly higher scores on the tax resistance scale than those who had never been audited (see Table 4). The reason for this relationship is not completely clear. It is possible that interaction with the fiscal authorities in this relatively coercive setting contributes toward tax resistance rather than reduces it. Strümpel (1968) has noted how rigidity in assessment may lower taxpayer compliance via a reduced willingness to cooperate. Perhaps interaction with fiscal authorities among some respondents led to perceptions of rigidity in assessment which increased their tax resistance. It is also possible however that the direction of causality may run entirely the other way. In particular, increased tax resistance reflected in behavior may increase the taxpayer's chances of being audited.

The second background variable found to be significantly related to tax resistance was the age of the respondent. 53.8% of those under fifty scored high on
### Table 4

**Tax Resistance by Experience with Tax Audits**

<table>
<thead>
<tr>
<th></th>
<th>Low (1)</th>
<th>High (2-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average per item score on the tax resistance scale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentages (and numbers) of respondents who reported having:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never been audited</td>
<td>61.0 (47)</td>
<td>39.0 (30)</td>
</tr>
<tr>
<td>Been audited at least once</td>
<td>43.4 (23)</td>
<td>56.6 (30)</td>
</tr>
</tbody>
</table>

Chi-Square = 3.254 with 1 degree of freedom

Significance = 0.0357 (One-tail)
the scale as opposed to only 34.6% of those over fifty. (See Table 5.) This suggests possibly that the older taxpayers may have internalized cultural values reflected in the law to a greater extent than younger taxpayers. However, the relationship might also reflect possible greater opportunities for tax evasion among younger taxpayers. Which of these explanations is likely will be discussed later in light of results from the multiple regressions, which control from some opportunity factors.

The final background variable found to relate to tax resistance was the income level of the respondent. Given that opportunities to evade taxes would seem to increase with the level of income, one might expect income to be positively related to scores on the tax evasion scale. However, Table 6 suggests precisely the opposite. In my view, this discrepancy may have arisen for the following reason. While the more wealthy may have greater opportunities to evade taxes, it also seems apparent that their opportunities for tax avoidance, a legal means of reducing tax burden, are also greater (Pechman, 1971, pp. 295-299). Given the latter opportunities, the more wealthy may be less tempted or motivated to take advantage of the more risky opportunities for tax evasion than the less wealthy whose opportunities for tax avoidance are less. This interpretation is lent support by the results of Strümpel (1968), which suggest
### Table 5

**Tax Resistance by Age**

Average per item score on the tax resistance scale

<table>
<thead>
<tr>
<th></th>
<th>High (1)</th>
<th>Low (2-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentages (and numbers) of respondents who reported age as:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>under 50</td>
<td>46.2</td>
<td>53.8</td>
</tr>
<tr>
<td></td>
<td>(36)</td>
<td>(42)</td>
</tr>
<tr>
<td>over 50</td>
<td>65.4</td>
<td>34.6</td>
</tr>
<tr>
<td></td>
<td>(34)</td>
<td>(18)</td>
</tr>
</tbody>
</table>

Chi-Square = 3.901 with 1 degree of freedom

Significance = 0.0242
(One-tail)
**Table 6**

**Tax Resistance by Income**

Average per item score on the tax resistance scale

<table>
<thead>
<tr>
<th></th>
<th>Low (1)</th>
<th>High (2-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>under $20,000</td>
<td>46.5 (33)</td>
<td>53.5 (38)</td>
</tr>
<tr>
<td>over $20,000</td>
<td>62.7 (37)</td>
<td>37.3 (22)</td>
</tr>
</tbody>
</table>

Chi-Square = 2.795 with 1 degree of freedom

Significance = 0.0473 (One-tail)
that the greater opportunities for tax avoidance or loopholes granted to British taxpayers relative to other European taxpayers tended to contribute toward taxpayer compliance.

Reported Tax Evasion Behavior and Related Variables

It will be recalled that questions were asked of respondents with respect to their actual behavior (see items 24, 25, Appendix B). Respondents were asked to indicate by means of a scale how often they either claimed deductions, which they believed unjustified, or failed to report parts of their taxable income. Chi-Square tests revealed only three statistically significant relationships.

There appeared to be a relationship between how often a respondent claimed what he felt to be an unjustified deduction and how many people he knew personally who evaded a part of their taxes. As Table 7 indicates, of those who knew personally no tax evaders, only 19.5% admitted to occasionally taking deductions that they did not believe were justified, compared with 37.2% of those who knew personally one or more tax evaders. Similar results were also shown concerning the relationship between reported behavior with respect to reporting income and the number of tax evaders personally known by the respondent (see Table 8).
Table 7

Tax Evasion Behavior ("Unjustified" Deductions) by Number of Tax Evaders Personally Known

