2001

2001-11 Tax Evasion and Trust

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ISSN: 0318-725X
ISBN: 0-7714-2345-4

RESEARCH REPORT 2001-11
(TERF REPORT 2001-1)

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June 2001

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June 4, 2001

Tax evasion has been a huge problem in Russia. After the breakup of the Soviet Union there was a steady decline in the share of Gross Domestic Product collected in revenue by the State at all levels: this figure dropped from 44.2 % in 1992 to an estimated 29% in 1998.[1] However in the last couple of years the situation has improved, no doubt due to the rise in oil prices and the substantial depreciation of the ruble since 1998, both of which have resulted in an improvement in the economy. Total revenue of the Russian federal government has increased considerably since 1998 (from 236b to 509b)[2] and in 2000 a budgetary surplus was recorded. Currently, many of the regional governments are also in surplus[3]. Still, the long run problem of tax evasion at all levels remains. Of course, these problems are not new in Russia: to illustrate, one expert estimated that 40% of all garden sheds in the Soviet Union were built in the black economy[4]. And tax evasion is a problem for all countries. In the United States, for example, tax evasion is estimated to cost the Treasury more than 20% of all taxes due. Still there is a sense that the problem remains particularly severe in Russia today.

1. THE STANDARD THEORY OF TAX EVASION

The standard view of tax compliance in tax theory is that taxes are a "burden" or windfall harm. Individuals do not consider taxes in relation to the other side of the government ledger - expenditures. The chief problem in normative taxation theory is to devise taxes which minimize

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[1]Russian Economic Trends, various years, reported in Gustafson (1998), p. 193.

[2]These figures are taken from Russian Economic Trends, October 2000.

[3]Russian Economic Trends, October 2000.

[4]Cited in Cowell(1990).

the "excess burden" of a tax, ie, how to minimize the total burden of taxation.

The standard view implies that individuals or corporations pay taxes only because they are forced to, i.e., because they believe that if they did not , they would be liable to prosecution by the state. So it is essential that the probability of being discovered for tax evasion, and the size of the penalty if caught and convicted a/re sufficiently large to deter evasion.

One problem with the standard view is that for some taxes such as self-reported income taxes, it is hard to believe that the probability of being caught for evasion is very large. Indeed, all countries do encounter tax evasion, even those with the most sophisticated systems for gaining compliance, and in some countries such as Italy or Russia the problem of non-compliance is substantial. What explains why compliance is less in these countries? And why don't those countries simply raise the penalties for non-compliance and solve the problem that way?

To illustrate, the United States Internal Revenue Service estimates that the proportion of all individual tax returns that are audited was 0.8% in 1990 (down from 4.75% in 1965). Civil penalties range from 20% of the portion of the underpayment resulting from a specific misconduct such as negligence or substantial understatement to 75% if there is evidence of substantial intentional wrongdoing. In very serious cases, criminal penalties may be applied. However, in 1995, only 4.1% of all U.S. taxpayers who were reassessed following an audit received *any* penalty at all.Yet the IRS estimates that, for tax year 1992, 91.7% of income that should have been reported was in fact reported.[5] What explains this high degree of compliance in the face of low penalties and probabilities of detection?

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[5]All figures in this paragraph are from Andreoni, Erard and Feinstein (1998).

A second problem may be elaborated if we look at the standard theoretical model (Allingham and Sandmo 1972, Yitzhaki 1974) in more detail. As is now common in the literature on tax evasion, this visualizes an individual taxpayer facing a tax rate t on his income Y. If he chooses to evade taxes, he faces a punishment ftE where E is the amount of unreported income and f is the size of the punishment (the fine rate) if caught. So in one sense, the model adapts the standard crime model of Becker (1968) to the taxation case. In another sense, tax evasion is part of optimal portfolio choice: The individual who chooses to evade taxes in effect makes a risky bet that he will not be caught and convicted. However, the Yitzhaki (1974) model makes a very odd prediction–namely that an increase in the tax rate t actually leads to *less* tax evasion. This result holds in the model as long as individual absolute risk aversion decreases as income increases. This prediction is at variance with empirical evidence (eg, Clotfelter 1983), the results of experimental games (eg, Friedland, Maital and Rosenberg[6] (1978) and, it would seem, even common sense. But the logic is simple once one realizes that in these models, tax evasion is treated as simply a risky gamble or a problem in optimal portfolio choice. The penalty if an individual is caught, ftE, is simply a constant multiple of the amount of tax evaded tE. So if the tax rate rises, both the gains from evasion and the penalty rise by the same proportion, and there is no substitution effect for or away from evasion. But there is an income effect: the individual is poorer as a result of the possibility of paying a higher penalty. So he takes less risk, ie, he evades less. Of course this relationship is derived from individual

