THE UNDERGROUND ECONOMY

HEARING

BEFORE THE

JOINT ECONOMIC COMMITTEE

CONGRESS OF THE UNITED STATES

NINETY-SIXTH CONGRESS

FIRST SESSION

NOVEMBER 15, 1979

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THURSDAY, NOVEMBER 15, 1979

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to notice, at 10 a.m., in room 6226, Dirksen Senate Office Building, Hon. Lloyd Bentsen (chairman of the committee) presiding.

Present: Senators Bentsen and Javits.

Also present: John M. Albertine, executive director; Paul B. Manchester, professional staff member; Charles H. Bradford, minority counsel; and Carol A. Corcoran and Mark R. Policinski, minority professional staff members.

OPENING STATEMENT OF SENATOR BENTSEN, CHAIRMAN

Senator BENTSEN. We will start this hearing of the Joint Economic Committee on time. I think the hearing that we have scheduled this morning is one of the most interesting, yet one of the most disturbing, subjects that we have examined in the last year. We will discuss the underground economy. We will try to understand the breadth, depth, and the scope of it, and the impact on these indexes where we try to determine how many people are really unemployed, what their income really is, and where taxes are really being paid. Are we seeing changes in the attitude of the people toward the whole tax system? Are we drifting into what we have seen in some other countries of the world? In some countries, they keep three sets of books—one for the government, one for their partner, and one for themselves. These illegal economic activities include cash payments off the books to employees, skimming income off the top by retailers, employment of undocumented workers, the narcotics trade, prostitution, gambling, and loan sharking.

Recent estimates have suggested that the underground economy may be as large as $700 billion. Now that would be one-third of the gross national product. It's a little hard to buy.

My concern, too, is how we can measure these amounts, because of the very nature of the problem. The $700 billion figure is the largest estimate made to date. Other estimates are smaller and may be closer to reality. But all of those who have studied the problem certainly think it's sizable. Our data on unemployment, economic growth, inflation, productivity, and the distribution of income fail to take into account the existence of an apparently rapidly growing underground economy.

There are serious errors in the econometric models, economic forecasts, and policy decisions which rely heavily on that data.

We hope to get a better idea about this problem this morning. I am deeply concerned about the fact that many Americans, otherwise law-abiding citizens, apparently see nothing wrong with their involvement in the underground economy. Aside from the illegality involved, this hurts all Americans because it reduces the tax base, requires higher tax rates on those who do comply with the laws and makes it difficult for honest businessmen to compete. And it leads to disrespect for the laws in general.

High taxes, excessive regulation, and government redtape have contributed much to the rise of the underground economy. We ought to reduce those burdens on our citizens as much as possible. At the same time we have to step up our efforts to enforce the law.

This area is a new field among economists and policymakers. At this hearing we are going to hear from several of those who have first analyzed this problem.

Our first witness will be Commisisoner Jerome Kurtz of the Internal Revenue Service. Following his testimony we will hear from a panel including Prof. Peter Gutmann of the City University of New York; Richard Fogel, Associate Director, General Government Division, General Accounting Office; and James Henry, economist, McKinsey & Co., Inc.

Commissioner, if you would be our leadoff witness, we would appreciate your testimony.

STATEMENT OF HON. JEROME KURTZ, COMMISSIONER, INTERNAL REVENUE SERVICE, ACCOMPANIED BY S. B. WOLFE, ASSISTANT COMMISSIONER FOR COMPLIANCE

Mr. KURTZ. Thank you, Mr. Chairman. I appreciate the opportunity to appear before you today to discuss our report entitled "Estimates of Income Unreported on Individual Income Tax Returns." I am accompanied today by Mr. Wolfe, our Assistant Commissioner for Compliance.

This study of noncompliance estimates that individuals did not report $75 billion to $100 billion of income for tax year 1976 from legal activities, resulting in a revenue loss of approximately $13 billion to $17 billion. In addition, individuals engaged in illicit drug sales, illegal gambling, and prostitution are estimated to have failed to report $25 billion to $35 billion of earnings on which the revenue loss may range from $6 billion to $9 billion. For the same tax year, individuals reported income taxes totaling $142 billion on $1,073 billion of income. The broad outlines of some significant aspects of the report are in the four tables and the chart which I have attached to my prepared statement.

The report confirms that voluntary reporting is very high where incomes are subjected to withholding. Voluntary income reporting is lower where incomes are subject to information document reporting and even lower where incomes are subject to neither withholding nor information document reporting. For example, in the legal sector, the voluntary reporting rate for wages and salaries was 97 to 98 percent.

The corresponding rate for dividends, which were subject to information reporting alone, was 84 to 92 percent. In contrast, only 60 to 64 percent of self-employment income was voluntarily reported.

Senator BENTSEN. Let me understand what you have said for a moment. What do you mean in the legal sector?

Mr. KURTZ. Income from legal sources. That is, the estimates are broken down in our report into income legally earned. It may be illegally not reported but it's from a business which itself is not against the law. The other estimates of illegal income, narcotics, illegal gambling, prostitution, et cetera, are estimated separately.

The reason for that is really twofold. One is that the estimates of illegal income are much softer estimates. Obviously, information is much harder to come by. We limited the estimates of illegal income to only income from those three sources simply because there were not statistically reliable data available at this time for our people to do anything more.

Senator BENTEN. All right.

Mr. KURTZ. Obviously it is not an all-inclusive figure.

Senator BENTSEN. Go ahead, sir.

Mr. KURTZ. As the report explains and as I just said, some of the estimates are more reliable than others. The estimates of illegal income are particularly soft. However, the figures in this report should be considered as best estimates based on available information—not as hard and final figures.

The measures of unreported income provided in our report represent direct estimates derived from a wide variety of data sources. The Internal Revenue Service has regularly conducted careful measurements of compliance as an adjunct to its examination program since 1964. This taxpayer compliance measurement program, which measures compliance with the tax laws by thorough audits of a statistical sample of filed tax returns, serves as a principal benchmark for our estimates in the legal sector.

However, this program does not measure noncompliance in areas normally undetected by customary audit procedures such as the income of those who fail to file returns and, to a large extent, the failure to report income from illegal sources. Moreover, it does not measure fully income from legal sources omitted by taxpayers because not all of such income is detected by normal audit techniques.

Senator BENTSEN. A taxpayer compliance audit. Is that a random selection?

Mr. KURTZ. It's a statistically stratified random selection. That is, a base for sampling is worked out by statisticians based on income groupings and other variables. Then within the particular group, the returns are selected at random.

Senator BENTSEN. We have had interesting instances of Presidential candidates and national treasurers of the Democratic Party who all of a sudden were randomly selected for taxpayer compliance at that particular time.

Mr. KURTZ. I have heard of those reports too. I can tell you exactly how it is done today. It's done by social security numbers selected by a blindfolded statistician out of a book of random numbers.

Senator BENTSEN. I think somebody peeked a little on a couple. I have been one of them.

I happened to be one of those selected in 1976 after I tried to get into the Democratic primaries. I remember that the treasurer of the Democratic Party that same year was also randomly selected.

Mr. KURTZ. Well, let me say that the probabilities of being sampled are different in different income groups. Being in certain income groups and having certain characteristics on the return can raise the probability.

Senator BENTSEN. If you say so, Commissioner. Go ahead.

Mr. KURTZ. To obtain estimates of the amount of income received by nonfilers, we used the exact match file which collated information from Commerce, Social Security, and Internal Revenue Service records for a sample of approximately 50,000 households.

We cooperated with the Drug Enforcement Administration in developing our estimates of unreported income derived from the sale of illegal drugs. We also worked closely with the Bureau of Economic Analysis in deriving parts of the upper range of our estimates of unreported legal source income. The Federal Reserve Board provided assistance to us in our analysis of certain indirect methods of estimating the size of the subterranean economy based on an analysis of the monetary data. Some data with regard to illegal gambling were obtained from the FBI. The methodology used in preparing all of the estimates is spelled out in the appendixes accompanying the report.

We are studying ways to improve and update these estimates. Of course, making more current estimates will depend on the availability of more current data. The year covered by the report is 1976. We gave consideration to making projections for tax year 1978, but we did not do so because there was not adequate data available for that year.

Simply to make a projection on the basis of change in some key economic indicator, such as personal income, would have conveyed the impression that we have found a basis for stating whether the unreported income problem has improved or deteriorated in recent years. And we do not have sufficient data from which to draw such a conclusion.

You have asked for our comments on recent estimates of the size of the "irregular economy" by Professor Edgar Feige. Our experts have examined Professor Feige's estimates and believe that his approach does not produce reliable results. I might say that Professor Feige himself states that estimates based on the methods he uses could vary within a range of several hundred billion dollars. Our people certainly confirmed that.

I do not want to leave you with the impression that our report has identified all areas of noncompliance. For example, the scope of the study was limited to unreported income by individuals. Further, the study only provides estimates of unreported income and tax loss from certain illegal activities.

We are taking steps to deal with the problems of noncompliance identified in the report. While I am not suggesting that the improvements I am about to enumerate will provide a complete solution to the problems of noncompliance, each we believe is a step forward.

First, we are planning to allocate more of our examination resources to specific areas of noncompliance identified in the report.

Second, in order to make better use of information documents which are filed by payors of wages, interest, dividends, and certain other types of income, we are implementing a new program which will associate with income tax returns all such information documents processed at the time most individual returns are selected for examination.

Currently we have a separate program for using information documents to identify underreporters and nonfilers. This new program will also enable us to use information documents both to select returns for examination and to provide our examining officers with leads to unreported income in examinations of returns selected under regular audit procedures for audit. This innovation reflects the higher priority the Service will afford to detecting unreported income in its audit program.

Third, we are trying to improve our method for selecting apparent nonfiler cases to investigate. The concept here is to design a more objective scoring system that will identify the most significant nonfiler leads. We need such a system because we anticipate a backlog of about 450,000 uncompleted nonfiler investigations by the end of fiscal year 1980 and must select those cases to which we will devote our limited resources.

