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Extrinsic Incentives and Tax Compliance

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Abstract

This paper models the impact of extrinsic incentives in a tax compliance model. It also provides experimental evidence that confirms the existence of a positive relationship between rewards and tax compliance. If individuals are audited, rewards for honest taxpayers are effective to increase the level of tax compliance. These results are particular relevant in countries where there is little respect for the tax law since rewards can contribute to crowd in the intrinsic motivation to comply.

Keywords: tax compliance, intrinsic motivation, experiments, crowding effect, rewards.

JEL classification: H26, C92.

Resumen

En este documento se incluye la repercusión de los incentivos extrínsecos en un modelo de cumplimiento de las obligaciones fiscales. También se proporciona evidencia experimental que confirma la existencia de una relación positiva entre la recompensa y el cumplimiento de las obligaciones fiscales. Si las personas son auditadas, las recompensas para los contribuyentes honestos son eficaces para aumentar el nivel de cumplimiento de las obligaciones fiscales. Estos resultados son especialmente relevantes en los países donde hay poco respeto por la ley de impuestos, ya que las recompensas pueden estimular la motivación intrínseca de los individuos para cumplir con sus obligaciones fiscales

Palabras clave: cumplimiento de las obligaciones fiscales, motivación intrínseca, experimentos, recompensas.

Clasificación JEL: H26, C92.

Introduction

The traditional model of tax compliance by Allingham and Sandmo (1972) emphasizes that the threat of penalty and of audit make people pay their taxes. However, compliance has been reexamined in light of the psychological theory (Schein 1965; Rousseau & McLean Parks, 1993). Motivation Crowding Theory combines the psychological theories with the standard economic model by stipulating a systematic interaction between extrinsic and intrinsic motivation to analyze taxpayer's decisions (Feld & Bruno, 2007). This theory states that controlling signals reduce taxpayers' willingness to contribute with the authority, since their intrinsic motivation to cooperate decreases when they feel that the authority does not trust them. Tighter monitoring and higher penalties for noncompliance can negatively affect taxpayer's intrinsic motivations, since they imply that authorities do not trust taxpayers. Also, extrinsic incentives, such as monetary rewards, can *crowd out* the intrinsic motivation of the individual to comply if they perceived them as controlling.

This paper presents evidence that confirms the existence of a positive relationship between extrinsic interventions and tax compliance. Specifically, this work presents experimental evidence of the strength of external interventions, such as monetary rewards for honest taxpayers on tax compliance. The types of rewards that are analyzed are two: One proportional to the size of the tax payment (i.e., a percentage rebate), and the other has the same size (i.e. fixed reward) for all "good" taxpayers. In this context honest taxpayers perceive rewards as a supportive intervention and not as a controlling one. If rewards increase honest responses, this policy can create a "critical mass" of people who comply.[1] Thus, acknowledging the intrinsic motivation to comply through the presence of rewards can be more effective to increase compliance than simply punishing the non-compliant individuals. This attitude will encourage honesty, which can be expanded to other laws in society as well. Therefore, if this public policy can enhance tax compliance, then compliance in other areas of society could possibly be changed as well. This is also called the spill-over effect.

The structure of the present work is the following: The theoretical framework is presented in Section 1. Section 2 describes the model. The experimental design is in Section 3. Section 4 describes the experimental results. Last section presents the conclusions.

[1] Bikhchandani, Hirshleifer and Ivo (1992).

1. Theories of Tax Compliance

Tax compliance has been studied in economics by analyzing the individual decision of a representative person between paying and evading taxes.[2] In the traditional economic models of tax compliance, the taxpayer decides how much income to report by solving an expected-utility maximization problem. Hence, the choice of whether and how much income to declare is akin to a choice of whether or not to gamble. The taxpayer faces a trade-off between the tax savings from underreporting true income against the risk of audit and the penalties for detected noncompliance. The threat of detection and punishment are responsible for the individual's compliance. This theory stems from the economics of crime and was first applied to the problem of tax compliance by Allingham and Sandmo (1972).[3]

A major puzzle is that most of these theoretical approaches greatly over predict non-compliance. Indeed, under the prevailing magnitudes obtained in the US for the probability of being caught and the size of the fines imposed, individuals optimally should declare no income. One of the solutions to this puzzle focuses on how the tax authorities treat taxpayers. The relationship between the two actors is taken to involve an implicit or 'psychological' contract. The tax authorities must acknowledge and support the contract with the taxpayers by acting in a respectful way towards them, but also by preventing honest taxpayers from being exploited in the process.

The relationship between taxpayers and tax authorities can be modeled as an implicit or relational contract (for example Akerlof, 1982). It thus involves strong emotional ties and loyalties, and goes well beyond transactional exchanges (see for example Williamson, 1985). Social psychologists (Schein 1965; Rousseau & McLean Parks, 1993) have been using this concept for a long time, calling it a 'psychological' contract to set it clearly apart from formal contracts, which are obeyed because the parties respond to the explicit and material sanction previously agreed upon.

A psychological contract aptly captures the relationship between taxpayers and the tax authority. The payment of taxes is, as Levi (1988) calls it, a 'quasi-voluntary' act, which is not solely undertaken because one fears explicit governmental sanctions. To maintain the psychological tax contract, the tax authority must take positive actions to support it, and negative actions to prevent breach of contract. The basis of any contractual

[2] The literature has been shaped by the path-breaking contribution by Allingham and Sandmo (1972), with the consequent extensions by, among others, Kolm (1973) and Srinivasan (1973). They are all specific, and particularly important, applications of Becker's (1968) economic theory of crime. The present state of the art has been summarized and critically discussed by Andreoni, Erard and Feinstein (1998) in their extensive survey on 'Tax Compliance'.

