# Essays on Crime and Tax Evasion

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**Abstract**

This dissertation consists of three essays addressing two issues related to crime and tax evasion. The first essay investigates the relationship between crime and law enforcement expenditures. The second essay examines the market structure in transition economies and the effects on firm-level tax evasion. The third essay investigates the incidence of tax evasion in a general equilibrium framework.

The first essay attempts to identify the impact on crime of increasing law enforcement expenditures. Crime pays if the expected marginal benefits of criminal activity outweigh the expected marginal costs, and the probabilities of apprehension and conviction play a decisive role in this calculus. Among the many channels that the public has to influence these probabilities are expenditures on police enforcement (e.g., the level of expenditures, the number of police officers), and we examine these specific channels to determine what role, if any, they may play in influencing crime rates for property crime and for violent crime. Conclusions in previous research are equivocal, and often do not adequately address the obvious simultaneity of crime and enforcement efforts. We use the Arellano-Bond system GMM estimation method to control for this simultaneity; we also use other methods commonly used in prior studies, in order to examine the robustness of a particular estimation method. Results from our preferred GMM estimation method show clearly that increases in law enforcement expenditures help reduce crime rates; other methodologies typically give results that are not robust. The policy implication is that increased enforcement expenditures may reduce crime but that it also matters how these expenditures are made.

The second essay extends previous empirical work evaluating the determinants of tax evasion by firms. Previous work by Nur-tegin (2008) included both standard and non-traditional determinants to tax evasion however; if tax evasion can be similar to a tax advantage under the law, as suggested by Martinez-Vazquez (1996), then replication and competition will consume and eliminate the direct tax advantage of evaded income (i.e. eliminate the positive expected profits of the evasion gamble). Recognizing this potential, the level of tax evasion may also be determined by current market conditions and industry category. Therefore, this paper contributes to the tax evasion literature by identifying characteristics of the economic environment in which it may be easier to evade or where high levels of evasion take place.

Survey data from 4,907 firms in 25 transition economies are analyzed. The results indicate that fighting corruption is still an important factor in determining the level of evasion. However, the data also suggests a long run situation in which the tax advantage of evasion has been replicated and competed away; more competitive markets have lower levels of evasion whereas monopolistic markets have higher levels of evasion. Further, tax evasion will occur in more service oriented industries.

The third essay develops and tests a theory in order to investigate how tax evasion affects the incidence of a tax. Previous tax incidence work has considered tax evasion, however little has been done considering distributional impact of tax evasion. There may, in fact, be cases in which individuals, other than evaders, indirectly benefit or lose from tax evasion. This work will contribute to the literature by clearly linking the individual or firm's decision to evade to a general equilibrium analysis of tax evasion using microeconomic foundations. Including evasion decisions in tax incidence analysis will have an impact on both tax policy and enforcement agency decision making and is an important step toward understanding how evasion affects the whole economy.

The purpose of using a CGE framework is to explore the potential for tax evasion to be similar as a tax advantage in the law as long as the expected value of the evasion gamble is positive. The standard portfolio approach introduced by Allingham and Sandmo (1972) assumes that the only benefits of tax evasion are the tax savings from unreported income. This may not be true. Individuals, other than evaders, may indirectly benefit or lose from tax evasion. If evasion is viewed as a tax advantage in the law; replication and competition will occur consuming and eliminating the direct tax advantage of evaded income. The process of adjustment will take place in the market through changes in the relative prices of commodities and factor inputs. These simulations will allow the following questions to be answered: What impact does tax evasion have on general equilibrium effects in the presence of an input factor tax both in a perfectly competitive and monopoly scenario? How does welfare change with a partial factor tax when tax evasion is present? Finally, how do multiple partial factor taxes with evasion occurring affect welfare in both a perfectly competitive and monopoly environment?