The nonfiler problem is difficult and expensive to deal with because nonfilers are generally concentrated among large numbers of low-income taxpayers. As GAO pointed out in its recent report on nonfilers, 52 percent of the total nonfiler population had incomes of $5,000 or below; 64 percent of private household workers were nonfilers; 68 percent of nonfiling laborers and service industry employees made $5,000 or below; we found that nonfilers accounted for about $2.2 billion of the legal sector tax loss of $12.8 to $17.1 billion.

Four, on another front, one avenue for identification of those who conceal substantial cash income is by the use of currency reports. In general, the law requires reporting by banks and other financial institutions when certain transactions exceed $10,000 in currency. The law also requires reporting of instances where over $5,000 of currency leaves or enters this country. These reports are useful in investigations of, for example, illegal narcotics traffickers and others who fail to report cash income.

These reports will become even more valuable in our enforcement efforts by making them available on the Treasury Enforcement Communications System, a computerized information storage and retrieval system designed to assist Federal personnel in carrying out law enforcement missions. We are initiating appropriate training programs to insure that full and efficient use is made of this new system.

Five, we are in the process of planning a new program to require that employers send to IRS copies of W4's, the form used by employees to claim withholding exemptions for payroll deduction purposes which meet certain objective criteria. These criteria are pointed at identifying "questionable" cirmumstances which may be indicative of false W4 exemptions.

Six, in the bartering area, we have instructed our agents to examine the issue of noncash exchanges when verifying income. We will also

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be conducting examinations of some of those who make a business of organizing bartering for others.

Seven, we are conducting major research initiatives testing how to improve compliance methods. Examples of research projects include efforts to detect unreported gains from sales of stock, failure to report taxable gains from sales of personal residences and failure to report income realized upon the termination or abandonment of certain tax shelters.

We are also studying the effectiveness of current information reporting applied to certain gambling winnings. The study involves comparison of taxpayer reporting on certain racetrack and lottery winnings, which are already subject to withholding, with taxpayer reporting on some sources of casino gambling winnings now covered only by information reporting. We have also started other studies in the gambling area, including casino audit techniques, auditing for tips, and approaches to determining whether so called "high rollers" adequately report their taxable income.

Feasibility studies covering proposals to extend information reporting to interest derived from certain money market and other debt instruments are also in progress. The Service is trying to develop a system for information reporting which would identify interest reported on income tax returns, at the same time taking into account the practical problems which might be encountered in complying with such requirements.

On a more basic level, the Service contracted with a private sector research firm last fall to develop methods to determine the relative impacts of factors that influence compliance with tax laws. We want to know what makes people comply or not comply with the tax laws, and hope to apply this research of attitudes and motives affecting voluntary compliance to improving our overall tax administration operation.

Finally, the Service recognizes that the uses of foreign tax havens present serious and complex enforcement problems. Accordingly we have established a formal study of tax havens. Our study will encompass the need for appropriate interagency coordination, a review of reporting requirements and report processing procedures, research and systematic analysis of available information sources, both domestic and foreign, a review of applicable regulations, an analysis of enforcement activities, and a review of the adequacy of existing legislation and the possible need for new legislation. The study will include interviews with practitioners, bankers, and others, inside and outside of government, as well as exchanges of information with foreign governments.

We must continue a balanced enforcement program. We cannot ignore any vital areas of our overall compliance effort. For example, our tax shelter program is important to voluntary compliance because of widespread abuses and because we must make it clear that high income taxpayers cannot avoid paying their fair share of taxes by arrangements which lack economic substance.

The decisions we face in allocating limited resources are close and hard. We cannot ignore the country's largest corporations and high income individuals to detect more low income nonfilers and moonlight-

ers. We divide our resources to do some of each. If we were to go too far in reacting to the findings of this report, we could be spending a disproportionate share of our budget on low-yielding cases, often involving individuals earning a marginal living, at the expense of ignoring significant tax issues among high income corporations and individuals.

In the illegal sector, we will continue to investigate major tax cases involving high level racketeers and narcotics traffickers in close coordination with the Department of Justice, including the Drug Enforcement Administration.

We need to devote criminal investigation recources to tax cases involving income from both legal and illegal sources. I hope that our basic research efforts underway will help us make more informed decisions on what proportion should go into each type of case with a better understanding of the factors influencing voluntary compliance than we have now.

One of the Service's basic administrative responsibilities is to manage compliance programs efficiently. We estimate that we will examine about 1.8 million tax returns of individuals this fiscal year and produce an estimated $5 of assessments for each $1 of cost. We will audit about 2 percent of individual income tax returns filed in 1979. We have a cost beneficial program to detect nonfilers and to match information documents reporting payments of interest, dividends and certain other types of income against the tax returns of the recipients of those payments.

Our criminal investigators spend about 25 percent of their time dealing with tax investigations involving illegal income about a quarter of these programs deal with narcotics. We spread our budget dollars to have a balanced presence in all areas of noncompliance.

Our study shows clearly what all of us already know—that the cornerstone of our tax system is withholding in all areas where it can conveniently be applied. The alternative is significantly increased audit coverage which is both more costly to the economy as a whole and more intrusive in the affairs of taxpayers.

Congress can help compliance by legislation. For example, Mr. Chairman, I urge your support for the administration's proposal to withhold 10 percent from the compensation of certain independent contractors. A separate IRS study indicated that there is widespread noncompliance by independent contractors, which is consistent with the findings of low compliance in the report we are discussing.

At least 45 percent of the workers in this special study reported absolutely none of the compensation in question for income tax purposes. Social security tax compliance was even worse. About 57 percent of those in the study paid none of the social security tax due on their compensation.

Senator BENTSEN. When you have something like that, 45 percent reporting none of the compensation, how do you catch up with some of them?

Mr. KURTZ. The answer in this particular area is withholding.

Senator BENTSEN. No. How do you do it under the present circumstances? What kind of followthrough do you have?

Mr. KURTZ. Well, we have audit programs. But the coverage is very low. Our overall audit coverage is only slightly over 2 percent. We have document matching and we match very large numbers of documents. But resource constraints prohibit following up every lead. We try and pick the best ones and follow them up. But the answer is that there are areas like this one of independent contractors where there is widespread noncompliance without withholding. And under present budget constraints, it's simply impossible to follow them all up. We do as many as we can in that area.

In 1976, the Internal Revenue Service issued a revenue ruling that would have required employers to report to employees and to the Internal Revenue Service tips of employees charged by customers on credit cards and therefore in fact, paid to the employees by the employers. However, the implementation of that ruling was suspended by Congress.

Compliance in reporting tip income by employees is poor. Consequently, the Service must devote a disproportionate amount of examination resources to this problem. We need congressional support in this area, in the independent contractor area and in other areas in the future to give us the tools to continue to administer our income tax system with a relatively low examination coverage. The alternatives are either to expand direct audits or to be content with the inequity of poor compliance by those with certain types of income.

Finally, my opinion is that voluntary compliance turns not only on enforcement efforts but to a significant but unmeasurable extent on the perception and reality that the system treats taxpayers decently and fairly. We must deal effectively with taxpayers' complaints and assist those unable to cope with the system. To that end we have substantially expanded our taxpayer service activities in recent years and implemented a problem resolution function to cut through redtape and resolve errors promptly. I believe we can do more, and I have, therefore, decided to establish an ombudsman in the Internal Revenue Service who will have the duty and the power to serve as an effective advocate and protector of taxpayer's rights.

We are concerned by the levels of noncompliance reported in the study. They are too high. There are no quick or easy answers. I think that our voluntary compliance system is basically sound, and we will do our best to improve it further and we can use your help in doing so.

I would be pleased to describe further the findings of this report and to answer your questions.

[The prepared statement of Mr. Kurtz, together with the attached tables and chart, follows:]

PREPARED STATEMENT OF HON. JEROME KURTZ

I appreciate the opportunity to appear before you today to discuss our report entitled "Estimates of Income Unreported on Individual Income Tax Returns." This study of noncompliance estimates that individuals did not report $75 billion to $100 billion of income for tax year 1976 from legal activities, resulting in a revenue loss of approximately $13 billion to $17 billion. In addition, individuals engaged in illicit drug sales, illegal gambling and prostitution are estimated to have failed to report $25 billion to $35 billion of earnings on which the revenue loss may range from $6 billion to $9 billion. For the same tax year, individuals reported income taxes totalling $142 billion on $1,073 billion of in-

come. The broad outlines of some significant aspects of the report are in the four tables and the chart which I have attached to my statement.

The report confirms that voluntary reporting is very high where incomes are subjected to withholding. Voluntary income reporting is lower where incomes are subject to information document reporting and even lower where incomes are subject to neither withholding nor information document reporting. For example, in the legal sector, the voluntary reporting rate for wages and salaries was 97 to 98 percent. The corresponding rate for dividends, which were subject to information reporting alone, was 84 to 92 percent. In contrast, only 60 to 64 percent of self-employment income was voluntarily reported.

As the report explains, some of the estimates are more reliable than others. The estimates of illegal income are particularly soft. However, the figures in this report should be considered as best estimates based on available information—not as hard and final figures.

The measures of unreported income provided in our report represent direct estimates derived from a wide variety of data sources. The Internal Revenue Service has regularly conducted careful measurements of compliance as an adjunct to its examination program since 1964. This Taxpayer Compliance Measurement Program (TCMP), which measures compliance with the tax laws by thorough audits of a statistical sample of filed tax returns, serves as a principal benchmark for our estimates in the legal sector. However, this program does not measure noncompliance in areas normally undetected by customary audit procedures such as the income of those who fail to file returns and, to a large extent, the failure to report income from illegal sources. Moreover, it does not measure fully income from legal sources omitted by taxpayers because not all of such income is detected by normal audit techniques. Other compliance programs, such as document matching and criminal investigations, deal with these problems operationally.

To obtain estimates of the amount of income received by nonfilers, we used the Exact Match File which collated information from Commerce, Social Security, and Internal Revenue Service records for a sample of approximately 50,000 households.