<table>
<thead>
<tr>
<th>Statements which respondents felt summed up their behavior best</th>
<th>I never take a deduction I don't believe is justified</th>
<th>I will occasionally take deductions I don't believe are justified</th>
</tr>
</thead>
<tbody>
<tr>
<td>no tax evaders</td>
<td>80.5 (70)</td>
<td>19.5 (17)</td>
</tr>
<tr>
<td>one or more tax evaders</td>
<td>62.8 (27)</td>
<td>37.2 (16)</td>
</tr>
</tbody>
</table>

Percentages (and numbers) of respondents personally knowing

Chi-Square = 3.856 with 1 degree of freedom

Significance = 0.0248 (One-tail)
Table 8

Tax Evasion Behavior (Failing to Report Parts of Taxable Income) by Number of Tax Eaders Personally Known

<table>
<thead>
<tr>
<th>Statements which respondents felt summed up their behavior best</th>
</tr>
</thead>
<tbody>
<tr>
<td>I always report every cent that I known I have earned</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentages (and numbers) of respondents personally knowing</th>
</tr>
</thead>
<tbody>
<tr>
<td>no tax evaders</td>
</tr>
<tr>
<td>one or more tax evaders</td>
</tr>
</tbody>
</table>

Chi-Square = 2.928 with 1 degree of freedom
Significance = 0.0435
The claiming of unjustified deductions also appeared to be related to whether or not the respondent had been audited. Of those who had never been audited, only 15.6% admitted to occasionally taking deductions that they did not believe were justified as opposed to 39.6% of those who had been audited at least once (see Table 9). This relationship is consistent with that found using the tax resistance scale and also is subject to the same set of conflicting interpretations.

Cross-tabulation of data, while useful for purposes of description and preliminary investigation of data, is not by itself a very powerful instrument of analysis. The grouping of scaled responses on items into categories is always arbitrary to some extent and different groupings will sometimes suggest different relationships. Furthermore, in this particular set of cross-tabulations, no attempt was made to control for interaction among the variables related to tax evasion. As a result, certain relationships may have been obscured while others may have been exaggerated. Some element of control can of course be introduced into a cross-tabulation, but the small sample size here severely limits the number of variables that can be controlled for, while still yielding interpretable results. Therefore, in order to reduce the arbitrariness in grouping of responses (the scaling of responses itself is arbitrary to some extent) and to
Table 2

Tax Evasion Behavior ("Unjustified" Deductions)
by Experience with Tax Audits

<table>
<thead>
<tr>
<th>Statements which respondents felt summed up their behavior best</th>
</tr>
</thead>
<tbody>
<tr>
<td>I never take a deduction I don't believe is justified</td>
</tr>
<tr>
<td>I will occasionally take deductions I don't believe are justified</td>
</tr>
</tbody>
</table>

Percentages (and numbers) of respondents who reported having:

<table>
<thead>
<tr>
<th>Never been audited</th>
<th>%</th>
<th>(Number)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>84.4</td>
<td>(65)</td>
</tr>
<tr>
<td>Been audited at least once</td>
<td>60.4</td>
<td>(32)</td>
</tr>
</tbody>
</table>

Chi-Square = 8.350 with 1 degree of freedom

Significance = 0.0019 (One-tail)
introduce an element of control, two multiple regressions were undertaken. The appropriateness of the multiple regression technique here is obviously open to question. As the reader is no doubt aware, multiple regression is based on a series of fairly strict assumptions concerning the distribution of variables, their relationships with one another and the distribution of error terms (Kmenta, 1971, p. 202, p. 348). I would be less than candid if I did not admit that it is questionable whether the data collected meet all of these assumptions. Nonetheless, as Blalock has noted (1960, p. 417), powerful techniques such as analysis of covariance or regression analysis may be justified when the aims of the research are exploratory in nature, provided that results are interpreted with caution. Given the essential exploratory nature of this particular study, I believe that the use of multiple regression, while it cannot provide very rigid tests of my hypotheses, can at the very least shed some light where little has been shed before.

Regression Results

Before computing the regressions, two indexes were constructed. I use the term "index" here rather than "scale" since items were not selected on the basis of any formal testing procedure but were simply grouped together. The first index was the sum of the scores on the two items
relating to reported tax evasion behavior. The scores on this index provide an element of continuity for assessing the extent to which a taxpayer evades tax. The second index was the sum of the scores on inequity items. Given the complexity of the concept of inequity, there are obviously serious doubts concerning the reliability of the index. Nonetheless, simple regression of total index scores on each item score revealed that variations in item scores were to a significant extent reflected in variations in the total index scores (see Table 10). A Kuder-Richardson test of internal consistency yielded a coefficient of 60%, suggesting a moderate degree of reliability. Attempts were made to improve reliability by dropping what appeared to be less reliable items, but without success. In spite of its weaknesses, it is my belief that the variations in total scores on this index reflect reasonably well variation in the perceived equity of input/outcome ratios and levels of input.