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[6]In these experiments, the single most important factor resulting in evasion was the tax rate. On the other hand, raising the size of the penalty, even to exorbitant levels (eg from 3 to 15 times the amount evaded) lowered the amount evaded and the probability of an under-declaration, but only marginally.

behaviour and only holds at the individual level. The aggregate level of evasion may well move in a different direction as the level of tax affects the *number* of taxpayers who choose to evade. Still, this difficulty should be addressed.

A third point is that the decision to pay taxes tends to be heavily influenced by whether others are paying taxes or not. This question has been addressed in a number of papers, most recently in a paper by Myles and Naylor (1996), who adapt work by Akerlof (1980) and introduce a conformity payoff as well as a payoff from following a social norm into the individual's decision to pay taxes. The two differ in that the utility from the conformity payoff depends on what most other people are doing–paying or not paying taxes-- whereas that from the social custom is always positively related to tax compliance. One of the most interesting results in the paper is that small changes in exogenous variables–eg, the rate of tax–can act as "tipping points" and lead to very large, even epidemic changes in the level of compliance. We return to this matter below.

2. A PUBLIC CHOICE APPROACH

In this paper I take a "public choice" approach to the problem of tax evasion. The basic hypothesis of the field of economics known as "public choice" is that the citizens of democratic political jurisdictions perceive a connection between the taxes they pay and the government services they receive. In its strong form, the hypothesis is that citizens know that taxes are the "price" paid for public expenditures, part of an "implicit contract" with other citizens and with the government. In its strong form this would require that citizens are capable of some very

sophisticated calculations. Still, in a democracy, citizens elect governments to provide them with goods and services and there is a certain sense in which every citizen must be aware that taxes must be paid to finance public services, whether they think their own burden is too high or low. And every citizen, even those residing in Ontario, Canada, where the government has been elected on and is carrying out an extensive program of tax cuts, must be aware that if taxes are reduced, a reduction in public services must follow.

One version of this approach was used by Cowell and Gordon, who introduce public goods into the Yitzhaki model of tax evasion [7] (1988). However the results remain at variance with the empirical evidence. Their result is that, if individuals display decreasing absolute risk aversion, the effect on tax evasion of an increase in the tax rate is positive or negative as public goods are under- or over-provided. Thus, if public goods are under-provided, an increase in tax rates means an increase in public goods as well. So individuals feel wealthier, and they wish to take more risk. So they evade tax *more* when the increase in public goods and associated increase in tax rates makes them better off, *less* when it makes them worse off.

However, recent work using the concepts of "social capital" (Coleman (1990), Putnam (1993, 2000) or its equivalent "trust" (Breton and Wintrobe (1982) makes it possible to use the public choice approach to investigate the question of tax evasion in a different and what I believe is an interesting way. Thus, even accepting the public choice point of view, one still has to assume that citizens trust their government to deliver the services it has promised in order to explain why they would "voluntarily" pay their taxes. To see this point, suppose for a moment

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[7]Bordignon (1993) develops a "fairness" approach in which public goods are introduced as well. In this model, an increase in tax rates yields more evasion, in accordance with the empirical evidence.

that they do not trust the elected government to deliver the services it has promised at all: instead they assume that the members of the government in office are completely corrupt. For example, they believe that the members of the government plan to appropriate the entire budget of the government and spend it on holidays for themselves in the Carribean. Then why would any citizen voluntarily pay his or her taxes? On the other hand, suppose the government is 100% trustworthy. In that case, citizens might be tempted to pay their taxes.

