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Below the Surface: Underground Economic Activity

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## Below the Surface

### Underground Economic Activity

**T**hough policymakers, researchers, journalists, and others speak frequently of the underground economy, they often talk past each other because underground economic activity has not been clearly defined. Is it the production and distribution of illicit goods and services, such as crack cocaine and prostitution? Does one instead mean economic production that is simply unaccounted for because the producers wish to avoid paying taxes—as in the case of a bartering transaction between a dentist and her manicurist? Or are we referring to home production—the value of output from the family garden plot?

These belong to different categories of economic activity. But what is common among all three is that they are difficult to measure systematically and often elude those drawing up the national income and product accounts. In this respect, official estimates of national income understate the true level of output.

To what extent is it a problem that we do not account for all economic activity? The answer depends on the activity's character. The implications of not accounting for home asparagus production are fairly inconsequential. In contrast, knowledge that the illicit drug trade has doubled has longstanding economic and social implications. Likewise, tracking growth in the level of tax evasion and understanding the degree of unreported economic activity that takes place are important. Increased tax evasion will result in a declining tax base, which will undermine the fiscal authorities' ability to finance infrastructure projects. Unregulated production, meanwhile, may have important consequences for worker safety. In this respect, the measurement of illicit economic activity and of unregulated and untaxed economic activity is vital. In what follows, I limit my discussion to these two broad categories of underground activity: illicit economic production and unregulated or untaxed economic production.

#### *Clues and Traces of Underground Economic Activity*

To measure the magnitude of underground activity, we can sum estimates of unrecorded economic production for each sector. However, such an analysis requires an inordinate amount of specialized information about illicit drug production, illegal prostitution, the loan sharking industry, tax evasion, and so forth. As such, the sector-by-sector approach is suboptimal if we wish to obtain time-series and comparable cross-country estimates. Alternative techniques are more easily applied to many countries and many time periods.

Economic production of goods and services leaves traces on the economy beyond the product or service itself. The mining of ore leaves tailings, and the production of irrigated crops decreases aquifer levels. For those of us interested in accounting for underground economic activity, these by-products constitute our main source of information. By analyzing their behavior, we derive conclusions about changing magnitudes of illicit, unregulated, and untaxed economic activity. We resort to a variety of techniques to uncover the traces left behind.

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First, changing labor force participation rates may indicate underground activity. If individuals are trying to “hide” their participation in illicit or unregulated economic activity, or if they are engaged in tax evasion, they may decline to admit that they are in fact working. Increases in underground economic activity would then be reflected in labor force participation rates. In the United States, the labor force participation rate for men over age 20 is currently reported at about 75 percent. In 1970 the rate was much higher; about 83 out of every 100 males over age 20 worked. The eight-percentage-point decrease in official labor force participation is sometimes attributed to a shift in work from the formal economy to the underground economy. There are concerns, however, with this conclusion. Other plausible explanations may account for the large drop in recorded labor force participation: changes in family structure, increased labor market opportunities for women, and changes in retirement patterns are equally compelling reasons.

Second, currency studies capture the variety of ways in which economic agents effectuate transactions. We pay for goods and services using currency, checking and debit accounts, credit cards, and a variety of other means. In the United States, the level of liquidity (currency circulating outside banks plus checkable deposits) is controlled by the Federal Reserve, but its distribution into currency and checkable deposits is determined by the habits and desires of the public. If individuals wish to hold more of their liquid assets as currency, they will transform checking deposits into currency by making withdrawals from their checking accounts. If individuals wish to hold less currency, they make deposits and will reduce the currency checkable deposit ratio. Liquidity remains the same, but the distribution into currency (outside banks) and deposits varies.