[3] The basic Allingham-Sandmo model has been extended in a variety of dimensions. For a comprehensive survey of this literature see Cowell (1990), and Slemrod and Yitzhaky (1999). Nevertheless, all these modifications do not take psychological aspects into consideration in their analysis.

relationship that relies on trust is the prior belief that the partner in the contract behaves honestly. The same applies to the psychological contract between tax authorities and taxpayers: tax authorities suppose that taxpayers will honestly report their true income on the tax declaration. Alternatively, taxpayers expect to be treated respectfully, as if they are honestly reporting their true income. Thus, a basic trust of tax authorities with respect to the honesty of taxpayers and a respectful treatment of taxpayers by the tax authorities must thus be accompanied by incentives for taxpayers to observe the rules of the game. In this sense, tighter monitoring and higher penalties can negatively affect the taxpayer's willing to comply, since they indicate that authorities do not trust individuals. Rewarding good results instead of punishing bad ones may be perceived differently. While the former may actually reinforce motivation, the latter conveys a negative message, dampening tax morale. Faced with agents who are heterogeneous, the ultimate management goal is to discipline the opportunistic agents without decreasing the intrinsically motivated ones.

The breach of a psychological contract puts the reciprocal good faith into question. In this case, empirical evidence (Robinson, Kratz & Rousseau, 1994) clearly indicates that the parties to the contract perceive that the relationship is transformed into a purely extrinsically motivated contract. Citizens' wiliness to pay is crowded out, and individuals take a purely rationalistic attitude towards tax payment. If the breach of contract results in a complete crowding out, the citizens behave exactly as predicted by the conventional economic theory discussed above. It follows that particular care must be taken to maintain and protect the psychological tax contract.

Standard economic theory does not normally differentiate between different sources of motivation, which in the economic view are just manifestations of underlying preferences (for the task itself, or for the reward that is associated with performing the task). In most strands of economic literature, and above all in more formal economic models, the extrinsic type of motivation only forms part of the theoretical arguments.[5] Intrinsic motivation is assumed to be an exogenously given constant, and often it is completely disregarded. For the purpose of integrating intrinsic motivation into economic thinking and deriving testable hypotheses, it is useful to consider purely intrinsically and purely extrinsically induced individuals as polar cases of a whole spectrum of possible combinations of intrinsic and extrinsic motivation.

Motivation Crowding Theory tries to mediate between these psychological theories and the standard economic model by stipulating a systematic interaction between extrinsic and intrinsic motivation (Feld and Bruno, 2007). Motivation Crowding Theory allows for movements along the continuum between these two poles —either towards the extrinsic (crowding-out) or intrinsic pole (crowding-in of intrinsic motivation). Frey and Jegen (2001, p.

591) define *intrinsic* motives in the following way: 'one is said to be intrinsically motivated to perform an activity when one receives no apparent reward except the activity itself'.[4] Intrinsic motivation is a firmly established concept in psychology (and partly in other social sciences such as sociology); its modern formulation goes back to DeCharmes (1968) and Deci (1975).

Rewards, and in particular monetary rewards, may crowd out intrinsic motivation. This idea emanates from a group of cognitive social psychologists who have identified that under particular conditions monetary (external) rewards undermine intrinsic motivation. The application of rewards for undertaking an activity thus has indirect negative consequences, provided intrinsic motivation is considered to be beneficial. Consequently, this effect has been named "The Hidden Cost of Reward". For the purpose of economics, the "hidden cost of reward" has been generalized in two respects (Frey 1997a): *i)* all interventions originating from outside the person under consideration, i.e. both positive monetary rewards and regulations accompanied by negative sanctions may affect intrinsic motivation; *ii)* external interventions may crowd-out or crowd-in intrinsic motivation (or leave it unaffected).

The effects of external interventions on intrinsic motivation have been attributed to two psychological processes: (a) *Impaired self-determination*. When individuals perceive an external intervention as reducing their self-determination, intrinsic motivation is substituted by extrinsic control. Following Rotter (1966), the locus of control shifts from inside to outside of the person affected. Individuals, who are forced to behave in a specific way by outside intervention, feel over justified if they maintain their intrinsic motivation. (b) *Impaired self-esteem*. When outside intervention carries the notion that the actor's motivation is not acknowledged, his or her intrinsic motivation is effectively rejected. The person affected feels that his or her involvement and competence is not appreciated, which debases its value. An intrinsically motivated person is deprived of the chance of displaying his or her own interest and involvement in an activity when someone else offers a reward, or orders them to do it. As a result of impaired self-esteem, individuals reduce effort.

The two processes identified allow us to derive the psychological conditions under which the crowding-out effect appears: (1) External interventions crowd-out intrinsic motivation if the individuals affected perceive them to be controlling. In that case, both self-determination and self-esteem suffer, and the individuals react by reducing their intrinsic motivation in the activity controlled. (2) External interventions crowd-in intrinsic motivation if the individuals concerned perceive it as supportive. In

[4] Frey and Jegen (2001), p. 591.

that case, self-esteem is fostered, and individuals feel that they are given more freedom to act, thus enlarging self-determination.