Having constructed the above indexes, two regressions were performed. First, total scores on the tax resistance scale were regressed on scores from the index of inequity items, the perceived severity of sanctions, the perceived probabilities of detection, the number of tax evaders personally known and seven background variables (experience with tax audits, age, education, whether or not the respondent was self-employed, income,
Table 10

Simple Regression Coefficients
for Inequity Item Scores on the Total Index Score

<table>
<thead>
<tr>
<th>Item Number&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Simple R</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0.60</td>
</tr>
<tr>
<td>3</td>
<td>0.53</td>
</tr>
<tr>
<td>4</td>
<td>0.49</td>
</tr>
<tr>
<td>5</td>
<td>0.40</td>
</tr>
<tr>
<td>6</td>
<td>0.49</td>
</tr>
<tr>
<td>7</td>
<td>0.72</td>
</tr>
<tr>
<td>8</td>
<td>0.63</td>
</tr>
</tbody>
</table>

<sup>a</sup>See Appendix B for item and coding.
the proportion of income received in wages, salaries or pensions, and party affiliation). Second, scores on the tax evasion index were regressed on the same set of variables to provide some comparison for relationships observed from the first regression. The Beta coefficients (standardized regression coefficients) and the multiple regression coefficients yielded by both regressions are shown in Table 11. The two Beta coefficients for each variable indicate the proportion of variance in the tax resistance scores and tax evasion index scores explained by that variable, holding all other variables constant. With respect to the tax resistance scores, the following relations were found to be statistically significant.

Three of the four hypothesized relationships were lent support by the results. Tax resistance scores were found to be positively related to scores on the index of inequity items and to the number of tax evaders known personally by the respondent and negatively related to the perceived probability of detection. No significant relationship was found with respect to the perceived severity of sanctions.

Certain background variables were also important. Age was the most important of these, explaining 29% of the total variance in scores on the tax resistance scale, holding all other variables constant. As with the Chi-
Table II
Multiple Regression Results
(Beta and Multiple Regression Coefficients)

Independent Variables | Dependent Variables
---|---
| Tax Resistance Scale (Items 8-22) | Tax Evasion Index (Items 24, 25) |

1. Variables Related in Hypotheses
   - a. Inequity (Index) (Items 2-8) | 0.34 | 0.24 |
   - b. Number of Tax Evaders Known Personally (Item 24) | 0.16 | 0.18 |
   - c. Perceived Probability of Detection (Item 27) | -0.17 | b |
   - d. Perceived Severity of Sanctions (Item 28) | b | b |

a See Appendix B for items and coding.
b Coefficient not statistically significant at 95% confidence level using Student's "t" test.
### Table II (cont'd)

**Multiple Regression Results**

**(Beta and Multiple Regression Coefficients)**

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variables</th>
<th>Tax Resistance</th>
<th>Tax Evasion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Scale (Items 3-22)*</td>
<td>Index (Items 25, 26)*</td>
</tr>
<tr>
<td>2. Background Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Age (Item 32)</td>
<td>-0.29</td>
<td>b</td>
<td></td>
</tr>
<tr>
<td>b. Education (Item 33)</td>
<td>b</td>
<td>b</td>
<td></td>
</tr>
<tr>
<td>c. Experience with Tax Audits (Item 30)</td>
<td>0.22</td>
<td>0.29</td>
<td></td>
</tr>
<tr>
<td>d. Income Level (Item 35)</td>
<td>-0.27</td>
<td>b</td>
<td></td>
</tr>
<tr>
<td>e. Party Affiliation (Item 34)</td>
<td>b</td>
<td>b</td>
<td></td>
</tr>
<tr>
<td>f. Proportion of Income Derived from Wages, Salaries or Pensions (Item 36)</td>
<td>0.20</td>
<td>b</td>
<td></td>
</tr>
</tbody>
</table>

**Multiple Regression Coefficients**

- **Tax Resistance Scale (Items 3-22)**: 0.37
- **Tax Evasion Index (Items 25, 26)**: 0.19

**F Statistic**

- **(7.1)**
- **(2.9)**

---

*a* See Appendix B for items and coding.

*b* Coefficient not statistically significant at 95% confidence level using Student's "t" test.
Square results, increasing age appears to be related to lower tax resistance. Given the control for opportunity factors such as self-employment, income level and the proportion of income received in salaries, wages or pensions, these results may reflect differences in the extent to which norms reflected in the law are internalized, as suggested earlier in the chapter. Experience with tax audits may also be important. Those who had been audited at least once tended to score higher on the tax resistance scale, as demonstrated by the significant positive beta coefficient.

Family income was found to be negatively related to tax resistance, even after controlling other variables. The reader will recall that a similar result was obtained using a simple Chi-Square test. Not only was the level of income important, however, but also the proportion of it derived from wages, salaries or pensions. The higher that proportion, the higher was the score on the tax resistance scale, holding other variables constant. These two latter relationships seem to indicate that opportunities for tax avoidance made available with higher incomes and also with larger additions to wages, salaries or pensions may indeed reduce the motivation to undertake risky acts of tax evasion, as suggested earlier in this chapter.