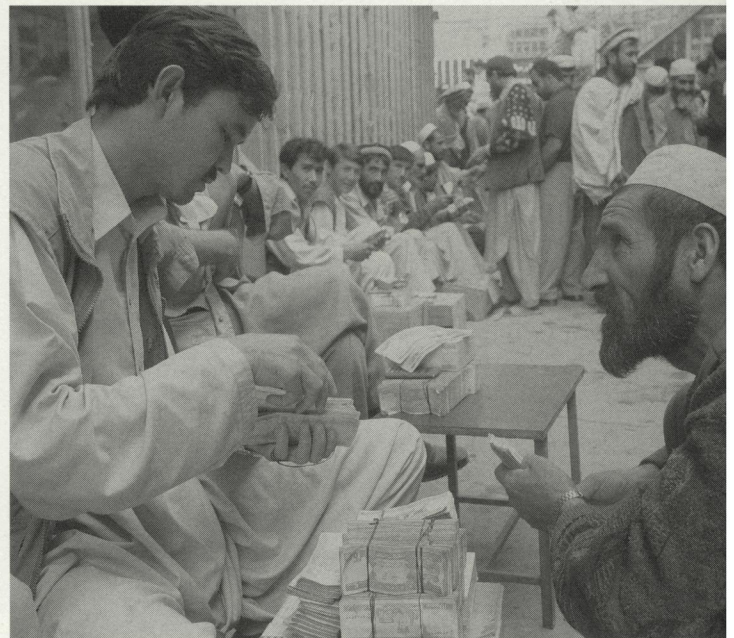
Individuals who transact in the underground economy will presumably prefer to use currency because cash transactions can remain anonymous. An examination of currency in circulation might therefore track increases and decreases in underground activity. According to the Treasury Bulletin in 1960, currency circulation in the United States was US\$177 per capita. Today, adjusted for inflation, US\$387 circulates for each person in the United States—currency holdings have more than doubled. Does this change reveal an increase in illicit and unrecorded transactions?

Not necessarily. The ratio of currency holdings to other forms of liquidity, not the absolute level of currency, is what matters. In this case, the currency deposit ratio confirms that there has been a substantial increase in currency relative to deposits, from about 0.38 in 1960 to 2.2 in 2005. Still, many causes other than the underground economy can explain changes in this ratio. Perhaps most important, the US dollar has gained popularity over the years as a means of conduct-

ing transactions in other countries. When monetary systems “malfunction” in other parts of the world, currency substitution often results in the use of US currency. Much of the increase in demand for US currency derives from individuals abroad seeking a substitute for their own poorly functioning currency. Hence, much of the rise in US currency deposit ratios has nothing to do with US events.

A third approach to measuring underground economic activity uses statistical advances in measuring unobservable or latent variables. This approach presumes that there are many different propagators of underground activity, including burdensome regulations and societal attitudes regarding governance. All of these are, to various degrees, measurable. There are also a multitude of effects of underground activity, some of which we have already discussed—including currency use and labor force participation rates. In the unobservable variables technique, statistical methods relate these “propagator inputs” to the observable “outputs,” deriving estimates of the growth of underground economic activity.

The unobservable variables technique employs a multitude of propagator and indicator variables simultaneously, increasing information and reducing the reliance on one imperfect measure. For example, size estimates of US underground activity using a currency approach run at about 20 percent of gross domestic product (GDP), while the unobservable variables technique place it closer to nine percent of GDP. The estimates derived from currency alone exaggerate



**Opposite:** Colombian police discover an organization that prints and trafficks false US bank notes. **Above:** An Afghan man exchanges US dollars for Afghanis on a Kabul street.

the degree of US underground activity because of difficulties in accounting for overseas holdings of US currency.

In addition to being less sensitive to one indicator variable, the unobservable variables technique can be widely applied because it relies on macroeconomic time series data that are more easily available for a large array of countries. This technique enables global comparisons of underground economic activity. However, as with the previous methodologies, observable outputs cannot always be correctly measured, and the information on causal variables is sometimes unreliable. We must take care in generalizing from these techniques.

**What Gives Rise to the Underground Economy?**

Size estimates of underground economic activity range from a low of 8.7 percent of GDP in the United States to a high of 67 percent in Azerbaijan. Why do some countries appear to generate very high levels of underground economic activity while others have smaller underground economies? What are the determinants of underground economic activity? Answers to these questions will aid in devising and evaluating policies concerning underground activity.