We cooperated with the Drug Enforcement Administration in developing our estimates of unreported income derived from the sale of illegal drugs. We also worked closely with the Bureau of Economic Analysis in deriving parts of the upper range of our estimates of unreported legal source income. The Federal Reserve Board provided assistance to us in our analysis of certain indirect methods of estimating the size of the subterranean economy based on an analysis of the monetary data. Some data with regard to illegal gambling were obtained from the FBI. The methodology used in preparing all of the estimates is spelled out in the appendices accompanying the report.

We are studying ways to improve and update these estimates. Of course, making more current estimates will depend on the availability of more current data. Consideration was given to making projections for tax year 1978, but we did not do so because there was not adequate data available for that year. Simply to make a projection on the basis of change in some key economic indicator, such as personal income, would have conveyed the impression that we have found a basis for stating whether the unreported income problem has improved or deteriorated in recent years.

You have asked for our comments on recent estimates of the size of the "irregular economy" by Professor Edgar Feige. Our experts have examined Professor Feige's estimates and believe that his approach does not produce reliable results. Professor Feige himself states that estimates based on the methods he uses could vary within a range of several hundred billion dollars.

I do not want to leave you with the impression that our report has identified all areas of noncompliance. For example, the scope of the study was limited to unreported income by individuals. Further, the study only provides estimates of unreported income and tax loss from certain illegal activities.

We are taking steps to deal with the problems of noncompliance identified in the report. While I am not suggesting that the improvements I am about to enumerate will provide a complete solution to the problems of noncompliance, each is a step forward.

We are planning to allocate more of our examination resources to specific areas of noncompliance identified in the report.

In order to make better use of information documents filed by payors of wages, interest, dividends, and certain other types of income, we are implementing a new program which will associate with income tax returns all such information documents processed at the time most individual returns are selected for examination. Currently, we have a separate program for using information documents to identify underreporters and nonfilers. This new program will also enable us to use information documents both to select returns for examination and to provide our examining officers with leads to unreported income in examinations of returns regularly selected for audit. This innovation reflects the higher priority the Service will afford to detecting unreported income in its audit program.

We are trying to improve our method for selecting apparent nonfiler cases to investigate. The concept here is to design a more objective scoring system that will identify the most significant nonfiler leads. We need such a system because we anticipate a backlog of 700,000 uncompleted nonfiler investigations by the end of 1980 and must select those cases to which we will devote our limited resources.

The nonfiler problem is difficult and expensive to deal with because nonfilers are generally concentrated among large numbers of low-income taxpayers. As GAO pointed out in its recent report, 52 percent of the total nonfiler population had incomes of $5,000 or below; 64 percent of private household workers were nonfilers; 68 percent of nonfiling laborers and service industry employees made $5,000 or below; we found that nonfilers accounted for about $2.2 billion of the legal sector tax loss of $12.8 to $17.1 billion.

On another front, one avenue for identification of those who conceal substantial cash income is by the use of currency reports. In general, the law requires reporting by banks and other financial institutions when certain transactions exceed $10,000 in currency. The law also requires reporting of instances where over $5,000 of currency leaves or enters this country. These reports are useful in investigations of, for example, illegal narcotics traffickers and others who fail to report cash income.

These reports will become even more valuable in our enforcement efforts by making them available on the Treasury Enforcement Communications System, a computerized information storage and retrieval system designed to assist Federal personnel in carrying out various law enforcement missions. We are initiating appropriate training programs to ensure that full and efficient use is made of this new system.

We are in the process of planning a new program to require that employers send to IRS copies of W–4's, the form used to claim withholding exemptions for payroll deductions, which meet certain objective criteria. These criteria are pointed at identifying "questionable" circumstances which may be indicative of false W–4 exemptions.

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On a more basic level, the Service contracted with a private sector research firm last fall to develop methods to determine the relative impacts of factors that influence compliance with tax laws. We want to know what makes people comply or not comply with the tax laws. We hope to apply this research of attitudes and motives affecting voluntary compliance to improving our overall tax administration operation.

Finally, the Service recognizes that the uses of foreign tax havens present serious and complex enforcement problems. Accordingly, we have established a formal study of tax havens. Our study will encompass the need for appropriate inter-agency coordination, a review of reporting requirements and report processing procedures, research and systematic analysis of available information sources, both domestic and foreign, a review of applicable regulations, an analysis of enforcement activities and resource commitments, and a review of the adequacy of existing legislation and the possible need for new legislation. The study will include interviews of practitioners, bankers, and others, inside and outside of government, who are familiar with tax havens and their uses.

We must continue a balanced enforcement program. We cannot ignore any vital areas of our overall compliance effort. For example, our tax shelter program is important to voluntary compliance because of widespread abuses and because we must make it clear that high income taxpayers cannot avoid paying their fair share of taxes by arrangements which lack economic substance.

The decisions in allocating limited resources are close and hard. We will not ignore the country's largest corporations and high income individuals to detect more low income nonfilers and moonlighters. We divide our resources to do some of each. If we were to go too far in reacting to the findings of this report, we could be spending a disproportionate share of our budget on low-yielding cases often involving individuals earning a marginal living at the expense of ignoring significant tax issues among high income corporations and individuals.

In the illegal sector, we will continue to investigate major tax cases involving high level racketeers and narcotics traffickers in close coordination with the Department of Justice, including the Drug Enforcement Administration.

We need to continue to devote criminal investigation resources to tax cases involving income from both legal and illegal sources. I hope that our basic research efforts underway will help us make more informed decisions on what proportion should go into each type of case with a better understanding of the factors influencing voluntary compliance than we have now.

One of the Service's basic administrative responsibilities is to manage compliance programs efficiently. We estimate that we will examine about 1.8 million tax returns of individuals this fiscal year and produce an estimated $5 of assessments for each $1 of cost. We will audit about 2 percent of individual income tax returns filed in 1979. We do have a cost beneficial program to detect nonfilers and to match information documents reporting payments of interest, dividends and certain other types of income against the tax returns of the recipients of those payments. Our criminal investigators spend about 25 percent of their time dealing with tax investigations involving illegal income; about a quarter of these programs deal with narcotics. We spread our budget dollars to have a balanced presence in all areas of noncompliance.

Our study shows clearly what all of us already know—that the cornerstone of our tax system is withholding. If we are to maintain acceptable levels of compliance, we should expand withholding to all areas where it can conveniently be applied. The alternative is significantly increased audit coverage which is both more costly to the economy as a whole and more intrusive in the affairs of taxpayers.

Congress can help compliance by legislation. For example, I urge your support for the Administration's proposal to withhold 10 percent from the compensation of certain independent contractors. A separate IRS study indicated that there is widespread noncompliance by independent contractors which is consistent with the findings of low compliance among the self-employed in our study of Estimates of Income Unreported on Individual Tax Returns. At least 45 percent of the workers in this special study reported absolutely none of the compensation in question for income tax purposes. Social Security tax compliance was even worse. About 57 percent paid none of the Social Security tax due on their compensation.

In 1976 the IRS issued a revenue ruling that would have required employers to report to employees and to the Internal Revenue Service tips of employees charged by customers on credit cards and therefore paid to the employees by the employers. However, the implementation of that ruling was suspended by Congress. Compliance in reporting tip income by employees is poor. Consequently, the Service must devote a disproportionate amount of examination resources to this problem. We need Congressional support in this area, in the independent contractor area and in other areas in the future to give us the tools to continue to administer our income tax system with a relatively low examination coverage. The alternatives are either to expand direct audits or to be content with the inequity of poor compliance by those with certain types of income.

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We are concerned by the levels of noncompliance reported in the study. They are too high. There are no quick or easy answers. I think that our voluntary compliance system is basically sound, and we will do our best to improve it further and we can use your help in doing so.

I would be pleased to describe further the findings of this report and to answer your questions.

TABLE 1.—ESTIMATES OF UNREPORTED INCOME FOR 1976, BY TYPE OF INCOME

[In billions of dollars]

Type of income	Lower estimates [1]				Higher estimates
	Underreporting based on—				
	TCMP [2]	Other sources	Nonfiling	Total	
Legal sector incomes:					
Self-employment [3]	$19.8	$3.5	$9.7	$33.0	$39.5
Wages and salaries [4]	3.5	5.0	12.8	21.3	26.8
Interest	1.4	1.8	2.2	5.4	[5] 9.4
Dividends	1.4	----	.7	2.1	4.7
Rents and royalties	2.6	----	.6	3.2	4.9
Pensions, annuities, estates, and trusts	2.1	----	1.5	3.6	5.4
Capital gains [6]	2.9	1.0	----	3.9	5.1
Other [7]	1.7	.6	----	2.3	2.9
Total	35.4	12.0	27.5	74.9	99.7

[1] Sum of components may not add to totals due to rounding.
[2] See footnote 12 of the IRS report referred to above.
[3] Self-employment income covers net earnings of farm and nonfarm proprietorships and partnerships (at times referred to as unincorporated business income) as well as net earnings of self-employed individuals working outside the context of regularly established businesses in the legal sector (see app. G of the IRS report referred to above.
[4] See footnote 17 of the IRS report referred to above).
[5] This is the sum of line (15), table E–3, and $0.3 billion of informal payments mentioned on the page preceding table G–3 in app. G of the IRS report referred to above.
[6] Excluded from the NIPA income concept which defines income as earnings arising from the current production of goods and services.
[7] Includes alimony, lottery winnings, prizes and awards and other types of income. Most of the incomes included here are excluded from NIPA since they represent transfer payments.

TABLE 2.—ESTIMATED AMOUNT OF UNREPORTED INCOME FOR 1976 AS PERCENT OF REPORTABLE AMOUNT, BY TYPE OF INCOME

[In billions of dollars]

Type of income	Amount of income[1]		
		Reported on tax returns	
	Reportable on tax returns	Total[2]	As a percent of amount reportable[1]
Legal-source incomes:			
Self-employment[3]	$93–99	$60	60–64
Wages and salaries	902–908	881	97–98
Interest	54–58	49	84–90
Dividends[4]	27–30	25	84–92
Rents and royalties	9–12	6	50–65
Pensions, annuities, estates, and trusts	31–33	27	84–88
Capital gains	22–24	19	78–83
Other[5]	9–10	7	70–75
Total	1,148–1,172	1,073	92–94

[1] Sum of components may not add to totals due to rounding. Percents of amounts reportable were computed from unrounded figures.
[2] A small amount of illegal-source incomes are included in the figures below. These inclusions will not significantly affect the percentages shown in the right-hand column.
[3] See footnote 1 to table 1.
[4] Dividends include an estimated portion of distributed net profits of qualified small business corporations.
[5] See footnote 5 to table 1.