The *crowding-out effect* (as it will subsequently be called), is one of the most important anomalies in economics, as it suggests the opposite of the most fundamental economic law, that raising monetary incentives increases supply. If the crowding out effect holds, raising monetary incentives reduces, rather than increases, supply. Under relevant circumstances, it is therefore not advisable to use the price mechanism to elicit a higher supply, and one should moreover rely on a quite different type of incentive, namely intrinsic motivation. Its introduction into economics has widened the narrow focus typically taken by the researchers in social psychology focused in laboratory experiments, towards studies of real world settings. A respectable number of social scientists, including economists, now admit the *theoretical* possibility that motivation may be negatively affected when a previously non-monetary relationship is transformed into an explicitly monetary one.

Several studies from important psychologists have identified that, under certain conditions, monetary (external) rewards undermine intrinsic motivation.[5] Therefore, a negative relationship is considered between external intervention and intrinsic motivation, but it is relevant only under some conditions and, in many cases, is neutral or even positive.[6] For example, one condition that is accepted from a considerable number of social scientists is that "motivation may be negatively affected when a previously non-monetary relationship is transformed into an explicitly monetary one".[7] Thus empirical research must be conducted to provide evidence about the conditions that make taxpayers perceive external interventions as an acknowledgment for being a good taxpayer, in order to raise tax compliance.[8]

2. The Model

Applying rewards is considered an external intervention that may enhance intrinsic motivation (c*rowding-in effect)* or drive it out (c*rowding-out effect)*.[9] When people *crowd in* (or *crowd out*) their intrinsic motivation —in our case increasing tax compliance— enhance (or drive out) their intrinsic motivation. The model considers the following variables:

Y , gross income,
y , net income,
x , reported income; $x \in [0, Y]$,

[5] *Ibid*, p. 598.
[6] Frey (1997), p. 16.
[7] Frey and Jegen (2001), p. 590.
[8] Kleppler and Naggin (1989), Hasseldine and Zhuhong (1999), and Torgler (2002).
[9] Frey (1997), p. ix.

τ, tax rate; $\tau \in (0,1)$,
r, reward rate; $r \in [0,1)$,
f, penalty rate; $f \in [0,\infty)$,
p, audit probability; $p \in (0,1)$,

In a tax regime without punishment or benefits, it is observed:

$$y = Y - \tau x$$

Where the optimal policy is taking $x = 0$ to obtain the maximum value $y = Y$

In a tax regime where there is always audit, net income is given by:

$$y = \begin{cases} Y - \tau x + r(\tau x) - f\tau(Y - x) & if \quad x = Y \\ Y - \tau x \qquad\quad - f\tau(Y - x) & if \quad x < Y \end{cases}$$

Where

$$y = Y - \tau x + r(\tau x) - f\tau(Y - x)$$

$$y = Y - \tau x + r(\tau x) \tag{1}$$

If the tax payer declares his net income correctly, we add the term $r(\tau x)$ as a reward for being honest. In other case, since the individual reported an amount x less than Y,
the net income is:

$$y = Y - \tau x - f\tau(Y - x) \tag{2}$$

If we subtract equation (2) from equation (1), it follows:

$$\begin{aligned} &\left(Y - \tau x + r(\tau x) - f\tau(Y - x)\right)\Big|_{x=Y} - \left(Y - \tau x - f\tau(Y - x)\right) \\ &= \left(Y - \tau Y + r(\tau Y)\right) - \left(Y - \tau x - f\tau(Y - x)\right) \\ &= \tau\left(rY - (1 - f)(Y - x)\right) \\ &= \tau\left((-1 + r + f)Y + (1 - f)x\right) \end{aligned} \tag{3}$$

The term $(1-r-f)$ in parentheses is positive if $r+f<1$ and negative or zero otherwise. In other side, the term $(1-f)$ is positive if $f<1$. Thus, both terms are non negative if $r+f\leq 1$.

When equation (3) equals zero, we obtain the level of income that makes the individual indifferent between declare his net income correctly $(x=Y)$ when the reward is present:

$$(-1+r+f)Y+(1-f)x=0,$$
$$x=\frac{(1-r-f)}{(1-f)}Y$$

Therefore, if $x=\frac{(1-r-f)}{(1-f)}Y$ the net income value y is equal if the individual declares $(x=Y)$ or $x=\frac{(1-r-f)}{(1-f)}Y$

Thus if the declared amount of x is within the interval $0\leq x<\frac{(1-r-f)}{(1-f)}Y$, the obtained net income y is higher than if it is declared $\frac{(1-r-f)}{(1-f)}Y\leq x\leq Y$, and the optimum is reached when $x=0$. Consequently, in order for the net income to be higher when the individual declares correctly $(x=Y)$, than when he evades $(x<Y)$ it must be the case that $r+f>1$.

In a tax regime where honest compliance is rewarded, dishonest compliance is punished and exist a probability $p\in(0,1)$ of being audited (and a probability $(1-p)$ of not being audited), net income is given by:

$$y_A=\begin{cases}Y-\tau Y+r(\tau Y) & if\ \ x=Y\\ Y-\tau x\quad -f\tau(Y-x) & if\ \ x<Y\end{cases}$$

if audited, and by $y_{NA}=Y-\tau x$ if not audited.

In this sense, if $U(y)$ denotes the utility of having a net income y, then the expected income is given by:

$$E[U]=pU(y_A)+(1-p)U(y_{NA})$$

Here we can think of two random variables. On the one hand, the random variable W indicates if he is audited or not. The other, the random variable Z that indicates that the taxpayer declare on the gross income Y or a smaller amount x. Each of these variables can take two different values.