Now the basic objection to this idea is that, even in the situation where the government is 100% trustworthy, it is still rational for each citizen to free ride, since whether he pays his taxes or not has little to do with the level of public services he receives. Thus, to take a simple example, suppose there are 1,000 citizens in a jurisdiction, and each one is supposed to pay taxes of $1,000. Each citizen will reason that if he does not pay his taxes, *but everyone else does*, then his level of services will fall, but only by a tiny amount: in this case, if public services are constant cost, and they are pure public goods, so that the non-tax paying citizen cannot be excluded from receiving services even if he expect that, assuming services are shared equally, while his tax bill falls by 100%, his level of services will fall by only 1/1000 = .1% Consequently it is rational for everyone to free ride and not pay his taxes.

Here we break this logic by assuming that each citizen will pay 100% of his tax bill (1) if he can *trust* everyone else to pay 100%; and (2) if he can *trust* the government to provide 100% of the services promised in return. As the level of trust by a citizen in the government's honesty or in the civic spirit of his fellow citizens falls, his own willingness to pay decreases. At some point, his own willingness to pay falls to zero, and he pays only to the extent that he believes he will be caught and convicted if he does not pay. Note that on the standard framework, wherein

taxes are a windfall burden, it should not matter to the citizen whether the government delivers the services promised or not, or whether other people pay or not: the free riding citizen should completely free ride whether services are delivered or not, and whether others do or not[8]. Yet there is a good deal of evidence that (1) tax evasion is a bigger problem when trust in the government is lower; (2) the more it is thought, within a jurisdiction, that other people evade taxes, the more each person wishes to evade taxes himself or herself.

To see the logic of this approach, assume that an individual can correctly calculate the implicit tax prices of public goods. In figure 1, we assume one public good S, for simplicity, provided to the citizens of some jurisdiction. Since the good is public, all of the citizens in the jurisdiction must consume the same amount, whatever level the government desires to provide. Each citizen is assumed to be able to correctly calculate that the tax price to him of a unit of the public good is p. At that price, the individual desires a level of public goods equal to S^1. Suppose, however, that the government provides S^0 instead of S^1. Then this citizen loses the amount of surplus from the good indicated by the shaded area L. The most obvious reasons why the government might provide less than the desired quantity is that a) it does not know what the citizen wants; b) the government has to provide all citizens with the same amount, and most others want a different amount; c) the government is corrupt, and appropriates some of the revenue which could be used to produce S for itself. If, however, trust increased between the citizen and the government, each of these problems would tend to be solved: a) with more trust, it is easier for the citizen to signal his preferences to the government and for the government to

[8]See Wittman (1998) for an explanation and description of the ways in which politicians can control free riding behaviour.

receive them; b) with more trust, if the government has to provide others with S^0 and thus fails to satisfy this particular citizen, it could try to satisfy him in some other way. For example, it could provide him with a private good which is a substitute for *S*, thus lowering his demand for *S*, and decreasing the loss to him *L*.

On this formulation, there is an exchange or an implicit contract between the citizenry and the government: the government provides goods and services to citizens in exchange for their support, and it tries to maximize this support, as in probabilistic voting models of the government sector[9]. In the aggregate, the government tries to maximize the sum of citizens' surpluses - value of public goods and services minus taxes - from the public sector. Each citizen, in turn, is more likely to support the government, and, *ceteris. paribus.*, *less likely to evade taxes*, the greater the surplus he receives from the public sector. On the other hand, the smaller this surplus, the less likely are individuals to support the government, and the less likely they are to pay their taxes.