TABLE 3.—ESTIMATES OF UNREPORTED INCOME AND ASSOCIATED TAX LOSS FOR 1976

[In billions of dollars]

	Unreported income	Tax loss
Total	$74.9–$99.7	$12.8–$17.1
Filers	47.4– 41.1	10.6– 14.3
TCMP-based	35.4– 36.5	7.8– 8.0
Other	12.0– 27.6	2.8– 6.3
Nonfilers	27.5– 35.6	2.2– 2.8

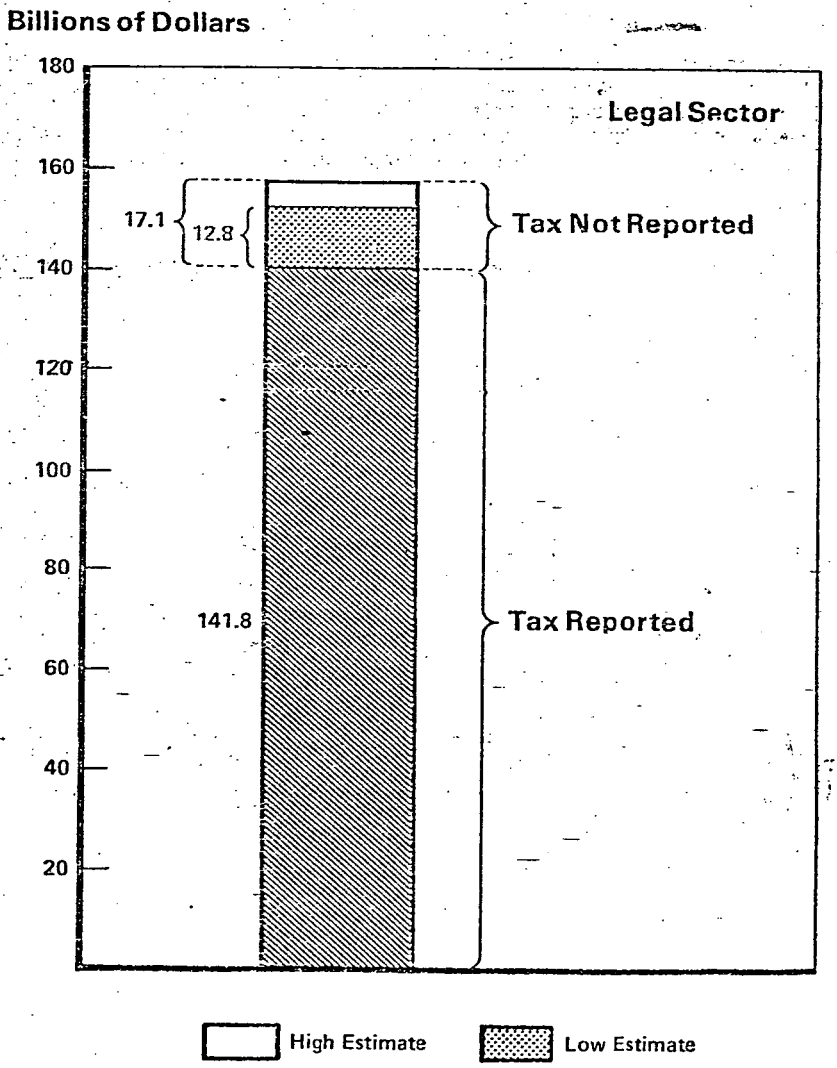
TABLE 4.—*Selected estimates of illegal-source unreported income for 1976, by type of income*

[In billions of dollars]

Type of income:	*Amount of unreported income*
Illegal drugs	16.2–23.6
Bookmaking	4.0– 5.0
Numbers	2.4– 3.0
Other gambling	1.6– 2.0
Prostitution	1.1– 1.6
Total income	25.3–35.2
Addendum: Estimated tax revenue loss	6.3– 8.8

Chart 1

Reported and Unreported Individual Income Tax – 1976



Senator BENTSEN. Let me ask you about some of these numbers.

Mr. KURTZ. Yes.

Senator BENTSEN. I read an article in Fortune on the underground economy. One of the comments there was that this task force was really set up to try to refute what Professor Gutmann has said. Now in turn it appears that with certain appropriate adjustments, there really isn't that much difference between your estimates and his. In your testimony you have disagreed with Professor Feige's estimate of the size of the underground economy, but you haven't analyzed his methods.

Mr. KURTZ. The Feige method?

Senator BENTSEN. Yes.

Mr. KURTZ. I can give you a technical paper on it which goes to the method and raises a number of questions about the method.

Senator BENTSEN. So you really have examined methods and results?

Mr. KURTZ. Oh, yes.

Senator BENTSEN. I would like to see that.

Mr. KURTZ. I will be happy to submit that for the record.

[The following information was subsequently supplied for the record:]

EVALUATION OF ARTICLE ENTITLED "HOW BIG IS THE IRREGULAR ECONOMY?" WRITTEN BY EDGAR L. FEIGE

SUMMARY STATEMENT

Dr. Edgar L. Feige, Professor of Economics at the University of Wisconsin at Madison and a Fellow at the Netherlands Institute for Advanced Study, recently estimated the size of what he refers to as the "irregular economy." The term "irregular economy" is used to refer to those economic activities that go unreported or are measured by the society's current technique for monitoring economic activity. His estimates were presented in an article "How Big is the Irregular Economy?" published in the November-December 1979 issue of Challenge. For 1976, Feige's first and second estimates of the irregular economy amounted to $226 billion and $369 billion, respectively. The corresponding estimates for 1978 were $452 billion and $704 billion, respectively.

The fundamental flaw in Feige's method is the notion that it is possible to derive estimates of unreported incomes based on changes in a single ratio—that is, total dollar transactions to Gross National Product in current dollars. Feige is in effect saying that this ratio would have remained at the same level as in 1939 had it not been for unusually rapid growth in the irregular economy. In fact, over the past forty years many factors completely unrelated to transactions in the irregular economy have had much to do with the observed movements in this ratio. Among these factors the most important ones are related to changes in the volume of financial transactions. These in turn are associated with large cyclical movements in business conditions and with innovations in carrying out the Nation's transactions by check. Illustrations of the latter would be improved methods of cash management—adopted to take advantage of rising inteerst rates—and the introduction of significant substitutes for money in the form of repurchase agreements (REPO's), highly liquid money market funds, negotiable orders of withdrawals (NOW accounts), and automatic transfers from savings (ATS accounts). Even if there had been no innovations in the financial world and no large cyclical swings in the economy, it stands to reason that in as dynamic an economy as that of the United States, an estimation method resting on the assumed constancy of a broad-based ratio over a forty-year period should be viewed with some skepticism.

DETAILED STATEMENT

Professor Feige's method of estimating the size of the irregular economy rests entirely on the changing ratios of total value of transactions to nominal

GNP for the years 1939, 1976, and 1978. Total transactions is defined as the volume of checking transactions (demand deposits times the average turnover of these deposits) plus the volume of currency transactions (currency in circulation times the average turnover of currency). In calculating these ratios, Feige relates the estimated total value of transactions (PT) to observed income (py), where "P" stands for the general price index, "T" represents a deflated or real volume of transactions, "p" stands for the price index of newly created goods and services, or the GNP deflator, and "y" is GNP.

Feige finds that PT/py has increased from 10.30 in 1939 to 11.66 in 1976, and then to 12.95 in 1978. He attributes this increase to an expansion of the irregular economy because, according to his analysis, the movements in (P/p) and the components of (T/y) other than the one associated with the irregular economy should cause a decrease rather than an increase in the ratio PT/py of 10.30 in 1939.

There are, however, errors in Feige's analysis. For example, he says that (P/p) appears to have fallen. The fact is that there are no reliable measures for P, the general price index. Feige's surrogates for it, namely, the Consumer Price Index (CPI) and the Wholesale Price Index (WPI), are very poor substitutes. Moreover, even though Feige says (WPI/p) has declined, in fact it has hardly moved at all, a decline from 1.18 in 1939 to 1.17 in 1976 being insignificant. No data are available for WPI for 1978 since it was discontinued due to errors of double counting.

Turning to a principal component of T/y, transaction in intermediate goods, Feige says that "examination of a consistent set of input-output tables by two-digit industry code . . . shows that between 1948 and 1973 (sic) the volume of intermediate transactions as a fraction of GNP fell slightly (from .84 to .80)." Actually, he means between 1947 and 1972. According to experts who prepare these input-output tables at BEA, however, the tables are not consistent. In the 1947 table there were 80 industries; in 1972, there were about 496 industries, classified on a different system. Furthermore, a significant change in methodology introduced for the 1972 table—namely, treating transfers of secondary products in the same way as real transactions—would tend to lower the ratio of intermediate transaction as a fraction of GNP by at least five percent (which happens to equal the decline from 0.84 to 0.80 mentioned by Feige).

There are other logical problems with Feige's analysis. Richard D. Porter, Chief, Econometric and Computer Applications Section, of the Federal Reserve Board applied Feige's method to estimate the size of the irregular economy for 39 years—in addition to 1939, the base year—instead of for two years, i.e., 1976 and 1978, as Feige had done. He found that for the great majority of the years the estimated size of the irregular economy, far from tracing a reasonable pattern, turned out to yield negative numbers.

Porter's analysis also shows that for the years when the irregular economy is estimated to have a positive value the increase in the size of this economy is due to "demand deposit phenomena exclusively." In other words, the increase in the value of total transactions which Feige attributes to a rapidly growing irregular economy was explained—using the same method Feige had used—in terms of transactions carried out with demand deposits, not with currency. In view of this, Porter asks, "What reasonable underground economy could explain this use of demand deposits? We doubt that there is any, and would conjecture that it most likely reflects the normal cyclical behavior of debits to GNP measures contaminated by increasingly larger amounts of financial transactions."