The multiple regression coefficient derived from
all the variables was 0.37, indicating that together all the variables account for 37% of the variation in tax resistance. This coefficient, while fairly low, was found to be significant, using an F test with a 99% level of confidence.

The second regression, involving scores on the tax evasion index, also lent support to hypotheses concerning perceptions of inequity and the number of tax evaders known personally by taxpayers. The hypothesized relationships between tax evasion and perceived severity of sanctions and probability of detection were however not supported by these results. With respect to background variables, experience with audits was shown to be positively related to reported tax evasion, but no other significant relationships were shown. The multiple regression coefficient was only 0.19, but was found to be statistically significant, at a 99% confidence level.

Both regressions suggest that perceptions of inequity, reference group factors and experience with tax audits may be important in determining taxpayer choice with respect to compliance and evasion. However, the perceived probabilities of detection, age and the two income variables were shown to be related only to scores on the tax resistance scale. If the reader will compare these results with those obtained using simple two by
two tables and Chi-Square tests, he will note a striking similarity in results obtained, suggesting that the effect of grouping of data and lack of control for interaction of independent variables in these Chi-Square tests did not radically affect results. However, there are three major differences in results. The regression of the tax resistance scores on other variables suggests that the perceived probability of detection and the proportion of income received in wages, salaries and pensions may be important in determining tax resistance, in addition to the variables suggested in the preliminary analysis. The regression on the index of tax evasion scores suggests also the importance of perceptions of inequity, which was not revealed in the preliminary analysis.

The discrepancy between results obtained by the two regressions indicates that the tax evasion index and the tax resistance scale may not measure the same variables. Which of them, if either, is more indicative of true behavior is not clear. The tax evasion index is probably more vulnerable to dishonesty on the part of respondents, given that it requires a greater degree of self-incrimination, but the tax resistance scale, while it probably brings forth more honest responses, may tend to measure general values and preferences concerning tax evasion behavior rather than tax evasion itself.
Therefore, in summary, while the results tend to confirm the hypotheses derived from exchange or inequity theory and reference group theory, they do not lend any support to the hypothesis concerning the perceived severity of sanctions and do not indicate unambiguously the effects of the perceived probability of detection. However the regression, using the tax resistance scale, does suggest that the perceived probability may affect behavior in the manner hypothesized. In addition, the experience of the taxpayer with tax audits appears to be related to tax evasion, although, as noted earlier, the direction of causality is not clear.

The generally low multiple regression coefficients yielded by the regressions must seriously limit interpretation of any of the results. They suggest either poor measurement or a failure to include certain important variables. Such inclusion could quite obviously change radically the regression results. Nonetheless, it is my belief that the results yielded do lend considerable support to hypotheses concerning perceptions of inequity and reference group effects and at least some degree of support to the hypothesis concerning the probability of detection.

Given the apparent important effect of perceptions of inequity on the level of tax resistance and on reported behavior, it is appropriate to ask what if any particular
aspects of the exchange process with government seem to lead to perceptions of inequity and relative deprivation.

The open-ended responses in inequity item 4 (see Appendix B) relating to the fairness or unfairness of the distribution of the burden of taxes, suggest an answer to this question. It is interesting to note that of those who felt the distribution to be not too fair, unfair, or very unfair, 75% stated that a major reason for their feelings was what they perceived as extensive tax avoidance either by more affluent taxpayers or corporations. This suggests that tax avoidance or the problem of so-called tax loopholes may be a major equity concern of tax evaders. The policy implications of this and of the other findings will be discussed in the next chapter.
Chapter 5

Summary and Policy and Research Implications

This study has emerged out of a personal conviction that the problems of public finance and indeed of public administration can best be tackled by a fusion of contributions from several disciplines. The problem of tax evasion is believed by the author to be of major importance not only because of loss of revenue but also because of the distortion such evasion introduces into the distributional impact of taxation and the effect of widespread tax evasion on the faith of taxpayers in fiscal policy and administration. Existing literature suggests that a pure economic approach cannot itself provide a sufficiently rich understanding of the factors underlying tax evasion and that a behavioral framework is essential for real progress. Building on concepts derived from psychology and sociology, I have attempted to develop a model of tax evasion which recognizes the paying of taxes as a social rather than a purely economic transaction. Hypotheses derived link tax evasion not only to penalties and detection but also the feelings of relative deprivation resulting from perceived inequities in the transaction and to reference group behavior. In
order to test, or at least shed light on these hypotheses, and also to attempt to suggest other factors related to tax evasion, a small sample survey study was undertaken. Analysis of the results of this study, using Chi-Square tests on simple two-by-two tables and multiple regression analysis lends, in my view, considerable support to the two hypotheses concerning perceptions of inequity and reference group effects and at least some support to the hypothesis linking perceived probabilities of detection to tax evasion. In addition, results suggest that certain background variables, such as experience with tax audits, income level, income composition and age may be linked to tax evasion.