What happens to the level of tax evasion if tax rates rise? On this model, a rise in tax rates would indeed *increase* the propensity of a citizen to evade taxes if it lowered the surplus of a citizen from the government, as would normally be the case. On the other hand, if the rise in tax rates raised the level of public goods provided, and they had been under-provided previously, so that the net effect of the tax increase is to *increase* citizens' surplus, then his propensity to evade taxes would *decrease.* These two cases are illustrated in fig 2. In Fig 2a, a rise in the tax rate from p to p^1 lowers the citizen's surplus (whether the amount of the public good stays the same or falls to S_1) and decreases his propensity to pay taxes. In Fig 2b, the same rise in the tax

[9]See Mueller, chapter 11 for a good exposition of this type of model.

rate (from p to p_1) is accompanied by an increase in the public good (from S^0 to S^1). Provided that the area A is larger than the area B in Fig. 2b, this citizen's surplus from government increases, and therefore so does his propensity to pay taxes. These results seem entirely sensible.

So far we have suggested that people will be more willing to pay their taxes when they trust the government more. The framework can be expanded to include the degree of *responsiveness* of the government to the wishes of citizens, not merely their honesty. Thus, we would expect that tax evasion would be lower, *ceteris paribus*, the more responsive governments are to their citizens' wishes.

Finally , although so far we have been discussing trust between the citizen and the government, similar considerations arise for the relationship between citizens. The hypothesis here is simple: The more citizens can trust their fellow citizens to pay taxes, the more willing they are themselves to do so and *vice versa.* This is similar to the ideas in Bejamini and Maital (1985) or Myles and Naylor (1996). In these papers, the utility of evasion to a taxpayer is positively related to the number of others who evade. This dependence of individual decision-making on the decisions of others leads to multiple equilibria, which can be broadly classified into two: one in which, broadly speaking, people assume that others are paying and so most of them also pay. We can refer to this as the *Canadian* equilibrium, as tax evasion is not the norm in Canada.[10] In the other equilibrium, it is assume that people don't pay their taxes and do

[10] According to a survey by CF Group Inc., sixty-seven per cent of Canadians think that most people are honest and pay all the taxes they should, up from 59 per cent who felt that way in 1995. One reason is that "The number of Canadians who think that they get good value for the taxes that they pay to governments has increased from 37 per cent in 1995 to 42 per cent today [2001]". Another is that "There is a greater sense now that the Canada Customs and Revenue Agency (formerly Revenue Canada) has stepped up its efforts to clamp down on tax evasion and the underground economy". However, "Despite many Canadians thinking that most people are

everything they can to evade: we will refer to this as the *Italian* equilibrium, in honor of that country's well known problems with tax evasion, and particularly in honor of the fact that they have just elected prime minister a a man who has been the subject of a number of investigations for tax evasion. The Russian equilibrium is usually thought to be similar (and rather worse than) the Italian one. The theoretical analysis in these papers shows that there is a tipping point, as is common in the analysis of group interdependencies: when the number of tax evaders reaches a certain level, everyone is better off evading and evasion becomes epidemic. Consequently a small change in tax rates or other variables which precipitate a change in the number of evaders can produce an epidemic of evasion.

The last social variable to think about is stigma (for evading taxes). Stigma (withdrawal from future interaction or exchanges, presumably because tax evasion can be interpreted as a violation of the implicit contract) is easily introduced into the standard model. In our language, the reason for stigmatization is breach of trust. The literature contains formulations in terms of utility. For example, Benjamini and Maital (1985) develop a model in which the disutility of being stigmatized as a tax evader is independent of the *level* of evasion. In that case, an increase in stigma costs do not affect the level of evasion. However, it would affect the decision whether

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honest when it comes to filing their tax returns and paying the GST, some say they would personally evade taxes if they had the opportunity and believed they would not get caught. Seventeen per cent would not report some income on their income tax return - a figure that has held constant since 1995 - and 37 per cent would avoid the GST by having work done for cash. In 1995, almost half (47 per cent) said they would avoid the GST". See LookTown, May 3, 2001, where the survey is reported and from which these quotations are taken.

to evade or not. The normal 'entry' condition that the net financial gain from evasion be positive is modified: the net financial gain must now be large enough to outweigh the expected penalty *and* the stigma cost. So a number of individuals will decide not to evade if the tax rate is fairly low. However, as the tax rate rises, the financial gain from evasion may rise above the stigma cost, pushing previously honest tax payers into becoming tax evaders. Thus, introducing social interactions into the model of tax evasion in the form of stigma costs can also explain why an increase in tax rates raises tax evasion.