Let g denotes a function where the expected value of $g(W)$ is finite. It is defined the conditional expectation of $g(W)$, given by $Z = z$, by the formula:

$$E\left[g(W)\middle|Z = z\right] = \sum_{w} g(w)\, p_{W|Z}(w|z) \quad \text{if } p_Z(z) > 0,$$

and the conditional mean is not defined in z when $p_Z(z) = 0$. The law of total probability for the conditional expectation is given by

$$E\left[g(W)\right] = \sum_{z} E\left[g(W)\middle|Z = z\right] p_Z(z).$$

Table 1 shows the density function and the corresponding functions for the random variables of marginal density:

TABLE 1. JOINT AND MARGINAL DENSITY FUNCTIONS

	$x = Y$	$x < Y$	MARGINAL AUDITED
AUDITED	pq	$p(1-q)$	p
NON AUDITED	$(1-p)q$	$(1-p)(1-q)$	$1-p$
MARGINAL DECLARATION	q	$(1-q)$	

The net income values when the individual declares $x = Y$ or $x < Y$ appear in Table 2 in the cases that the individual is audited or not audited.

TABLE 2. VALUE OF THE NET INCOME

	$x = Y$	$x < Y$
AUDITED	$Y - \tau Y + r(\tau Y)$	$Y - \tau x - f\tau(Y - x)$
NON AUDITED	$Y - \tau Y$	$Y - \tau x$

Then, the expected utility value is given by:

$$E[U] = pqU(Y - \tau Y + r\tau Y) + p(1-q)U(Y - \tau x - f\tau(Y - x)) + (1-p)qU(Y - \tau Y) + (1-p)(1-q)U(Y - \tau x)$$

3. Experimental Design

The experiment is made up of 11 sessions, each consisting of three parts. The individual participating in the first three sessions face three different levels of probability of audit: 5, 30 and 50 per cent. In contrast, during sessions 4 to 6 the probability of audit is constant, but individuals face different fine rates on underreported taxes (2, 4 and finally to level 6). Sessions 7 to 9 capture the response on the compliance rate to changes in the tax rate (10, 30 and 40 per cent).

The rewards sessions are 10 and 11. In session 10 only those subjects audited and found compliant receive an immediate reward of 50 tokens. In session 11 the reward for taxpayers audited and complaint is a 10 per cent reimbursement of the taxes paid.[10] Under these two sessions, individual who declared honestly have an incentive to be audited. Table 3 shows the features of each session in the experiment. The probability of audit, the penalty rate and the tax rate are changed after ten rounds.

TABLE 3. EXPERIMENTAL DESIGN

SESSION	AUDIT RATE (%)	FINE RATE	TAX RATE (%)	REWARD
1	5,30,50	2	30	NO
2	30,50,5	2	30	NO
3	50,5,30	2	30	NO
4	30	2, 4, 6	30	NO
5	30	4, 6, 2	30	NO
6	30	6, 2, 4	30	NO
7	30	2	10,30,40	NO
8	30	2	30,40,10	NO
9	30	2	40,10,30	NO
10	30	2	30	*FIXED REWARD*
11	30	2	30	*PERCENT REWARD*

At the beginning of a round, individuals randomly receive incomes varying between 25 and 200 tokens in 25 token increments. Only the individual knows his or her true income. They are not allowed to communicate during the duration of the experiment. At the end of each round, subjects are shown their balances, and a new round then begins. This process will be repeated for a fixed number of rounds but individuals will not know the total number of rounds, in order to avoid end-of-treatment effects. However, the actual number of rounds is predetermined at 30. A session typically lasts less than one hour.

[10] Note that it is implicitly assumed that during the experiment the tax agency does not face any budget constraint to implement this policy.

All sessions begin with the subjects reading their own copy of the instructions.[11] The subjects used in the experiments were recruited in class on a voluntary basis at the Centro de Investigación y Docencia Económicas (CIDE) in Mexico City. They had no prior experience with experimental settings, and were allowed to participate only once in the experiment. The experiments were conducted in the computer laboratory.

In each session there are eight different individuals. They were guaranteed at least five dollars, but they were told that they could earn more since they would be paid whatever they earned in the experiment. The participants are told that all tokens accumulated during the experiment will be redeemed for cash at the end of the session at a fixed exchange rate of 50 tokens per Mexican peso. Subject earnings range from seven to eleven dollars depending on the subject's performance in the experiment.

4. Experimental Results

The values of the total and marginal density functions using the data applied for the experiment are shown in Table 4.

TABLE 4

	$x = Y$	$x < Y$	MARGINAL AUDITED
AUDITED	0.1063	0.1975	0.3038
NON AUDITED	0.2437	0.4525	0.6962
MARGINAL DECLARATION	0.3500	0.6500	

The net income values when the individual declares $x = Y$ or less appear in Table 5.

TABLE 5

	$x = Y$	$x < Y$
AUDITED	90.000	-5.636
NON AUDITED	78.750	93.642

The utility expected value calculated for the experiment is:

$$E[U] = 70.02$$

The probability of declare correctly when the probability of being audited, p change from 5 to 30 per cent, increases from 0.1417 to 0.2321. However, it

[11] A sample set of instructions is in the Appendix.

does not vary when p raises from 0.30 to 0.50. The conditional probabilities for the event $[x = Y]$ given p are:

$$P[x = Y | p = 0.05] = 0.1417$$
$$P[x = Y | p = 0.30] = 0.2321$$
$$P[x = Y | p = 0.50] = 0.2375$$
$$P[x = Y | p = 0.30 \text{ and } r = 0] = 0.2026$$
$$P[x = Y | p = 0.30 \text{ and } r > 0] = 0.35$$

In this case, since there are two propositions, two hypotheses tests have to be done. The first one corroborates that the proportion of people who declare correctly increases when the probability of being audited raises from 5 to 30 per cent.