If, in spite of the weaknesses of the study, one is prepared to accept the above results, then important policy implications may be derived. These implications concern not only the administration of taxes but also the formulation of both tax policy and perhaps general social policy.

Firstly, it would appear that at least minor infractions of tax law are not limited to a few greedy taxpayers but are an accepted means of tax reduction for a large proportion of the population. The scores on the tax evasion index indicate that 33% of respondents feel they evade income taxes at least to some extent, either by claiming deductions they do not believe are justified,
or failing to report parts of their income. Given the social desirability bias in responses, these results probably represent a conservative estimate of tax evasion behavior for comparable groups in the population. While each taxpayer may only commit minor offenses, the pervasiveness of such offenses suggests that overall income tax evasion may be a more serious problem in the United States than one has usually been led to believe.

Secondly, the results suggest that the problem may become even more serious in the future. As noted, there appears to be a negative relationship between the individual propensity to evade taxes, as reflected in the tax resistance scale, and the age of the individual, implying that younger taxpayers may not have internalized legal norms of taxpayer behavior to the same extent as their fathers. When one considers also the observed effects of reference group behavior on not only tax resistance but also reported behavior, then the outlook for future tax compliance is not bright.

Given the seriousness of the policy problem of present tax evasion and the potential for increased tax evasion, discussion of the following policy recommendations seems pertinent. At an administrative level it would not seem likely that taxpayer compliance can be improved by the imposition of more severe sanctions. In addition, the observed relationship of tax evasion as
reflected in both the tax resistance scale and reported behavior to experience with tax audits suggests that increased auditing of taxpayers may not increase overall compliance but may even lower it. However, it would appear that taxpayers are sensitive to the perceived probability of detection.

How does one increase the perceived probability of detection without increasing audits which may actually lower compliance? One way might be through the publicizing of individual tax offenses in such a manner that other taxpayers can identify with those who are caught. This suggests that the present emphasis in publicity given by the Internal Revenue Service to tax offenses involving large amounts of money may not be entirely appropriate, and that publicity should also be given to selected minor offenses, which many taxpayers had either considered committing or actually committed themselves.

At a policy formulation level, the implications of the results are more complex. If it is accepted that perceptions of inequity are a partial cause of tax evasion, then the results suggest improved compliance might be attained by introducing more equity into relative input/outcome ratios and relative input levels. It was noted in the last chapter that a major part of perceived inequity may be the feelings among respondents that many
taxpayers, especially the more wealthy, did not pay their fair share because of tax avoidance routes. Therefore, one way of reducing perceived inequity might be to implement the tax reform proposals, suggested by economists such as Joseph Fechman (1971), which would close many of those tax avoidance routes. However, it is not clear that such a move would necessarily improve overall tax compliance.

The reader will recall that the results of the regression on tax resistance (see Table 10) suggested that those whose opportunity to avoid taxes was greater, because of the level and composition of their incomes, may be less tempted to evade taxes than those whose opportunities are less. Might then the closure of tax avoidance routes not increase the temptation for these taxpayers to evade taxes, offsetting to some extent the increased compliance caused by perceptions of greater equity? However, there is an additional policy effect to be considered. Opportunities for tax avoidance tend also to be opportunities for tax evasion given that there is often a fine line between what constitutes legitimate tax avoidance and what constitutes tax evasion, as the President's present tax problems amply illustrate. Therefore, while the temptation for certain taxpayers to evade might be increased by closure of tax avoidance routes, their opportunities to do so would be reduced.
While exact calculation of all the policy effects is difficult, it is thus very possible that overall compliance might indeed be increased by closure of certain tax avoidance routes.

The question of closure of tax avoidance routes however cannot and should not be resolved purely on the basis of effects on compliance. Revenue productivity is but one factor to be considered in evaluating fiscal policy. One must also consider carefully the possible allocation and distribution effects of policy, and it seems clear that closure of certain tax avoidance routes would probably have many such effects.

If exchange and inequity theory can indeed be applied to the relationships of taxpayers with their government, then the implications of this study go far beyond questions of specific tax policy and may affect our very notions about the nature of the social contract between a citizen and the state. In particular, the theory of taxpayer behavior developed here and the apparent support given it by survey results may imply that a citizen's felt obligation to the state can neither be taken for granted nor simply purchased on a quid pro quo basis, in return for government provided goods and services. Rather, that felt obligation may emerge partly in return for a sense of parity in his transactions when compared to other citizens' transactions with the state.
It may not be what a man receives from the state that determines his felt obligation, so much as whether his terms of trade compare favorably with those of other men. If this is true, then the implications of this study apply not only to tax policy but to general economic and social policy as a whole. It is interesting to note that this notion of social contract has been explicitly stated in the policy of the present Labor Government in Britain, and has been endorsed at least superficially by the British Trade Union Congress. The government, in return for union restraint in collective bargaining, has offered a package of tax reforms and social benefits which supposedly would introduce a greater element of equity into the fiscal system.