To understand what Porter means it should be recalled that Feige's estimates were derived with a method based on the ratio of total dollar transactions (PT) to nominal GNP (py). He used a benchmark period of 1939 and hypothesized that any movements away from the ratio of PT/py were due to movements in the irregular economy. PT contains a large volume of financial transactions which Feige tries to subtract from his measures of PT. However, according to Porter's analysis, he fails to do so. That is why Porter says that Feige's debits measures—which refer to transactions carried out by check—are "contaminated" by financial transactions.

Feige's article in Challenge was almost word for word the same as an unpublished paper he had circulated earlier. Porter's analysis was in response to this paper, not to the published article. In the meantime Feige and Porter had met and clarified the ambiguities in the unpublished paper and Porter's

misinterpretations of Feige's method which were in part due to these ambiguities. In the light of the clarifications made, Porter will revise his calculations. The recalculations, however, are not expected to change the negative figures obtained when Feige's method was applied to years prior to 1970. The revised figures will appear in an updated version of Porter's paper.

Barry Molefsky, an expert in econometrics, who is the author of a paper entitled "The Underground Economy: An Overview," released by the Library of Congress, Congressional Research Service, also questions the validity of Feige's calculations. The chief criticism Molefsky offers relates to the fact that "Feige's methodology requires that a significant proportion of check transactions be involved in underground activity." He concludes, "While it is possible that some portion of underground activity is conducted using checks, it is questionable whether such a large proportion of demand deposit transactions are related to the underground economy."

Even Feige inserted a technical caveat in his paper that "The foregoing calculations are obviously in need of considerable refinement and I would not be shocked to discover that more elaborate econometric estimates of the irregular economy based on these methods could vary within a range of several hundred billion dollars." In view of this statement, plus the critical comments outlined above with regard to this estimating methodology there is little reason to place much confidence in his estimates or his conclusions.

Senator BENTSEN. Commissioner, on this chart there are differences between your estimates and Mr. Gutmann's estimates. But if adjustments were made for the differences between GNP and national income, there really would not be much difference.

Mr. KURTZ. I think that is a fair conclusion.

Senator BENTSEN. When we start comparing apples to apples they are pretty close?

Mr. KURTZ. They are really of the same order of magnitude, that is correct. In doing this kind of an estimate, I think we all recognize that there is an area of variability, or potential error that can be significant. So when figures come within 25 percent of each other, I think it's fair to say they are of the same order of magnitude.

Senator BENTSEN. When we look at this IRS estimate of $135 billion for 1976, what are we talking about, something on the order of seven percent of GNP?

Mr. KURTZ. Well, in tax revenues, well, it represents——

Senator BENTSEN. Eight percent of GNP, I am told. But this would be a higher percentage of national income.

Mr. KURTZ. It represents reporting in the legal sector, 92 to 94 percent of income in the legal sector. The illegal sector, if you add that in, of course, it will lower the total. We hesitated in our estimates to combine the two sets of numbers because we recognize we are not measuring the entire illegal sector. There are other omissions in ours. That is, we are only measuring certain types of illegal income.

Senator BENTSEN. But you are talking only about activities covered by your study— 6 percent?

Mr. KURTZ. On the legal it's between 6 and 8 percent, yes.

Senator BENTSEN. If you throw in activities excluded from your study, obviously it's more.

Mr. KURTZ. Exactly right. Yes, sir.

Senator BENTSEN. It must be frustrating to try to get a handle on all of the illegal activities. Obviously you are trying to do something to get better estimates.

Mr. KURTZ. Yes.

Senator BENTSEN. What are you doing?

Mr. KURTZ. We have a group within the Service of economists and statisticians who are reviewing and constantly looking at additional data sources and are involved in plans for future studies in this area. In connection with this study—let me say first, this study is based on existing data sources. That is, we did not go out and do any original field work. We tried to pull together everything that was known, that had been developed in other agencies and other places, and pull it all together in one place. So it's the best estimates we were able to arrive at based on the information then existing. As to what information would be developed in other areas, that is a problem that is being looked into.

Senator BENTSEN. With regard to the law requiring reporting of amounts of currency entering or leaving the country in excess of $5,000, is that enforceable? I understand we have great amounts of cash that leave this country—the Drug Enforcement people tell me that—to buy drugs and bring them back into the country. Is that an enforceable law?

Mr. KURTZ. No; it is not completely enforceable, just as I am sure the Drug Enforcement Agency would tell you that they cannot stop the importation of drugs completely.

Senator BENTSEN. At what point has the person violated the law? As they leave the boundary of the United States, can you really stop them at the airport if they are carrying $10,000 in cash?

Mr. KURTZ. And fail to file the appropriate reports.

Senator BENTSEN. Can you do a body search there?

Mr. KURTZ. We do not do it. Customs would do it. We do not have people at points of debarcation. Customs Service does. And Customs is charged with the responsibility of enforcing those currency transaction reports as well as enforcing other laws governing duty and importation of other products. There are also currency transaction reports required to be filed by banks and other financial institutions for unusual currency transactions.

Senator BENTSEN. Is nonreporting of income highest at the lower levels of income? Do you see a serious bilking of payments from State and Federal agencies.

Mr. KURTZ. Because of the method by which these overall estimates were done, we cannot stratify them by income class. On the nonfilers, however, our indications are that the nonfiling population is heavily concentrated in low-income individuals.

Senator BENTSEN. What do you do on your bounty program, where a percentage of the tax that is recovered from tax violators is paid to individuals who provide the information leading to the IRS investigation? Would expansion and more publicity for that program be helpful in reducing some of this tax evasion on the underground economy?

Mr. KURTZ. I would have serious hesitancy about undertaking a widely publicized campaign for informants. The Service has for years made payments to informants in certain circumstances. They are not huge in amount, and it's reserved for particular kinds of cases. I think many people would find it offensive to advertise a so-called bounty program as you describe.

Senator BENTSEN. I think I would, too. Now, I understand that the General Accounting Office has found that the Treasury Department

cut your proposed budgets for tax enforcement by 8 percent in 1977, and also by 8 percent in 1978. Then the Office of Management and Budget cut it some more. Do you believe it would be preferable if the IRS were somewhat autonomous in submitting its request to OMB?

Mr. KURTZ. That gets into a very delicate area. Well, let me say, as the head of an agency, I suppose I feel as the head of any agency feels, that we ought to have more money. I suppose the head of any agency around Washington thinks that he could do his job better with more resources.

Senator BENTSEN. As I understand it, you have 450,000 uncompleted nonfiling investigations.

Mr. KURTZ. Yes.

Senator BENTSEN. Is one of the reasons for that because you just don't have the funds?

Mr. KURTZ. It's a big increase because we have in recent years become much more effective in our document matching program which produces most of these leads. That is, people——

Senator BENTSEN. Is that the reason, or are there more people?

Mr. KURTZ. We frankly don't know. We frankly don't know whether there are more people not filing, or whether we are identifying them better. Because the program has been accelerating and is so much more effective now, we have no basis of comparison.

Senator BENTSEN. What about the situation where you call for a home repair, or for modifications to a house. Two prices are quoted—one in cash, and one by check. Do you have any kind of action you can take against the homeowner who participates in that kind of a deal?

Mr. KURTZ. Against the homeowner?

Senator BENTSEN. Yes. I know you can go against the recipient.

Mr. KURTZ. Yes.

Senator BENTSEN. What about the payer?

Mr. KURTZ. No, I would not think so.

Senator BENTSEN. There is no action even though he joins in this thing.

Mr. KURTZ. No.

Senator BENTSEN. I suppose the problem would be proving that he knew that the recipient didn't declare.

Mr. KURTZ. Yes; ultimately there can be a crime in conspiring to commit a tax fraud.

Senator BENTSEN. But he would have to know the recipient wasn't declaring it. That is part of the problem of following through.

Mr. KURTZ. Yes.

Senator BENTSEN. Let me ask you once again. With these numbers that I am looking at here, it certainly appears that we have a very alarming trend in unreported income.

Mr. KURTZ. The problem is a substantial one. Whether it's a trend or not we really don't know.

Senator BENTSEN. What do you think these estimates show?

Mr. KURTZ. Well, we——

Senator BENTSEN. You have made an estimate for 1976. Have you made one for 1978?

Mr. KURTZ. We have not. This is the first time we have ever done an overall estimate.

Senator BENTSEN. You should do more to see what the trend is.

Mr. KURTZ. We would have liked to have been able to do trend information. There simply were not data available at the time we did this study for later periods. But we will certainly continue to look at this problem.

Senator BENTSEN. I will have to ask Professor Gutmann. Apparently he found some data he felt was credible.

Mr. KURTZ. Well, his estimates are done on quite a different basis than ours.

Senator BENTSEN. But you came up with some estimates very close to his.

Mr. KURTZ. For the year 1976, that's correct.

Senator BENTSEN. That's right. But if he can find something that comes so close to yours for 1976, it might add some credibility to his estimates for other years.

Mr. KURTZ. The benchmark, the basis, or one of the major components of our estimates is the taxpayer compliance measurement program. We have conducted that since 1964. That does show some decline in compliance. But very modest. Very modest. That would mean that the changes in compliance that Professor Gutmann is describing would be in areas largely undetected by the TCMP program. That would be in illegal income essentially and nonfilers. For that we just don't have the information.

Senator BENTSEN. Commissioner, if you have one lonely professor out there who can make this kind of a study and come up with almost the same estimate as IRS for 1976, then you should take a look at his methods.

Mr. KURTZ. We have looked very carefully at his methods.

Senator BENTSEN. And you should definitely try to measure the trend, because this is a very serious subject. If the trend line is anything like Professor Gutmann says, then it means that we are going to have to do some major things.

Mr. KURTZ. It's obviously very disturbing.

Senator BENTSEN. And we should try to put a stop to that trend and reverse it.

Mr. KURTZ. Let me say, on Professor Gutmann's estimate, while we come with the same order of magnitude of figures for 1976, that does not mean that we are satisfied that the method accurately estimates what we are estimating. We would not be willing to rely on that method for our purposes.