Most policy prescriptions suggest that lowering taxes and limiting government regulation of the economy will reduce underground economic activity. However, the notion

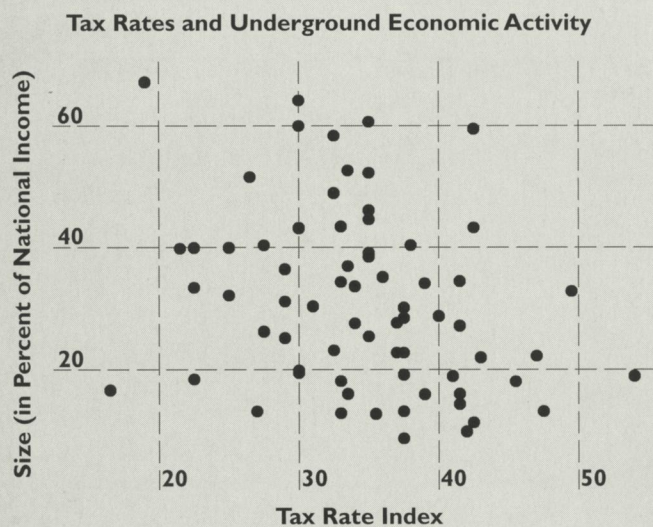
that high tax rates (and hence large government) increase underground activity is not supported by the data summarized in the graph to the left. The figure plots each country's tax rate index for the year 1999 (obtained as an unweighted average of corporate and individual marginal tax rates as reported by World Bank Indicators), along with estimates of the size of the underground economy in that same year for a sample of 70 countries from around the globe, derived from a cross country study by Friedrich Schneider.

If higher tax burdens increased underground economic activity, then we would expect these points to be higher as we moved from left to right, suggesting a positive relationship between tax rates and the size of the underground economy. But we actually observe a slight negative or perhaps no relationship. While this scatter plot oversimplifies the case, these data do not support the claim that high tax rates raise underground activity. This result should cause us to reconsider the notion that high taxes and large government are the source of the hidden economy and that by simply reducing taxes, underground economic activity would diminish.

Indeed, by all accounts, the United States has one of the smallest underground economies in the world. US tax rates are also, relatively speaking, higher than average. But the higher taxation does not seem to draw as much US economic activity underground. This fact is simply explained. In the United States, most businesses and individual taxpayers feel that taxes do provide us with worthwhile services and public goods. Taxpayers are not generally concerned that collectors pocket the proceeds. This results in higher tax compliance; economic activity remains, by and large, above ground.

By contrast, in countries where residents place little faith in the taxing authorities—where it is likely that tax collectors will pocket tax proceeds and bureaucracies will partner with national leaders to whisk these into secret bank accounts—it is less likely that individuals will comply with tax law and other regulations. The graph on the opposite page underscores that respect for the authorities is an important deterrent to underground activity. In this figure, Transparency International's Corruption Perceptions Index is plotted against the size of the underground economy (measured as a percentage of national income). The Corruption Perceptions Index is modified from the original index so that higher values signify greater levels of perceived corruption. The results suggest a decidedly positive correlation between underground economic activity and perceptions of corruption. This observation is consistent with the notion that individuals who have less respect for the integrity of government will engage in underground activity. When citizens feel that corruption is not an issue, there is less need to protect one's economic production from the grabbing hands of unscrupulous government officials.

**THE TAX PARADOX**



This scatterplot, using data from 70 countries around the globe, plots the tax rate index of each country in 1999 against the amount of underground activity for that same year. There is no positive correlation between tax rates and the size of the underground economy.

World Bank Indicators; Friedrich Schneider (1999)

Given the differing types of underground activity, it would be simplistic to expect a basic model to fully account for the variation observed in the level of underground activity across countries. It is worthwhile to distinguish between what is generally responsible for illicit and unregulated economic activity. The production of cocaine and the bartering of manicures for dental fillings have different causes. Consumer demand for prohibited goods and services may be initially responsible for the development of illicit markets, while unrecorded and untaxed economic production are more likely due to poor governance. Corruption and inadequate legal infrastructure nurture both types of activity.