While it is difficult to trace the exact policy implications of this notion of social contract, it would seem reasonable to speculate that in those areas where the success of a program is particularly contingent upon the support of either the general public or particular groups with conflicting interests, then the government should attempt generally to avoid policy outcomes that will be perceived as so grossly inequitable by parties affected by the policy, that their lack of support will endanger the viability of the program. Clearly, however, the means by which one would inject a greater element of concern for equitable policy outcomes have been a subject
of debate among students of the policy process at least since the Age of Enlightenment and probably for many centuries before, and it is doubtful if one could do justice to the subject in an entire dissertation let alone the concluding chapter of this particular work. What this study does emphasize is that lack of attention to the equity of policy outcomes by actors in the collective decision-making process may lead citizens to make their own individual adjustments in a manner that is socially dysfunctional, even where such adjustment involves behavior that violates cultural and legal norms.

The extension of the concepts developed by Homans and Adams into areas of public policy can only proceed on the basis of sound research and certainly cannot be justified solely on the basis of this study of tax evasion, which is by my own admission essentially exploratory in nature and characterized by several methodological weaknesses. Exchange and inequity theory have in the past been used to explain behavior within fairly limited groups and it is sufficient for this study to indicate how they may be used to explain taxpayer choice between compliance and evasion. It is apparent that real justification of even this extension of the theory must await follow-up studies using larger samples, improved measurement of variables, particularly tax evasion and percep-
tions of inequity, and different methodologies. In particular, an improved scale to measure tax evasion might be developed by testing responses on items, specifically directed toward the respondent's own behavior, against responses on a social desirability scale such as that developed by Edwards (1953b). In this way, items which are heavily biased by social desirability effects could be identified and removed from the scale, thereby improving the overall validity of the scale. In addition, an attempt might be made to introduce an experimental element into the study of taxpayer behavior, although, as noted, it may be difficult to simulate the effects of inequity on such behavior.

It is my belief that exchange theory and inequity theory may have profound implications for the study of political and economic behavior and perhaps prove to be the basis of a new theory of behavioral political economy. The concepts developed by Homans and Adams could be extended to study the behavior of citizens not only in their role as taxpayers, but also as voters and clients of various public agencies. They could also provide a framework for analyzing relationships within the policy-making arena. Such relationships would include those between interest groups, elected public officials and various departments and agencies within the bureaucracy. This type of research could, in my view, yield an integrated
theory of behavioral political economy far more realistic and far richer in terms of policy implications than those developed by contemporary political economists such as Buchanan (1962, 1967) and Downs (1957).

However, the exchange system represents but one part of the total social system (Boulding, 1970). Therefore, exchange theory and inequity theory can only provide a partial although nonetheless crucial understanding of the relationships either between a citizen and his government or within the policy-making arena. One needs also to examine the role that the elements of coercion and legitimacy (derived from the threat and integrative systems respectively) might play in such relationships. For example, the results of this particular study suggest that, in addition to perceptions on inequity, the perceived probability of detection and reference group behavior may exert a significant effect on the choice between tax evasion and compliance. The effect of the perceived probability of detection clearly reflects the element of threat in the taxpayer-government relationship. Reference group behavior affects the commitment of the taxpayer to legally and culturally prescribed norms or role-expectations, thereby affecting the role of the element of legitimacy in the taxpayer-government relationship. It seems clear that a true theory of behavioral political economy must thus take as fundamental the con-
cepts of exchange, coercion and legitimacy in the study of those relationships it seeks to explain.

In conclusion, it was stated in the introduction to this dissertation that the role of the scholar in public administration is in part to integrate the contributions of many disciplines into a pattern that facilitates an understanding of public policy problems. It is my hope that I have performed such a role with respect to the policy problem of income tax evasion and that the concepts, borrowed and developed particularly from exchange theory and inequity theory, may, as suggested, prove useful to other scholars of public administration in the examination of other policy problems.
Appendix A
Preliminary List of Items to Measure Tax Evasion
Section 1
(Questions 1-11)

Please indicate how serious you feel are the following taxpayer offenses by marking a number on the answer sheet. If you feel the offense is

- extremely serious.....mark a 5
- very serious.....mark a 4
- fairly serious.....mark a 3
- not serious.....mark a 2
- not at all serious.....mark a 1

1. Mr. S., a salesman, charges the cost of all his personal long distance telephone calls to his business account for tax purposes.

2. Mr. V. took a vacation trip to San Francisco for a week with his family and charged the trip against business income in computing his tax bill.

3. Dr. F. charges lower fees to cash paying patients so that he can conceal a part of his income from taxation.

4. Mr. G. buys curtains for his living room and his office but charges both sets to his business.

5. Mr. A has an auto repair shop and charges his customers a lower price if they will do without a receipt. He then does not report income from these transactions in his books.

6. Mr. G. runs a private garbage collection company and by persuading customers to pay cash is able to conceal a part of his income from taxation.

7. Mr. T., a T.V. repairman, buys old T.V.'s for cash,
fixes them up and sells them for cash. He does not report this cash income on his tax return.