Senator BENTSEN. Well, I can't believe that you can't come up with some credible information on past years that wouldn't give you a trend line.

Mr. KURTZ. For years prior to 1976?

Senator BENTSEN. Sure. I was looking forward to hearing Professor Gutmann anyway. But, if you think you can't, I am particularly looking forward to hearing from him.

Mr. KURTZ. Of course, what we would hope to do is to do this kind of an estimate for a year later than 1976.

Senator BENTSEN. Well, you obviously have to.

Mr. KURTZ. And see where it's going there.

Senator BENTSEN. All right, Commissioner. We appreciate your testimony. But you obviously have some work to do on this problem.

Mr. KURTZ. Thank you.

Senator BENTSEN. Our next witnesses, presenting their information as a panel, will be Professor Peter Gutmann of the City University of New York, Richard Fogel, Associate Director, General Government Division, General Accounting Office, and James Henry, economist, McKinsey & Co., Inc.

Professor Gutmann, if you will proceed.

STATEMENT OF PETER GUTMANN, PROFESSOR OF ECONOMICS AND FINANCE, BARUCH COLLEGE, CITY UNIVERSITY OF NEW YORK, NEW YORK, N.Y.

Mr. GUTMANN. Mr. Chairman, ladies and gentlemen, first I would like to say that I am from the Baruch College of the City University of New York.

Senator BENTSEN. Well, I appreciate the better definition.

Mr. GUTMANN. Some 2 years ago in late 1977——

Senator BENTSEN. I am sure it's a disappointment for the City University but I am sure Baruch College is delighted.

Mr. GUTMANN [continuing]. I published an estimate of the size of the U.S. subterranean economy in the Financial Analysts Journal. This estimate, about $176 billion GNP in 1976, or a little more than 10 percent of the legal gross national product, was the first overall size estimate made of the subterranean economy—the sum total of those economic activities which are carried out without the required intercession of the tax collector.

The subterranean economy includes income derived from skimming of cash, goods, or services from a business, working for payment in unreported cash in a business, self-employment with unreported cash receipts, skimming of expense accounts, operation of a business entirely in unreported cash, theft of money, goods, or services from a business, barter, et cetera.

A wave of public interest ensued. Over a period of time, there were numerous stories and a number of editorials in many U.S. newspapers and some abroad including the New York Times, the Wall Street Journal, the Washington Star, the Chicago Tribune, and many more. Business Week, Fortune, Time, U.S. News and World Affairs, Newsweek, and others—some as recently as last month—carried articles. Several TV networks, radio networks, and radio stations, including two foreign ones, interviewed me.

Two congressional committees—the Subcommittee on Oversight of the Ways and Means Committee of the House of Representatives, and the Subcommittee on Commerce, Consumer and Monetary Affairs of the Government Operations Committee of the House of Representatives—were moved to conduct hearings recently on the subterranean economy.

Obviously—except amongst economists—there has been tremendous interest. And well there might be. The subterranean economy is one of the profound phenomena of our times. With the growth of taxation and regulations, more and more people have simply been walking away from the system, dealing in cash, not paying taxes on income.

I first became interested in the subterranean economy when I noticed the huge amount of currency in circulation per capita outside the

banks, far more than could reasonably be attributed to ordinary and customary uses. This mountain of cash is currently around $480 for every man, woman, and child, growing in the past year at an annual rate of around 9 percent per capita. Far from entering the cashless society, which has been so widely predicted, we are using ever more and more cash.

I estimated the size of the subterranean economy for 1976 by estimating how much of this mountain of currency could reasonably be attributed to ordinary and customary business purposes, how much currency appeared to be used for subterranean purposes, and how much subterranean output was lubricated by this subterranean currency.

I felt then, and I feel now, that my estimate was very conservative. I thought that the true size of the subterranean economy was greater than the amount I had estimated. This was due to the fact that I had made some very conservative assumptions in the process of deriving my estimates. For example, I did not include that part of subterranean output which was produced using means of payment other than currency. Hence, both barter and those transactions carried out with use of checks made out to cash or with other checks, were not specifically included in my size estimate.

But, while I thought that my estimate was definitely low, those few who cared to comment last year or in the first half of this year—including some Government officials—invariably seemed to think that my estimate was too high, perhaps even outrageously high. Some indeed proclaimed that what I had just done, namely estimate the size of the subterranean economy, was in fact impossible to do. In short, I suffered the fate of an innovator.

The Internal Revenue Service, challenged—according to a story in Fortune magazine—by my estimates, and concerned about the degree of press coverage, mounted a study team in the summer of last year to make its own determination of the size of the subterranean economy. After more than a year of study, the IRS issued an extensive report this September. This report is a very substantial contribution.

The IRS report has an upper and a lower estimate. Briefly, the upper IRS estimate for the year 1976 is roughly the same as my own estimate for that same year, once the two estimates are put in the same conceptual terms. Hence, the results of the IRS study essentially confirm the results of my own work. Moreover, the IRS estimate has already been criticized as being too low. Indeed, the upper IRS estimate—just like my own estimate—is actually conservative; it is an underestimate of the true size of the subterranean economy.

The IRS upper estimate for the subterranean economy for 1976 is $135 billion income unreported on individual income tax returns—a figure quadruple the $35 billion of underreporting identified by the IRS taxpayer compliance measurement program (TCMP). Subtracting out capital gains and transfer items from the IRS figure puts the estimate at about $127 billion, essentially in national income conceptual terms.

My own original estimate of $176 billion for 1976 was in gross national product terms, amounting to about $141 billion in national income terms. In other words, the IRS estimate for 1976 is about nine-

tenths the size of my own estimate. That is about as close as estimates are likely to come in this field.

However, the IRS estimate has been criticized as too small by the General Accounting Office and by Professor Eisner of Northwestern University who was asked to analyze their estimate by the Subcommittee on Oversight of the Committee on Ways and Means of the House of Representatives. As already noted, I believe my own estimate also to be on the low side.

The IRS report leaves out certain categories altogether, some of substantial size. Skimming of corporate expense accounts is omitted. Theft from business is omitted. This type of theft should be included since businesses write off theft as an expense while the thieves do not include it in their income; hence, national output is understated by the amounts stolen.

Barter is also omitted. So are certain illegal activities such as bootlegging of pornography, records, films, or cigarettes; loan sharking; smuggling of goods other than drugs; kickbacks and bribery; protection rackets, et cetera.

The General Accounting Office apparently thinks that more than $50 billion additional should be added to the IRS estimate of the subterranean economy for 1976. Certainly, some of the excluded categories are substantial. For example, estimated business losses due to property offenses against business, not including construction and agriculture, were about $25 billion for 1976. Professor Eisner thinks that, compared to the estimate of the IRS task force, "the true figures may be considerably higher and rising." For example, he feels that the unreported income of aliens is substantially higher than estimated by the IRS study team.

What then is the true size of the subterranean economy compared with the actually measured legal economy? Once the necessary adjustments are made in the IRS estimates or in my own estimates, the true size of the U.S. subterranean economy is approximately 13 to 14 percent of the U.S. legal economy.

I believe that afew years from now, after a good deal more work has been done, the size of the subterranean economy will be found much closer to 15 percent than 10 percent of the U.S. legal economy. Intelligent debate will not center on how much less than 10 percent, but on how much greater than 10 percent the size of the subterranean economy is, relative to the legal and measured economy.

I now turn briefly to an estimate of the subterranean economy by Professor Edgar Feige of the University of Wisconsin which has just been published. His estimate for 1976, at $369 billion, or 22 percent of the legal GNP. is more than twice as high as my own. His estimate for 1978, at $704 billion, or 33 percent of the legal GNP, is more than three times my own. Feige claims that the subterranean economy grew more than 90 percent in dollar total in 2 years. These estimates, particularly that for 1978, as well as the fantastic growth factor—all of which I discuss in the current issue of Challenge magazine—are far, far too high.

One intriguing question, which is only partially resolved, is the size of the classical illegal activities—namely those activities which are illegal even in the absence of tax evasion—relative to the total size of the

subterranean economy. These activities include illegal drugs, illegal gambling, prostitution, theft, and others.

The IRS study team places these at about one-quarter of the total. However, as noted earlier, the IRS report left out a number of categories, including several falling within the classical illegal activities, because these are difficult to estimate. Once proper adjustment is made for all the omitted activities, the classical illegal activities will probably be in the one-quarter to one-third range of the total, most likely at the upper end of this range.

For the year 1979, very conservatively stated, subterranean income is running at an annual rate of roughly $250 billion GNP, a bit larger than 10 percent of the legal GNP. This means that illegal source income, also conservatively stated, may be as much as $85 billion GNP this year out of this total.

What is the theoretical—and I do want to emphasize that it is theoretical—tax loss involved in the subterranean economy. The upper IRS estimate is $26 billion for 1976. However, as noted earlier, the IRS study team left out a number of categories and may have underestimated others. Once these omitted categories are added, the tax loss for 1976 will be more than $35 billion, corresponding to the higher 13 to 14 percent estimate of the subterranean income as a percentage of legal GNP.

For 1979, the tax loss corresponding to the higher 13 to 14 percent estimate of the subterranean income as a percentage of legal GNP would be over $50 billion.

Can most of these taxes be collected? Will most of these taxes be collected? The answer to these questions is clearly "No." Can we reasonably expect the IRS to collect most of these taxes? Again, the answer is "No."

We are a democratic society. No democratic society will countenance the draconian measures required to truly enforce all the tax laws. In fact, even authoritarian regimes cannot enforce their own tax laws very well; generally, they choose to overlook a great deal of tax evasion because the social, economic, and political costs of enhanced collection efforts are too great.

The IRS can reasonably be expected to be effective and efficient. It cannot be expected to solve the basic problems of our society. The voluntary self-assessment basis of our tax system is being eroded, a little more each year. This is a worrisome problem. No one can be sure where it will end.