3. POLICY IMPLICATIONS

Some of the causes of the high level of tax evasion in Russia are immediately obvious once this framework has been set out. The level of trust in the Russian government appears to be extremely low based on survey data used in international comparisons (Hjolland and Svendsen 2001). A Russian scholar, Anton Oleinik, presents a similar picture and entitles one of his papers on Russia "A Trustless Society" (Oleinik (n.d.)). For example, in surveys reported in Oleinik's paper for 1999, only 3.4% of the respondents think that they can trust the state. Indeed, Oleinik suggests that it was the "non-reciprocal behaviour of the state confirmed during the August 1998 crisis [which] led to a dramatic decline of the citizens' willingness to pay the taxes." (Oleinik, n.d., p. 22).

What is to be done? The framework outlined here suggests that one important avenue of solution to the problem of tax evasion is to develop and emphasize the logic of democracy, which is that there is an exchange relationship between the citizen and the government. This

relationship can only be based on mutual trust, since a government cannot be sued if it does not deliver on its promises. Building trust implies de-emphasizing the relationship of coercion implicit in models of taxation which neglect the expenditure side of government. One implication of this approach is that the problem of tax evasion will not be solved by punitive measures and may in fact be worsened that way. The empirical evidence on penalties for tax evasion supports this point: the evidence that higher penalties are in fact an effective deterrent remains weak. This is in line with the work on criminal penalties which casts doubt on their effectiveness in solving the crime problem[11]. The same reasoning that applies to individuals also holds for the big companies who have been among the biggest tax evaders in Russia. Again, it must be emphasized that the rule of law must be enforced, and this includes appropriate penalties for tax evasion, but within the parameters of the rule of law, in a democracy the citizen should feel his relationship to the state to be one of exchange and not coercion.

Within this logic, we can develop four broad avenues of solution to tax evasion:
(1) As long as people or corporations *do not believe the government is responsive to their wishes*, even if it may he honest, they will attempt to evade their taxes. To be responsive, the government needs information on what goods and services citizens want the government to supply, and it has to be motivated to provide them. One of the chief reasons for the inefficiency of many authoritarian governments is that they lack information on people's preferences. The greater their use of repression, the less information they will have on citizens' preferences and their views of the government, and the more difficult it will be to build a trust relationship with

[11]See Wintrobe (2001) for amplification of this point.

citizens.[12]

(2) As long as individuals and corporations do not *trust the government* they will be unwilling to pay their taxes. Consequently one, obviously very difficult, line of reform is to take measures to increase trust in their government. Here (and this is also relevant to point #1 above) there is a distinction to be made between the *rule of law,* and *authoritarianism.* Historically, the only strong governments Russia has had have been authoritarian governments, and they have not had experience with a government which is strong and implements the rule of law, both for itself and for its citizenry, but which is democratic. That is the only form of government which promotes voluntary tax compliance.

(3) As long as people *believe the tax code is fair*, they will be more willing to pay their taxes. Here a giant step has been taken with the passage of Part 1 and more recently Part 2 of the Russian tax code. Still, it is of vital importance that the system is applied fairly. Usually, one important criterion of "best" is "fairness", ie that the system be fair in two senses: (1) horizontal equity, ie equal treatment of persons in the same circumstances; (2) vertical equity, ie persons of different means are taxed unequally. From this, one point of view about the ideal tax system, the Royal Commission on Taxation in Canada (the so-called "Carter" commission) came up, in the late 1960's I believe, with the principle of taxation that "A dollar is a dollar." The Report was widely discussed, both within Canada and outside, and hailed as "a landmark in the annals of taxation". It is easy to translate this principle into terms that apply to Russia: "A ruble is a

[12]In my (1998) book on dictatorship I referred to this as "the Dictator's Dilemma".

ruble."