It is also important to consider the byproducts of the various policies that target illicit activities. For example, although more enforcement resources may reduce the volume of illicit drug transactions, enforcement will also raise the price of these goods—thereby raising companion criminal activity, as individuals require more resources to feed an addiction. It is preferable, then, to deter illegal activity by attacking the problem at its source. The availability of good jobs, education, and opportunities for youth is more likely to yield lifestyles devoid of criminal activity. Societal norms, perceptions and willingness to confront inequalities in opportunities are most important in reducing such activity.

**Selective Policies Toward Underground Activity?**

In this essay, I have differentiated two types of underground economic activity—the production of goods and services that are licit yet unaccounted for (what is often referred to as informal economic activity), and the production of illicit goods and services. Can a case be made for instituting policies that would stem illicit activity but tolerate informal activity? According to some, if informal activity is simply the expression of legal economic activity that would otherwise be stifled, we should celebrate its growth. This argument may be fallacious, however, because informal economic activity often gives shelter to illicit economic activity.

The two activities have a tendency to intersect for a variety of reasons. For example, street vendors in Mexico City, who are a visible component of Mexico’s informal economy and who sell legal goods but are unregistered in order to avoid government regulations, are also subject to extortions by mafia-type organizations who have gained control of public space. Drug or arms dealers, terrorists, or others interested in laundering money may use the services of informal money transfer agents. Poor immigrants who are doing nothing wrong by transferring remittances to their loved ones back home may unwittingly serve as cover for the money transfers of criminals who also use the services of these informal businesses. This is why the US Government has encouraged immigrants to use banking institutions rather

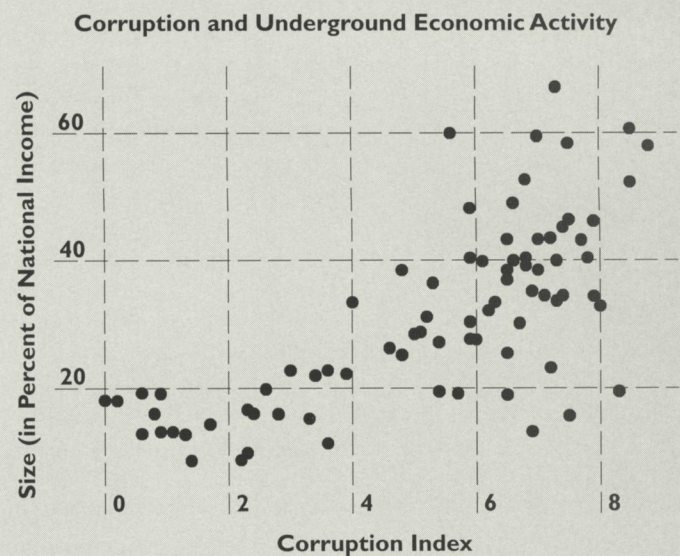
than relying on informal money transfer agents.

**Wrapping Up**

There is considerable variation in the level of underground economic activity around the globe, but most conclude that all countries do not account for all market-based economic production. While researchers studying this phenomenon have made some inroads into tracking underground economic activity, better methods of measurement are sorely needed. They will help policymakers assess the effectiveness of policies that target such activity. Policy prescriptions for limiting these activities depend, in part, on the type of underground activity being pursued and, in particular, whether the activity is illicit or simply unregulated.

The notion that taxes cause underground activity is unsupported by the data. Instead, the prevalence of corruption is more likely to affect both illicit and informal economic activity. Corruption and its impact on social morale contribute to the demise of respect for government, a disregard for laws and regulations, and the rise of underground activity. Moreover, a corrupt police force and corrupt senior bureaucracy will make enforcement against the illicit and informal production of goods and services less likely. ■

**BUYING THE GOVERNOR**



This scatterplot shows the Corruption Percentage Index plotted against the size of the underground economy in a sample of countries from around the world. Here the perceived corruption appears directly related to the amount of underground economic activity.

..... Transparency International; Friedrich Schneider (1999)