Do we need auditors in the tax collection process? Yes, of course, we do. Do we need more? More auditors will certainly increase tax collection—up to a point. Moreover, the Service believes that, currently, an additional dollar spent on staff will result in more than an additional dollar collected in tax revenues. If that is the proper cost-benefit concept, then we need more auditors. But, is it the proper concept?

Some important sectors of the economy will be adversely affected by enhanced tax enforcement which comes with increased enforcement staff, most obviously small business. According to the IRS study team report, 36 to 40 percent of the legal source income from self-employment which is supposed to be reported on tax returns is, in fact, not

reported. In addition, there is, of course, the matter of overstated deductions.

A substantial enforcement effort here undoubtedly will increase the degree of political opposition to the tax enforcement system by the many millions of small businessmen. The public is already more than unhappy with a tax system so structured that government is the clearest beneficiary of the inflation which drives everybody into tax revolt, the adoption of widened propositions 13's—such as the just passed proposition 4 in California—and the general tax malaise will undoubtedly be spurred on by more rigid tax collection practices.

For these reasons, we should not forget Newton's third law: For every action, there is an equal and opposite reaction. This is valid in physics. But in life, the reaction may be much the greater of the two. At this time in our national history, caution is advisable in our tax collection practices lest we live to regret the social and economic results of the constitutional and legislative restrictions on taxes which may be imposed as a result of public displeasure with more vigorous tax collection practices.

The IRS can use its existing resources more effectively, particularly in document matching. Of course, in the allocation of the existing IRS resources, there is a natural tendency to eventually allocate resources so that the largest number of dollars are collected for each administrative dollar spent. This resource allocation obviously will lead to the concentration of tax collection efforts in those areas where it is easier to collect taxes and to the avoidance of those areas where tax collection proves more difficult. This puts a premium on that type of tax evasion which is difficult to detect.

For this reason, maximization of taxes collected must not be the sole criterion for allocation of administrative resources. A good deal of administrative effort should also be allocated to economic sectors where the directly measurable tax yield per dollar of administrative effort is relatively meager. Some real effort has to be made here if we are to slow down the erosion of the tax collection system. I now want to turn to some of the implications of the subterranean economy.

One, the unemployment rate. The Government, in calculating the official unemployment rate, assumes that the subterranean economy does not exist. Thus, we now have a strange situation; The IRS believes the subterranean economy to be somewhat under 10 percent of the legal national output, the General Accounting Office thinks it is several percentage points higher than that, while the Bureau of Labor Statistics in effect assumes that it is zero percent.

The official unemployment rate is overstated, since some of those counted as unemployed are actually working in the subterranean economy, off the books, paid in cash. The overstatement due to this factor is a little under 0.4 percentage points. Hence, the official 6 percent seasonally adjusted unemployment rate for October 1979 should be reduced to about 5.6 percent due to the subterranean factor alone—and should be reduced to an even lesser figure, once several additional factors are considered.

Senator BENTSEN. Let me interrupt just a minute here, Professor, on my time. The Government's estimates on unemployment are based on sampling interviews. They do that once a month. They don't base

that on money estimates. Why do you believe that the interviews don't pick up people in the labor force?

Mr. GUTMANN. If you look at the survey, you have to ask yourself whether people are telling the interviewer the truth. When they have a good reason for not telling the truth, they will not tell the truth. Obviously, if you are an individual who is in the sample and you are actually collecting unemployment insurance, and you are asked whether you are unemployed—let's say that actually you are working off the books being paid in cash—you clearly are going to tell the interviewer that you are unemployed. Hence, you will be considered to be among the unemployed despite the fact that you are actually working in the subterranean economy. So unfortunately, the Government has not looked at the subject of bias in the responses of individuals in this survey. And I for one would strongly suggest that the Congress take up this matter and get the Government to take a very close look and determine to what extent people are or are not telling the truth in answering these questions. We know, for example, that people don't answer the questions correctly when they talk about their income.

Senator BENTSEN. All right.

Mr. GUTMANN. I mentioned there are other factors, too. If you take all of those into account, then the 6 percent becomes 4.5 percent for October 1979.

Two, U.S. labor force. The U.S. labor force is larger than the official statistics indicate, by some 4 to 5 million workers, amounting to a little less than 4 to 5 percent of the U.S. legal labor force. This understatement in the official statistics derives from the exclusion from the labor force of the vast majority of those whose income is drawn exclusively from the subterranean economy.

Three, subterranean labor force. The subterranean labor force is composed of two groups—first, those who work exclusively in the subterranean economy, either on a full-time or part-time basis and, second, those who receive subterranean untaxed income in addition to their legal, taxed income.

The first group, those who derive all their income from the subterranean economy, numbers approximately 4 to 5 million. The second group, who derive only part of their income from the subterranean economy, numbers into the many, many millions. Allan Voss of the General Accounting Office thinks that both groups together total 15 to 20 million. Probably about a fifth of all those who now work in the United States are involved, in one way or another, with the subterranean economy.

Four, small business. The subterranean economy is very important for the health and prosperity of small business. Small business is prominent in those areas of the economy where cash receipts are a substantial portion of total receipts. Small business effectively receives a subsidy, not as a matter of law, but as a matter of practice, through the substantial amount of cash income which escapes the tax collector. As noted earlier, according to the IRS study team report, around two-fifths of the legal source income from self-employment which is supposed to be reported on tax returns is actually not reported.

Senator BENTSEN. Dishonest businessmen don't report their income.

Mr. GUTMANN. Well, they don't report all income, that's correct.

Senator BENTSEN. That's right. The fellow that is honest reports, and he is at a competitive disadvantage.

Mr. GUTMANN. Yes, he would be, right.

This effective subsidy allows less efficient small business to compete with more efficient large business.

Five, poverty. There is less poverty in the United States than appears in Government statistics, since these official statistics do not take into account the subterranean income of low-income households.

Six, economic models. Consumption ratios and savings ratios, consumption functions and savings functions—component parts of econometric models of the economy—often lead to biased results. This is so because a portion of income receipts, from which consumption and savings are made, is subterranean income, which is not included in making the calculations.

Seven, economic predictions. Economists, making predictions and delivering advice to policymakers, depend upon the statistics they peruse and analyze. Unbeknownst to economists, these statistics are often biased reflections of reality. Hence, the predictions based on them are biased, and the policy advice poor. Policies often do not have the results anticipated by policymakers who base their anticipations on the predictions of economists. As a result, confidence in economists and their work diminishes, confidence in policymakers diminishes, and confidence in Government diminishes.

Eight, standard of living. The U.S. income per capita is understated by about 10 percent very conservatively estimated, and some 13- to 14-percent more realistically estimated, due to the existence of subterranean income, which does not enter the statistics.

Nine, subterranean capital gains. Subterranean income leads both to subterranean savings and expenditure. The transfer of the savings derived from subterranean income, out of currency which is depreciating rapidly as a result of inflation, fuels the price rises of many of these asset markets—such as coins, stamps, painting, prints, antiques, et cetera—which are not monitored very closely by the Internal Revenue Service. Rising asset values, in turn, allow achievement of subterranean capital gains.

Ten, productivity. Productivity is greater than official statistics indicate, since these official Government statistics do not include subterranean income. This is particularly important in those economic sectors where subterranean income from skimming, off the books employment for cash, and theft is relatively significant. Business sectors which handle a great deal of currency, such as retailing and services, are important examples.

Eleven, productivity growth. The forces which create the subterranean economy in turn create a set of perverse incentives which affect real national productivity growth adversely. The subterranean economy draws resources into those areas which offer substantial opportunities for untaxed income, mainly economic sectors where cash receipts are significant. Many of these sectors—for example, retailing and services—are sectors which have had below average productivity growth historically—although, as previously noted, their actual productivity level is higher than official statistics indicate. Hence, insofar

as resources shift from higher productivity full taxed sectors to lower productivity, partially subterranean and untaxed sectors, national productivity growth suffers.

Twelve, growth in national output. The growth rate of U.S. national output is somewhat greater than official statistics indicate, since the official statistics do not take into account the growth rate in subterranean output which is greater than that of legal output.

Senator, I am told 10 minutes is up. I was not asked to prepare only 10 minutes. Shall I continue or stop at this point?

Senator BENTSEN. My problem is that I have a conflict. Why don't you take another 3 or 4 minutes. We will take it in its entirety for the record.

Mr. GUTMANN. I will skip a number of sections to try to wind it up right now.

Senator BENTSEN. Senator Javits will chair while I try to take care of conflicting situations.

Mr. GUTMANN. Ever more vigorous tax enforcement is scarcely any solution. It strikes at symptoms rather than causes of the subterranean economy. We need to consider more fundamental remedies. Briefly, we must consider the following.

One, how large should the size of Government be? What proportion of total national output should Government be allowed to spend, directly or indirectly?

Two, how extensive should Government regulation be? How many regulations are creating incentives to go off the books?

Three, we have to consider the expenditure side of Government. Can Government provide more valued services to taxpayers in return for taxes paid?

Four, how much income redistribution can reasonably be carried out through the Government tax and expenditure system without seriously affecting the taxes paid?

Five, can we reform the tax system? Can we levy taxes which are less unpopular than the current crop? To what extent will be a value added tax (VAT)—which tends to be more invisible—be better in reducing the incentive to earn subterranean income?

Six, can we control inflation, or at least index the tax brackets, so that Government ceases to be the chief beneficiary of inflation at the expense of the taxpayer?

Seven, the present system of tax collection effectively gives a subsidy to cash type businesses, particularly much of small business, since a substantial portion of the taxes due is not collected in cash type businesses. Would it not be better to bite the bullet, recognize reality, and give these types of businesses more specific advantages in the law, rather than doing so surreptitiously in the way the present law is administered. Once the law is in realistic conformity with actual policy, then the law can be enforced; currently, it cannot. Where effective policy differs greatly from the law, law and government will be brought into disrespect.

Eight, we have to look at the objectives of the tax system. The trouble with the present system is that it erects grave barriers to economic and social mobility, both upward and downward, as explained in my article, "Tax System: Bar to Social Mobility," Wall

Street Journal, December 15, 1976. It is too hard to get rich and too easy to stay rich. As a result, people will try to avoid the barriers to social mobility set up by the tax system by resorting to subterranean income.