The point is that income earned, from whatever source, be taxed in exactly the same way. So the rate of taxation on income earned from salary, capital gains, an inheritance, a gift, a dividend, and so on, should be taxed at exactly the same rate. The system can be made progressive, i.e. consistent with the idea of unequal treatment of unequals, by assuming that some base level of income, again however received, is "non-discretionary" and should not be taxed. The virtues of the system are obvious: (1) it is fair as everyone is treated in exactly the same way; (2) it can be made as progressive as desired by varying the base level of income which is not subject to tax; (3) it is simple; (4) it is in many respects efficient, ie, non-distortionary as income earned from whatever source is taxed at the same rate. Hence investors are not led to bias their decisions into making economically inefficient ones because of quirks in the tax system.

From the point of view of the present inquiry, one can also see what appears to be another virtue of the system: *it would appear to minimize corruption.* The reason is simple: any evidence that anyone paid less than the standard rate of tax adopted is prima facie evidence of corruption. Consequently, the system appears to maximize the visibility of corrupt transactions and therefore make them less easy to engage in.[13]

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[13]However, from the public choice point of view, the system does have an obvious flaw: all pay at exactly the same rate, yet some individuals want and get more out of public goods and services than others. Hence on some definitions of "fairness" such people should pay more, and a system which recognizes differences in the valuation of public goods would be more fair. Still, for many public goods usage rates do not differ dramatically. In any case, the ideal system was never implemented in Canada. A "White Paper" (a document which is issued by the governing party to the legislative body, but is not yet a piece of proposed legislation but preliminary to it) was issued, which already watered down the main principle. In the end, the Canadian system remained and remains more complicated than ever, with all kinds of loopholes,

(4) As long as people *assume other people are trying to evade taxes*, they will attempt to evade themselves. This idea is in line with the solution to the crime problem which has been widely adopted in a number of U.S. cities and is known as the "Fixing Broken Windows" approach. Some attribute the dramatic drop in crime in big U.S. cities, particularly New York, to the adoption of this approach, but the matter remains controversial[14]. The approach is described in an article by George Kelling and James Q. Wilson (1982) and in the book, *Fixing Broken Windows* by Kelling and Coles (1996). In particular, the approach emphasizes that behavior commonly classified as "disorderly", while not as serious as crime, nevertheless can create fear and criminogenic conditions. Like broken windows left unrepaired, such behaviour tended to create an atmosphere which criminals might find congenial but ordinary citizens do not. The result was that neighborhoods deteriorated and citizens withdrew, in turn spawning further deterioration and withdrawal and social decay. So on this line of thought, disorder and crime are contagious. The mechanism may be represented as the *disintegration of social capital*, as follows:

Disorder → Fear → Citizens withdraw from the neighborhood→Crime increases.

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special rates for different kinds of income, and special provisions.

[14]However it is worth recalling that the program was begun under Dinkins, a Democratic mayor, and then pushed, along with other measures, by Giuliani, a Republican. The inspiration for the program is undoubtedly Jane Jacobs' ideas on the texture of urban spaces.

The program to combat crime focused on minor rather than major problems and in some ways reversed the emphasis on "marginal deterrence" for bigger offenses which is characteristic of the individualistic approach. Whether the program was responsible or not, there seems little doubt about the drastic decline in serious crime in New York City after its adoption: within 5 years, from 1992-1997, murders had fallen by 64.3 per cent , and total crimes had been cut in half (Massing (1998), pp. 33-34).

The application of the approach to tax evasion is straightforward: it suggests de-emphasizing going after big evaders such as Gazprom and raising the level of enforcement or increasing the incentives for compliance for small evaders instead. However, the points raised in #1, 2 and #3 above have to be kept in mind: the system must be seen to be fair, and the government has to be seen to be democratic and responsive to the people's wishes.