H_0 : The probability of declare correctly when $p = 0.30$ is 0.1417.
H_1 : The probability of declare correctly when $p = 0.30$ is higher than 0.1417.

The sample proportion is $\bar{p} = 0.2321$ and $n = 240$ it follows that and the P-Value equal to 0.0. Since the P-Value for this test is lower than 0.05, the null hypothesis is rejected with a confidence level of 95%. The critical region starts for all the values higher or equal to 0.1534.

The second hypothesis corroborates that the proportion of people who declare correctly does not change when the probability of being audited increases from 0.30 to 0.50 is:

H_0 : The probability of declare correctly when $p = 0.50$ is 0.2321.
H_1 : The probability of declare correctly when $p = 0.50$ is higher than 0.2321.

The sample proportion is $\bar{p} = 0.2375$ and $n = 240$, the P-Value equals to 0.4516. Since the P-Value for this test is higher than 0.05, the null hypothesis can not be rejected with a confidence level of 95%. The critical region is for all the values higher or equal to 0.2771.

This evidence suggest the when there is a positive change in the probability of audit compliance increases. However, in the presence of a reward for those individuals who comply, and are audited, the change in reported income is even higher. Thus, the reward does not crowd out the intrinsic motivation for those who declare correctly. However, in the absence of rewards, an increase of the probability of audit *per se* might not increase compliance, since the individual perceives this change as a controlling

attitude from the tax authority and thus, it crowds out the intrinsic motivation of people to declare correctly.

The conditional probabilities of $[x = Y]$ given the penalty rate f are:

$$P[x = Y | f = 2] = 0.2283$$
$$P[x = Y | f = 4] = 0.2292$$
$$P[x = Y | f = 6] = 0.1875$$
$$P[x = Y | f = 2 \text{ and } r = 0] = 0.1979$$
$$P[x = Y | f = 2 \text{ and } r > 0] = 0.35$$

According to the data, the probability of declare correctly does not increase when the penalty rate raises from 2 to 4. In fact, when the fine rate goes up to 6 the conditional probability decreases. The hypothesis test indicates that the decrease is not statistically significant. In this case, there are also two propositions and two statistical hypothesis tests. The first one corroborates that when the fine increase from 2 to 4, there is no change in the proportion of people who pay their taxes correctly. The test is as follows:

H_0 : The probability of declare correctly when $f = 4$ is 0.2283.
H_1 : The probability of declare correctly when $f = 4$ is different to 0.2283.

The sample proportion is $\bar{p} = 0.2292$, and $n = 240$, the P-Value equal to 1.0. Since the P-Value for this test is higher than 0.05, the null hypothesis can not be rejected with a confidence level of 95%. The critical region is for the values higher to 0.2867 or lower to 0.1768.

The second statistical tests supports that when the fine increase from 4 to 6 there is no change in the proportion of people who pay their taxes correctly. The test is as follows:

H_0 : The probability of declare correctly when $f = 6$ is 0.2292.
H_1 : The probability of declare correctly when $f = 6$ is lower than to 0.2292.

The sample proportion is $\bar{p} = 0.1875$, $n = 240$ and the P-Value equals 0.0721. Since the P-Value for this test is higher than 0.05, the null hypothesis can not be rejected with a confidence level of 95%. The critical region is for all the values lower to 0.1852. The data suggests that there is no change in the conditional probability of declares correctly, when the fine rate increases. In other words, people do not perceive the fine rate as controlling.

Nevertheless, in the presence of a positive reward the conditional probability increases, even though there is a fine for people who do not report correctly.

Also, it is observed that the probability of declare correctly decreases from 0.2917 to 0.1667 when the tax rate increases from $\tau = 0.10$ to $\tau = 0.40$. Using the experimental data we obtain that this probability also increases when the reward appears. Given the tax rate τ, the conditional probabilities of $[x = Y]$ are:

$$P[x = Y | \tau = 0.10] = 0.2917$$
$$P[x = Y | \tau = 0.30] = 0.2242$$
$$P[x = Y | \tau = 0.40] = 0.1667$$
$$P[x = Y | \tau = 0.30 \text{ and } r = 0] = 0.1927$$
$$P[x = Y | \tau = 0.30 \text{ and } r > 0] = 0.35$$

The statistical hypothesis test that corroborates the last assertion is the following:

H_0: The probability of declare correctly when $\tau = 0.40$ is 0.2917.

H_1: The probability of declare correctly when $\tau = 0.40$ is lower than 0.2917.

In this case $n = 240$ and the sample proportion is $\bar{p} = 0.1667$ and the P-Value equal to 0.059E-9. Since the P-Value for this test is lower than 0.05, the null hypothesis is rejected with a confidence level of 95%. The critical region is for all the values lower or equal to 0.2435. This evidence shows that a higher tax rate decreases compliance. However, the presence of the reward increases the probability compliance.

Finally, given some values of rewards r, we calculate the conditional probabilities of $[x = Y]$. The experimental results indicate that the probability of declare correctly increases from 0.20 without reward to 0.35 with reward. Also, this probability increases from 0.2875 to 0.4125 when the reward increases from 10 to 50 per cent.

$$P[x = Y | r = 0] = 0.2$$
$$P[x = Y | r > 0] = 0.35$$
$$P[x = Y | r = 10\%] = 0.2875$$
$$P[x = Y | r = 50] = 0.4125$$

The statistical hypothesis test to corroborate the last assertion is the following:

H_0: The probability of declare correctly when the reward exists is 0.2

Against the alternative hypothesis:

H_1: The probability of declare correctly when the reward exists is higher than 0.2.