8. Mr. B. undertook various home improvements, including installing air conditioning, panelling, and tiling, and remodelling the bathroom. He charged most of these costs as business costs and so was able to deduct them from his business income.

9. Mr. P., a local businessman, is able to conceal up to 10% of his income by not listing work for which he receives cash.

10. Mr. B. is able by carefully juggling his books to charge purchases for personal use against his business income. About 10% of his so-called business costs are in fact for personal items.

11. Mr. S., a local storeowner, makes a point of undervaluing his inventories so as to understate his taxable income.

Section 2
(Questions 12-45)

On the following pages are statements that reflect people's opinions and behavior. Please show how well each of these statements of opinion and behavior fit in with your own feelings or behavior by marking a number on the answer sheet. If the statement fits with your opinion

extremely well.....mark a 5
very well.....mark a 4
fairly well.....mark a 3
not well.....mark a 2
not at all well.....mark a 1

13. The infraction of income tax laws is not an immoral act.
14. The penalties for tax evasion are too soft.
15. Tax evasion is not a serious crime.
16. I would never pad my deductions.
17. Cheating on one's taxes is unpatriotic.
18. When it comes to paying taxes I say take the Internal Revenue Service for what you can get.
19. Tax evaders should be heavily fined.
20. Tax evasion is a sign of moral bankruptcy.
21. Taxes would be much lower if nobody evaded taxes.
22. Given present tax burdens, one can hardly blame tax evaders.
23. Given the easy availability of opportunities to evade taxes, one can hardly blame tax evaders.
24. I would feel no qualms at all about not reporting my income to IRS.
25. If in doubt about whether or not to report a certain source of income, I would not report it.
26. A man found guilty of not paying $1,000 of owed taxes should go to jail.
27. There is nothing bad about underreporting taxable income on one's tax return.
28. If I received $2,000 in cash for services rendered, I would not report it on my income.
29. If a man intentionally lists less income on his tax return than legally required, more power to him.
30. Anyone who cheats on his taxes should be ashamed of himself.
31. The Internal Revenue Service should increase their auditing capability to get taxpayers to report and pay all taxes due.
32. The penalties for tax evasion are too harsh.
33. The IRS if it catches a person evading taxes on a return should investigate the previous returns of that person for at least four years.
34. Cheating on taxes is justifiable in light of the unfairness of the tax system.
35. Few taxpayers who have the opportunity to do so fail
to chisel a little here and there.

36. I would never evade taxes.

37. Since the government gets enough taxes, it does not matter that some people evade taxes.

38. Most of us err in our own favor in deciding what are business or personal expenses.

39. Since everybody evades taxes, one can hardly be blamed for doing it.

40. If I received $500 in cash for services rendered, I would not report it.

41. Taxes are something I readily contribute.

42. If in doubt about whether or not to deduct an item, I would deduct it.

43. Taxes are so heavy that tax evasion is an economic necessity for many to survive.

44. Taxes are something which are taken away from me.

45. Tax evaders should if caught pay taxes owed and interest due but no more.
Appendix B

Items Used and Coded Scores

1. Judging by your own experience or by what you read or hear, what do you think are two or three of the most important tax problems facing citizens today? (No coding)\textsuperscript{a}

2. How do you feel about the level of taxation nowadays in light of services provided. Do you feel taxes are:

   a. far too high\textsuperscript{a} \hspace{1cm} (3)
   b. little too high\textsuperscript{b} \hspace{1cm} (2)
   c. about right\textsuperscript{c} \hspace{1cm} (1)
   d. little too low\textsuperscript{d} \hspace{1cm} (1)
   e. far too low\textsuperscript{e} \hspace{1cm} (1)

3. Some people say that the Federal Income Tax is a fair tax. Others disagree. What do you think? Do you think it is a fair tax?

   a. yes\textsuperscript{f} \hspace{1cm} (1)
   b. no\textsuperscript{g} \hspace{1cm} (2)

   Why? (No coding)\textsuperscript{h}

4. What about taxes in general. Do you think that on the whole the burden of taxes is:

   a. very fairly distributed\textsuperscript{i} \hspace{1cm} (1)

\textsuperscript{a}open-ended question
b. fairly distributed___________ (2)
c. not too fairly distributed____ (3)
d. unfairly distributed___________ (4)
e. very unfairly distributed_______ (5)

Why do you feel this way? (No coding)\(^a\)

What about government expenditures?