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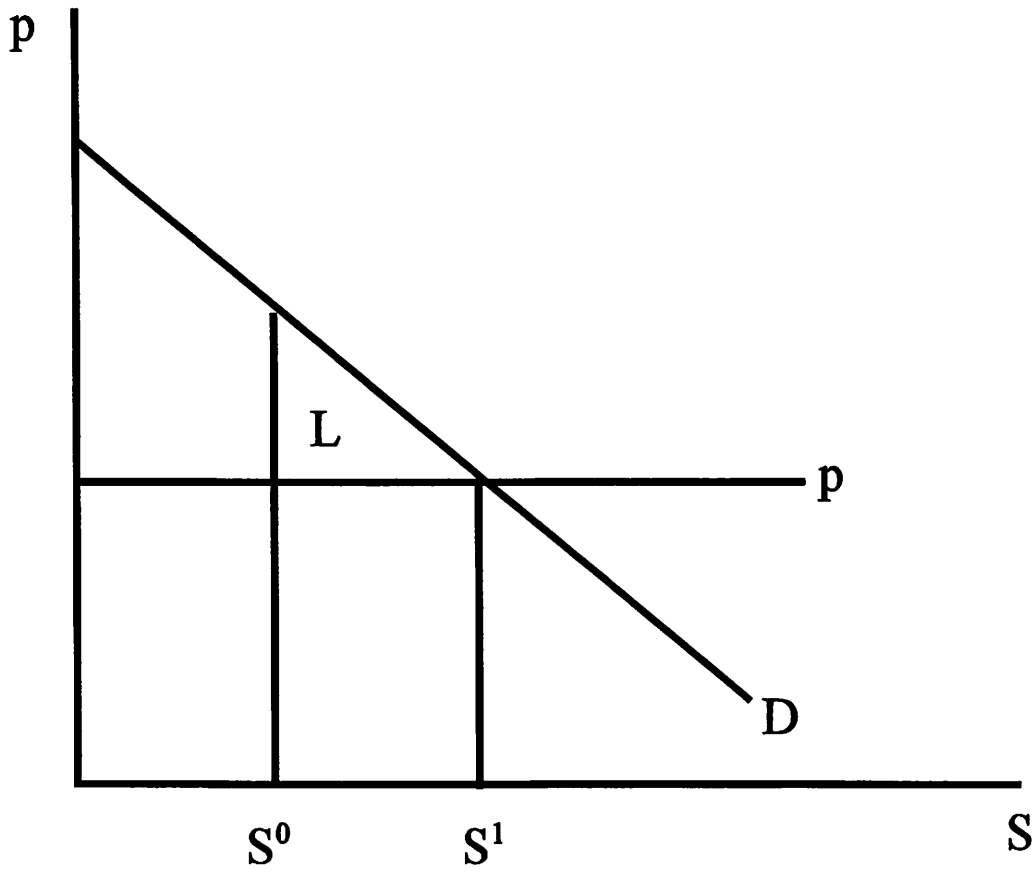