The sample proportion is $\bar{p} = 0.35$ and the P-Value equals 2.22045E-16. Since the P-Value for this test is lower than 0.05, and $n = 480$, the null hypothesis is rejected with a confidence level of 95%. The critical region is for values higher or equal to 0.2301. Consequently, the external incentive of the reward crowds-in the intrinsic motivation to comply.

The statistical analysis is consistent with the following econometric analysis. The dependent variable is the change in declared income in response to variations in the audit rate, the fine rate, the tax rate and each of the rewards.[12] Estimation results are reported in Table 6.

TABLE 6. ESTIMATION RESULTS

INDEPENDENT VARIABLE	FIXED REWARD		PERCENTAGE REWARD	
	COEFFICIENT	ELASTICITY	COEFFICIENT	ELASTICITY
CONSTANT	-1.260	—	-1.386	—
	(-2.03)		(-2.17)	
TOTAL INCOME	0.556	1.099	0.547	1.129
	27.02		25.81	
AUDIT RATE	6.329	0.360	6.285	0.373
	5.940		5.730	
FINE RATE	0.015	0.007	0.080	0.042
	0.170		0.930	
TAX RATE	-4.239	-0.237	-4.691	-0.273
	(-2.77)		(-2.98)	
FIXED REWARD	1.112	0.014		
	5.62			
PERCENTAGE REWARD			20.421	0.009
			4.68	
N	2400		2400	
LOG-LIKELIHOOD	-6585.9593		-6543.0768	
LR STATISTIC	683.66		636.25	

*Elasticities are calculated at the mean values of the variables. *t* values are in the parentheses.

[12] Since the dependent variable is censored at zero (amount of declared income) a Tobit estimation technique was used.

In contrast to the literature of intrinsic motivation, compliance increases with higher probabilities of audit. These results are consistent with the Allingham-Sandmo model: the higher the probability of audit, the higher the predicted compliance level. They also support the evidence presented by Witte and Woodbury (1985), Dublin and Wilde (1988), and Dublin, Graetz and Wilde (1990).

However, the elasticity of the penalty rate shows that its effect is close to zero and non-significant, even when the probability of audit is large. This result indicates that the benefits of increasing the penalty rates disappear, even though its low administrative cost. The absence of response in compliance to a change in the fine rate is consistent with many empirical studies about the effects of sentence severity on crime levels, and confirms the expected results from the intrinsic motivation theory.[13]

The response in compliance is negative when there is a positive change in the tax rate: Higher tax rates lead to lower compliance since the payoff of a successful evasion increases when the tax rate increases. These results contradicts the Yitzhaki model (1974), but confirm the results from Clotfelter (1983), Slemrod (1985), Crane and Nourzad (1986), Baldry (1987), Poterba (1987), and Friedland, Maital, and Rutenberg (1978).

In both econometric specifications, the estimation results are largely the same for the deterrence factors. Also, in both models, the coefficients for the rewards are highly significant. Recall that in the fixed reward session those individuals who are audited and found compliant receive an immediate reward of 50 tokens. The elasticities indicate that rewarding compliant individuals randomly with a fixed reward increases compliance more than with a percentage reward. Moreover, the fixed reward session is the session with the lower none compliance response within the experiment.

This results show that immediate and salient rewards have a significant impact upon compliance. On average, individuals' responses are higher when facing rewards than in the presence of higher penalty rates. The policy to direct rewards to "good" taxpayers is thus essential for its effects on taxpayer behavior. In this way, tax authorities can start acknowledging taxpayers for being honest instead of increasing penalties, since they do not have a visible effect on compliance.

The positive elasticity of the rewards indicates that creating well-advertised rewards for honest taxpayers can change the taxpayers' attitudes toward compliance.[14] Different kinds of rewards can have an important impact on compliance —particularly if one thinks that the reimbursement of a percentage of taxes paid can be seen as a reward for the task of keeping records and filling out tax forms correctly.

[13] Doob & Webster (2003), Roth *et al.* (1989), and Grasmick and Bursik (1990).
[14] Frey (1997).

Conclusions

Experimental evidence has two main advantages over the measures of compliance that can be obtained through surveys. The first is the fact that it allows to test the effects of changes in policy over individual behavior directly. Second, the experimental approach provides direct observation of behavior that may be penalized.

Consequently, the influences of explanatory variables can be better analyzed in a laboratory setting. Empirical research has identified that, in many cases, monetary rewards *crowd-out* intrinsic motivation of taxpayers. Nevertheless, the present paper highlights the importance of rewards to recognize honest taxpayers, and to increase compliance. The main difference in this experiment is that monetary rewards are directed to honest tax payers, but only to those who have been randomly selected from the complete list of honest taxpayers.

In general, external interventions *crowd out* intrinsic motivation if the individuals affected perceive it as *controlling*, and *crowd in* when the individuals concerned perceive it as *supportive*.[15] In this case, rewards have been perceived by the taxpayers as a *supportive* external intervention, and consequently they *crowd in* the intrinsic motivation to comply.

If rewards are well-advertised "the agents feel that they have a certain amount of freedom in their intensity of responding", acknowledging taxpayer's intrinsic motivation to comply.[16] This is why external interventions via rewards *crowd out* intrinsic motivation less than regulations used for the same purpose, and if they are well-advertised it can even *crowd in* intrinsic motivation, as it was shown in the results.