5. With respect to defense, do you feel that government expenditures are:
   a. far too low_________ (1)
   b. little too low_______ (1)
   c. about right__________ (1)
   d. little too high_______ (2)
   e. far too high__________ (3)

6. With respect to social services, do you feel government expenditures are:
   a. far too low_________ (1)
   b. little too low_______ (1)
   c. about right__________ (1)
   d. little too high_______ (2)
   e. far too high__________ (3)

Turning back to the matter of taxes, I have here a number of statements that reflect what some people think about certain aspects of taxation, especially Federal Income Taxes, their experiences with taxes and their behavior with respect to taxes. I would like you to tell me how well each statement fits your own feelings, experiences and behavior. Does the statement fit:

   a. Extremely well

\(^a\) open-ended question
b. Very well
c. Fairly well
d. Not well
e. Not well at all

| 7. I get fair value for my tax dollars. | 1 2 3 4 5 |
| 8. Compared to other taxpayers, I pay no more than my fair share. | 1 2 3 4 5 |
| 9. Given present tax burdens, one can hardly blame tax evaders. | 5 4 3 2 1 |
| 10. Given the easy availability of opportunities to evade taxes, one can hardly blame tax evaders. | 5 4 3 2 1 |
| 11. If in doubt about whether or not to report a certain source of income, I would not report it. | 5 4 3 2 1 |
| 12. Since the government gets enough taxes, it does not matter that some people evade taxes. | 5 4 3 2 1 |
| 13. Taxes are so heavy that tax evasion is an economic necessity for many to survive. | 5 4 3 2 1 |
| 14. If I received $2,000 in cash for services rendered, I would not report it. | 5 4 3 2 1 |
| 15. Cheating on taxes is justifiable in light of the unfairness of the tax system. | 5 4 3 2 1 |
| 16. I would never pad my deductions. | 1 2 3 4 5 |
| 17. Taxes are something which are taken away from me. | 5 4 3 2 1 |
| 18. Since everybody evades taxes, one can hardly be blamed for doing it. | 5 4 3 2 1 |
| 19. I would never evade taxes. | 1 2 3 4 5 |
| 20. When it comes to paying taxes, I say take the IRS for what you can get. | 5 4 3 2 1 |
21. There is nothing bad about underreporting taxable income on one's tax return.  
22. If a man intentionally lists less income on his tax return than legally required, more power to him.  
23. I would feel no qualms at all about not reporting all my income to the Internal Revenue Service.  

Thank you. I would like to ask you just a few more questions about your experiences and reactions to income taxes.

Scores

24. How many people do you know personally who evade a part of their taxes?
   a. none__________  (1)  
   b. 1-5___________  (2)  
   c. 5-10__________ (3)  
   d. 10-15__________ (4)  
   e. over 15_______  (5)  

25. Which of the following statements best sums up your behavior with respect to taking tax deductions?
   a. I never take a deduction I don't believe is justified__________  (1)  
   b. I will occasionally take deductions that I don't believe are justified__________ (2)  
   c. I often take deductions I know are not justified__________  (3)  

26. Which of the following statements best sums up your behavior with respect to reporting taxable income?
   a. I always report every cent that I know I have earned__________  (1)
b. I will occasionally omit to report some income that I have earned (2)
c. I often omit to report parts of my income (3)

27. What do you think are the chances that the Internal Revenue Service will examine your return to find out whether you paid all taxes due?
   a. it's a sure thing (5)
b. chances are so-so (4)
c. unlikely (3)
d. very unlikely (2)
e. no chance (1)

28. What do you think would happen to a taxpayer like yourself if the Internal Revenue Service were to find that he/she had either concealed part of his/her income or claimed invalid deductions?
   a. pay all taxes due plus interest (1)
b. pay taxes due, interest, and a small fine (2)
c. pay taxes due, interest and a very heavy fine (3)
d. go to jail (4)

29. Have you ever had any personal contact with the Internal Revenue Service? (No coding)\(^a\)

   Were you ever audited?
   a. yes (2)
   b. no (1)

30. Did you feel you were treated fairly? Please explain. (No coding)\(^a\)

\(^a\) open-ended question
31. What is your occupation?
   a. self-employed_______ (2)
   b. not self-employed____ (1)

32. What is your age?
   a. under 29__________ (5)
   b. 30-39_____________ (4)
   c. 40-49_____________ (3)
   d. 50-59_____________ (2)
   e. 60 or over________ (1)

33. What was the last grade you completed in school?
   a. some high school__________ (1)
   b. high school graduate_____ (2)
   c. some college_____________ (3)
   d. college graduate_________ (4)
   e. post-graduate or professional education____ (5)

34. In general do you consider yourself a Republican or a Democrat?
   a. Republican__________ (1)
   b. Independent__________ (2)
   c. Democrat_____________ (3)

35. What was your total family income in 1972 considering all sources such as rent, profits, wages, interest and so on? Was it:
   a. under $7,000__________ (1)
   b. $7,000 to $9,999_______ (2)
   c. $10,000 to $14,999____ (3)
d. $15,000 to $19,999____

e. $20,000 and over_____

36. Roughly what proportion of this was in wages, salaries or pensions?

a. 50% or less__________

b. 51%-75%_______________

c. 76%-95%_______________

d. over 95%___________
References


Farioletti, M. (1952) Some "Results from the first year's audit control program of the Bureau of Internal Revenue." National Tax Journal. 5: pp. 65-78.