Figure 1

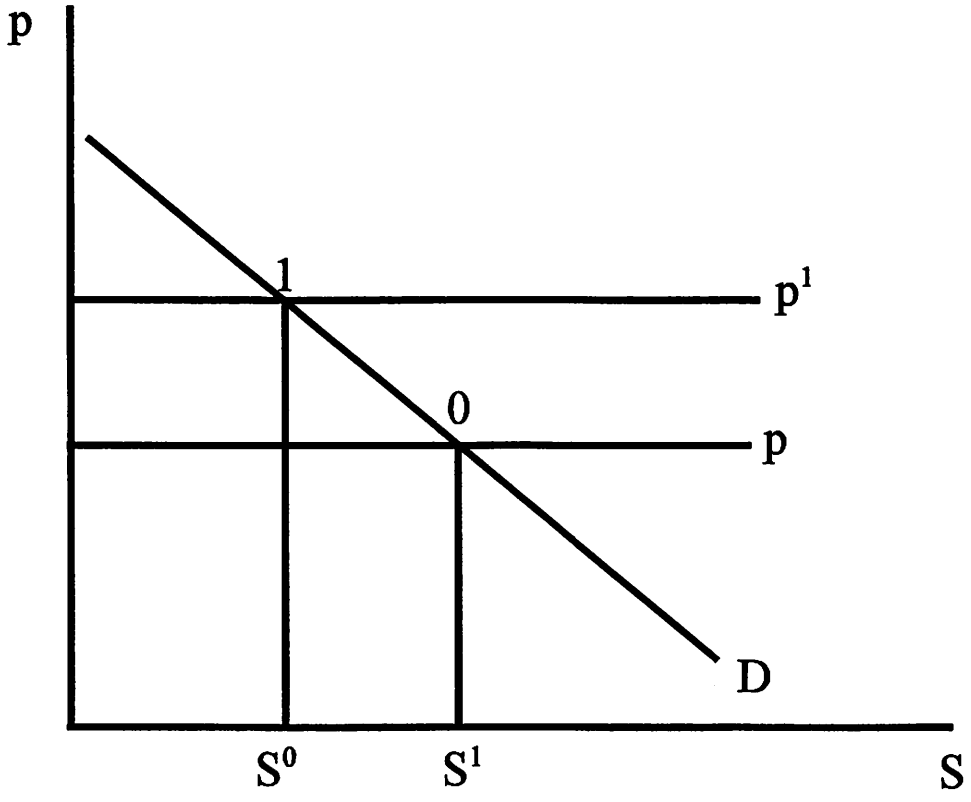

Figure 2a

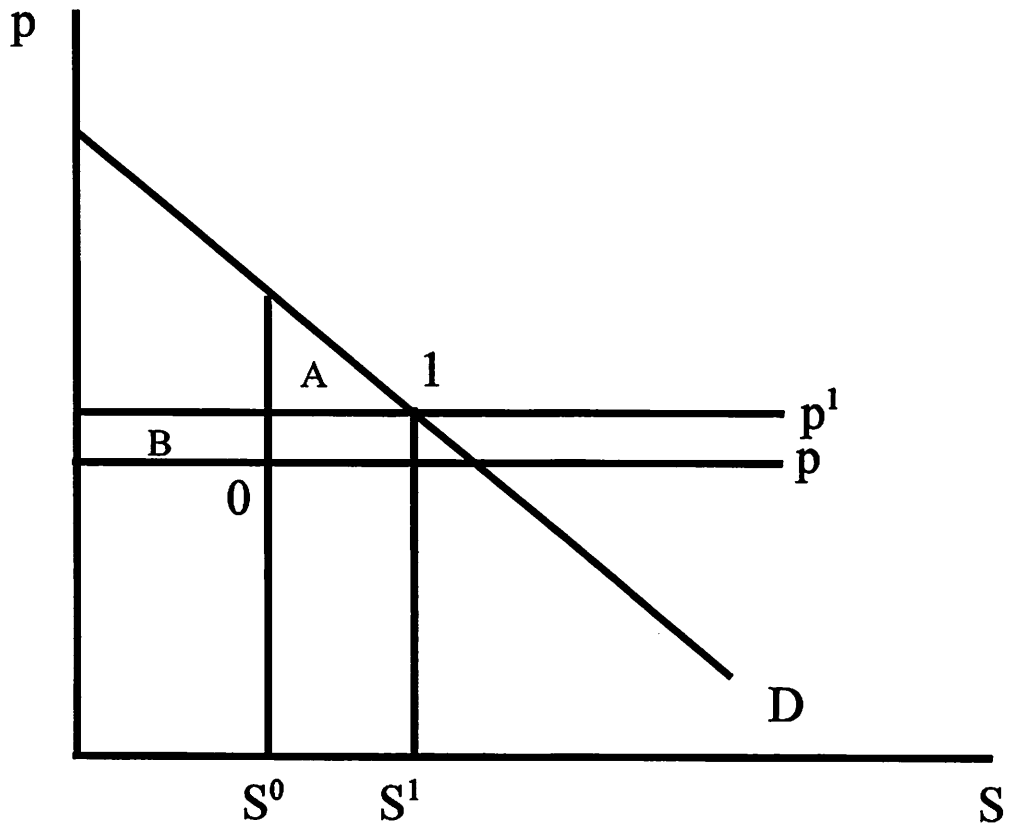

Figure 2b