The policy recommendations stated here make us think differently about the problem of tax compliance. When deterrence factors increase, intrinsic motivation to comply tends to *crowd out*, unless honest taxpayers perceive the stricter policy to be directed against dishonest taxpayers. This is particularly relevant in countries where the common practice is to extend deadlines and offer discounts to people who do not pay on time. This policy has led to a loss of respect for those who comply, for the tax law, and also for the government itself. As a result, next time individuals have to fill their tax forms, they will think that if everybody was able to get an extension without paying a cost then, they should not care about paying their taxes accurately and on time.

Temporary rewards can contribute to the willingness of people to comply and to improve the relation between taxpayers and tax authorities. A

[15] *Ibid*, p. 18.
[16] *Ibid*, p. 30.

temporary reward for "good behavior" can create a positive attitude towards the government and increase compliance in the long run.

Appendix

Sample Instructions

INSTRUCTIONS

The following instructions were originally written in Spanish. The instructions were adapted accordingly to the different sessions. They are available upon request.

This is an experiment in the economics of decision making. The instructions are simple and, if you follow them carefully, you will have an opportunity to earn A CONSIDERABLE AMOUNT OF MONEY that will be paid to you in cash at the end of the session.

You have been organized in groups of eight people. Each group will consist of the same eight people for the duration of the session. The specific identities of the other people in your group will not be revealed to you. YOU MAY NOT COMMUNICATE WITH ANYONE ELSE IN THE ROOM DURING THE SESSION. If you do not follow the rules, we will have to exclude you from the experiment and you will not receive any payment.

The session will last for several rounds, each one is independent from the others. In each round, you will be required to make a decision and your total earnings will depend on these decisions. You will not know the total number of rounds. At the beginning of the session each individual will be given 2000 tokens. You will have the opportunity to add to these tokens in each round. At the end of the session, the tokens you have accumulated will be converted to cash at the rate of 50 tokens per pesos. For example, if at the conclusion of the experiment your balance on the computer is 5000 then you will receive 100 pesos. YOU SHOULD FEEL FREE TO TRY TO MAKE AS MUCH MONEY AS YOU CAN. The experiment is divided in two parts.

At the beginning of each round, on the top left corner, the session number, participant and round will appear on your computer. In each round, you will be given a new amount of tokens (actual tokens). The exact quantity you and the others in your group receive will be randomly drawn by the computer from the range of 25 to 200 tokens in increments of 25 tokens. All values are equally likely and only you will know the quantity you have received. You have the choice of keeping your tokens or disclosing them to contribute to a common fund together with other 3 participants. Move the mouse to enter in the input-field “reported tokens”. You may disclose any amount of tokens between zero and the amount of tokens that you actually receive.

You will pay 30 per cent of the tokens you disclose. For example, if you receive 100 tokens and disclose 70 tokens, you will pay 21 tokens (0.3 times 70). You do not pay on money you do not disclose, and only you know the true

amount of money that you receive at the start of each round. After you have decided the number of tokens that you want to disclose, please copy this number in the report sheet (yellow sheet), as well as the round number. In the above example, you will fill the report sheet with the following numbers:

ROUND	REPORTED TOKENS
1	70

Now, WAIT FOR THE INSTRUCTION TO PRESS THE BUTTON "ACCEPT". Please check the number of tokens that you disclose, because once you click the "Accept" button, you will not be able to change your mind. After everyone has disclosed his or her tokens, some individuals may be selected for a check. In this check, the computer will compare the person's true quantities of tokens for the current round with the actual levels disclosed. If you are checked, any tokens received but not disclosed will be discovered. You will pay the shortfall (30 per cent of over the tokens received but not disclosed) plus a penalty. In this session, you pay the shortfall plus an amount equal to one time the shortfall—. In the above example, you would pay 18 additional tokens, that is, the shortfall (30 tokes times 0.3), plus fine of 9. The computer will calculate the shortfall payments and subtract it from your balance. Only you will know the result of your own check. If you are checked and reported the same amount of tokens that you received, as a reward you will receive 50 tokens.

The procedure for selecting the person for a check is as follows: each person has an ID number that appears on your computer screen, between 1 and 8. In the bingo cage that appears on the top right corner of your screen there are balls numbered 1 through 20. After everyone has disclosed his or her tokens, a ball will be drawn from the cage. If the number of the ball is from 1 to 8, the person with that ID will be checked. If the number is from 9 through 20, no one will be checked in that round. Once the ball has been drawn from the bingo cage, WAIT FOR INSTRUCTIONS TO CLICK ON THE BUTTON "ARE YOU READY TO CONTINUE?". Once you have clicked the button, you can continue to the next round.

We will begin with two practice rounds to familiarize you with the payment, disclosure, and check process. These practice rounds will not be counted to calculate your payment. At the end of the two practice rounds, your balance will be reset to 2000 tokens as the real rounds begin.

Are there any questions? Please, raise your hand, DO NOT ASK THE QUESTION OUT LOUD.

When you finish reading these instructions, please place them face down on your own desk.

References

Andreoni, J., Brian, E., & Feinstein, J. (1998). Tax compliance. *Journal of Economic Literature,* 36, pp. 818-860.

Allingham, M. G., & Sandmo, A. (1972). Income tax evasion: A theoretical analysis. *Journal of Public Economics,* 1, pp. 323-338.

Alm, J., Jackson, B., & McKee, M. (1992). Estimating the determinants of taxpayer compliance with experimental data. *National Tax Journal,* 45, pp. 107-114.

Alm, J., Jackson, B., & McKee, M. (1992). Deterrence and beyond: Toward a kinder, gentler IRS. In J. Slemrod (ed.), *Why people pay taxes?* Ann Arbor, University of Michigan Press, pp. 311-329.

Alm, J., McClelland, G. H., & Schulze, W. D. (1992). Why do people pay taxes? *Journal of Public Economics,* 48, pp. 21-38.

Baldry, J.C. (1987). Income tax evasion and the tax schedule: Some experimental results. *Public Finance,* 422, pp. 357-383.

Bikhchandani, S., Hirshleifer, D., & Welch, I. (1992). A Theory of fads, fashion, custom, and cultural change as informational cascades. *Journal of Political Economy,* 100, pp. 992-1026.

Clotfelter, C.T. (1983). Tax evasion and tax rates: An analysis of individual returns. *The Review of Economics and Statistics,* 65, pp. 363-373.

Cowell, F. A. (1990). *Cheating the government: The economics of evasion.* Cambridge. MIT Press.

Crane, S. E., & Nourzad, F. (1986). Inflation and tax evasion: An empirical analysis. *The Review of Economics and Statistics,* 68, pp. 217-223.

Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, 18, 1, pp. 105-115.

Deci, E. L., & Ryan, R. M. (1980). The empirical exploration of intrinsic motivational processes. *Advances in Experimental Social Psychology*, 10, pp. 39-80.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.

Doob, A., & Webster, C. M. (2003). Sentence severity and crime: Accepting the null hypothesis. *Crime and Justice: A Review of Research,* 30, pp. 143-195.

Dubin, J. A., Graetz, M. J., & Wilde, L. L. (1990). The effects of audit rates on the federal income tax 1977-1986. *National Tax Journal,* 43, pp. 395-409.

Dubin, J. A., & Wilde, L. L. (1988). An empirical analysis of federal income tax, auditing and compliance. *National Tax Journal,* 41, pp. 61-74.

Feld, L. P., & Tyran, J.-R. (2002). Tax evasion and voting: An experimental analysis. *Kyklos,* 55, pp. 197-222.

Frey, B. (1992). Tertium Datur: Pricing, regulating and intrinsic motivation. *Kyklos,* 45, pp. 161-184.

Frey, B. (1997). *Not just for the money. An economic theory of personal motivation.* Cheltenham, Edward Elgar Publishing.

Frey, B., & Jegen, R. (2001). Motivation crowding theory. *Journal of Economic Surveys,* 15, pp. 589-611.

Friedland, N., Maital, S., & Rutenberg, A. (1978). A simulation study of income tax evasion. *Journal of Public Economics,* 8, pp. 107-116.

Graetz, M. J., Reinganum, J. F., & Wilde, L. L. (1986). The tax compliance game: Toward an interactive theory of law enforcement. *Journal of Law, Economics and Organization,* 2, pp. 1-32.

Grasmick, H. G., & Bursik, R. J. Jr. (1990). Conscience, significant others, and rational choice: Extending the deterrence model. *Law and Society Review,* 24, pp. 837-861.

Hasseldine, J., & Zhuhong, L. (1999). More tax evasion research required in new millennium. *Crime, Law & Social Change,* 31, pp. 91-104.

Kagel, J. H., & Roth, A. E. (1995). *The handbook of experimental economics*. New Jersey: Princeton University Press.

Klepper, S., & Nagin, D. (1989a). Tax compliance and perceptions of the risk of detection and criminal prosecution. *Law and Society Review,* 23, 2, pp. 209-240.

Klepper, S., & Nagin, D. (1989b). The deterrence effect of perceived certainty and severity of punishment revisited. *Criminology,* 27, pp. 721-746.

Lane, R. E. (1991). *The market experience*. Cambridge: Cambridge University Press.

Poterba, J. M. (1987). Tax evasion and capital gains taxation. *American Economic Review,* 77, pp. 234-239.

Pittman, T. S., & Heller, J. F. (1987). Social motivation. *Annual Review of Psychology*, 38, pp. 461-489.

Roth, J. A., Scholz, J. T., & Witte, A. D. (1989). *Taxpayer compliance*: *An agenda for research.* Philadelphia: University of Pennsylvania Press, Vol. 1.

Torgler, B. (2002). Speaking to theorist and searching for facts: Tax morale and compliance in experiments. *Journal of Economic Surveys,* 16, pp. 657-683.

Slemrod, J. (1985). An empirical test for tax evasion. *The Review of Economics and Statistics,* 67, pp. 232-238.

Slemrod, J., & Yitzhaki, S. (2000). *Tax avoidance, evasion and administration*. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=213192 [29 de Julio de 2008].

Witte, A. D., & Woodbury, D. F. (1985). The effects of tax laws and tax administration on tax compliance: The case of the United Sates individual income tax. *National Tax Journal,* pp. 1-13.

Yitzhaki, S. (1974). A note on income tax evasion: A theoretical analysis. *Journal of Public Economics,* 3, pp. 201-202.

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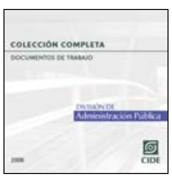

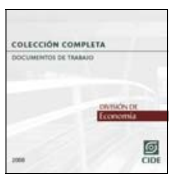

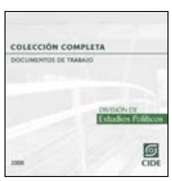

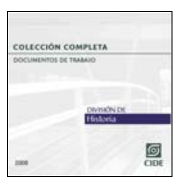

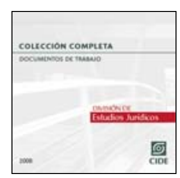

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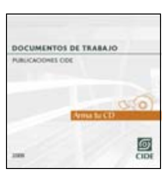

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