It would be wise to face the issues posed by the subterranean economy. If we fail to do so, more and more of the economy will go underground.

Thank you.

Senator JAVITS [presiding]. Thank you very much.

[The prepared statement of Mr. Gutmann follows:]

PREPARED STATEMENT OF PETER GUTMANN

Some two years ago, in late 1977, I published an estimate of the size of the U.S. subterranean economy in the Financial Analysts Journal.[1] This estimate, about $176 billion GNP in 1976, or a little more than 10 percent of the legal gross national product, was the first overall size estimate made of the subterranean economy—the sum total of those economic activities which are carried out without the required intercession of the tax collector. The subterranean economy includes income derived from skimming of cash, goods or services from a business, working for payment in unreported cash in a business, self-employment with unreported cash receipts, skimming of expense accounts, operation of a business entirely in unreported cash, theft of money, goods or services from a business, barter, etc.

A wave of public interest ensued. Over a period of time, there were numerous stories and a number of editorials in many U.S. newspapers and some abroad, including the New York Times, the Wall Street Journal, the Washington Star, the Chicago Tribune and many more. Business Week, Fortune, Time, U.S. News and World Affairs, Newsweek, and others—some as recently as last month—carried articles. Several TV networks, radio networks and radio stations, including two foreign ones, interviewed me. Two Congressional Committees—the Subcommittee on Oversight of the Ways and Means Committee of the House of Representatives, and the Subcommittee on Commerce, Consumer and Monetary Affairs of the Government Operations Committee of the House of Representatives—were moved to conduct hearings recently on the subterranean economy.

Obviously—except amongst economists—there has been tremendous interest. And well there might be. The subterranean economy is one of the profound phenomena of our times. With the growth of taxation and regulations, more and more people have simply been walking away from the system, dealing in cash, not paying taxes on income.

I first became interested in the subterranean economy when I noticed the huge amount of currency in circulation per capita outside the banks, far more than could reasonably be attributed to ordinary and customary uses. This mountain of cash is currently around $480 for every man, woman and child, growing in the past year at an annual rate of around 9 percent per capita. Far from entering the cashless society, which has been so widely predicted, we are using ever more and more cash.

I estimated the size of the subterranean economy for 1976 by estimating how much of this mountain of currency could resonably be attributed to ordinary and customary business purposes, how much currency appeared to be used for subterranean purposes, and how much subterranean output was lubricated by this subterranean currency.

I felt then, and I feel now, that my estimate was very conservative. I thought that the true size of the subterranean economy was greater than the amount I had estimated. This was due to the fact that I had made some very conservative assumptions in the process of deriving my estimates. For example, I did not include that part of subterranean output which was produced using means of payment other than currency. Hence, both barter and those transactions carried out with use of checks made out to cash or with other checks, were not specifically included in my size estimate.

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[1] Peter Gutmann, "The Subterranean Economy," Financial Analysts Journal, November/December 1977.

But, while I thought that my estimate was definitely low, those few who cared to comment last year or in the first half of this year—including some government officials—invariably seemed to think that my estimate was too high, perhaps even outrageously high. Some indeed proclaimed that what I had just done, namely estimate the size of the subterranean economy, was in fact impossible to do. In short, I suffered the fate of an innovator.

The Internal Revenue Service, challenged—according to a story in Fortune Magazine—by my estimates, and concerned about the degree of press coverage, mounted a study team in the summer of last year to make its own determination of the size of the subterranean economy. After more than a year of study, the IRS issued an extensive report this September.[2] This report is a very substantial contribution.

The IRS report has an upper and a lower estimate. Briefly, the upper IRS estimate for the year 1976 is roughly the same as my own estimate for that same year, once the two estimates are put in the same conceptual terms. Hence, the results of the IRS study essentially confirm the results of my own work. Moreover, the IRS estimate has already been criticized as being too low. Indeed, the upper IRS estimate—just like my own estimate—is actually conservative; it is an underestimate of the true size of the subterranean economy.

The IRS upper estimate for the subterranean economy for 1976 is $135 billion income unreported on individual income tax returns—a figure quadruple the $35 billion of underreporting identified by the IRS taxpayer compliance measurement program (TCMP). Subtracting out capital gains and transfer items from the IRS figure, puts the estimate at about $127 billion, essentially in national income conceptual terms. My own original estimate of $176 billion for 1976 was in gross national product terms, amounting to about $141 billion in national income terms. In other words, the IRS estimate for 1976 is about nine-tenths the size of my own estimate. That is about as close as estimates are likely to come in this field.

However, the IRS estimate has been criticized as too small by the General Accounting Office and by professor Eisner of Northwestern University who was asked to analyze their estimate by the Subcommittee on Oversight of the Committee on Ways and Means of the House of Representatives. As already noted, I believe my own estimate also to be on the low side.

The IRS report leaves out certain categories altogether, some of substantial size. Skimming of corporate expense accounts is omitted. Theft from business is omitted. (This type of theft should be included since businesses write off theft as an expense while the thieves do not include it in their income; hence, national output is understated by the amounts stolen.) Barter is also omitted. So are certain illegal activities such as bootlegging of pornography, records, films or cigarettes; loan sharking; smuggling of goods other than drugs; kickbacks and bribery; protection rackets; etc.

The General Accounting Office apparently thinks that more than $50 billion additional should be added to the IRS estimate of the subterranean economy for 1976.[3] [4] Certainly, some of the excluded categories are substantial. For example, estimated business losses due to property offenses against business, not including construction and agriculture, were about $25 billion for 1976. Professor Eisner thinks that, compared to the estimate of the IRS task force, "the true figures may be considerably higher and rising".[5] For example, he feels that the unreported income of aliens is substantially higher than estimated by the IRS study team.

What then is the true size of the subterranean economy compared with the actually measured legal economy? Once the necessary adjustments are made in the IRS estimates or in my own estimates, the true size of the U.S. subterranean economy is approximately 13 to 14 percent of the U.S. legal economy.

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[2] "Estimates of Income Unreported on Individual Income Tax Returns," Internal Revenue Service, Department of the Treasury, Publication 1104 (9-79).

[3] Statement of Richard Vogel, Associate Director, General Government Division, U.S. General Accounting Office, on the Subterranean Economy, before the Subcommittee on Commerce, Consumer and Monetary Affairs of the House Committee on Government Operations, dated Sept. 6, 1979.

[4] Richard Vogel, General Accounting Office, quoted in New York Times, Sept. 25, 1979, p. D2.

[5] Robert Eisner, Prepared Statement on "Unreported Income aid the Underground Economy: Estimates and Implications," before the Oversight Subcommittee of the Committee on Ways and Means, Sept. 10, 1979.

I believe that a few years from now, after a good deal more work has been done, the size of the subterranean economy will be found much closer to 15 percent than 10 percent of the U.S. legal economy. Intelligent debate will not center on how much less than 10 percent, but on how much greater than 10 percent the size of the subterranean economy is, relative to the legal and measured economy.

I now turn briefly to an estimate of the subterranean economy by professor Edgar Feige of the University of Wisconsin which has just been published.[6] His estimate for 1976, at $369 billion, or 22 percent of the legal GNP, is more than twice as high as my own. His estimate for 1978, at $704 billion, or 33 percent of the legal GNP, is more than three times my own. Feige claims that the subterranean economy grew more than 90 percent in dollar total in 2 years. These estimates, particularly that for 1978, as well as the fantastic growth factor—all of which I discuss in the current issue of Challenge Magazine—are far too high.[7]

One intriguing question, which is only partially resolved, is the size of the classical illegal activities—namely those activities which are illegal even in the absence of tax evasion—relative to the total size of the subterranean economy. These activities include illegal drugs, illegal gambling, prostitution, theft and others.

The IRS study team places these at about one-quarter of the total. However, as noted earlier, the IRS report left out a number of categories, including several falling within the classical illegal activities, because these are difficult to estimate. Once proper adjustment is made for all the omitted activities, the classical illegal activities will probably be in the one-quarter to one-third range of the total, most likely at the upper end of this range.

For the year 1979, very conservatively stated, subterranean income is running at annual rate of roughly $250 billion GNP, a bit larger than 10 percent of the legal GNP. This means that illegal source income, also conservatively stated, may be as much as $85 billion GNP this year out of this total.

What is the theoretical—and I do want to emphasize that it is theoretical—tax loss involved in the subterranean economy. The upper IRS estimate is $26 billion for 1976. However, as noted earlier, the IRS study team left out a number of categories and may have underestimated others. Once these omitted categories are added, the tax loss for 1976 will be more than $35 billion, corresponding to the higher 13 to 14 percent estimate of the subterranean income as a percentage of legal GNP. For 1979, the tax loss corresponding to the higher 13 to 14 percent estimate of the subterranean income as a percentage of legal GNP would be over $50 billion.

Can most of these taxes be collected? Will most of these taxes be collected? The answer to these questions is clearly, "No". Can we reasonably expect the IRS to collect most of these taxes? Again, the answer is, "No".

We are a democratic society. No democratic society will countenance the draconian measures required to truly enforce all the tax laws. In fact, even authoritarian regimes cannot enforce their own tax laws very well; generally, they choose to overlook a great deal of tax evasion because the social economic and political costs of enhanced collection efforts are too great.

The IRS can reasonably be expected to be effective and efficient. It cannot be expected to solve the basic problems of our society. The voluntary self assessment basis of our tax system is being eroded, a little more each year. This is a worrisome problem. No one can be sure where it will end.

Do we need auditors in the tax collection process? Yes, of course we do. Do we need more? More auditors will certainly increase tax collections—up to a point. Moreover, the Service believes that, currently, an additional dollar spent on staff will result in more than an additional dollar collected in tax revenues. If that is the proper cost/benefit concept, then we need more auditors. But, is it the proper concept?

Some important sectors of the economy will be adversely affected by enhanced tax enofrcement which comes with increased enforcement staff, most obviously small business. According to the IRS study team report, 36 to 40 percent of the legal source income from self employment which is supposed to be reported on tax returns is, in fact, not reported. In addition, there is of course the matter of overstated deductions.

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[6] Edgar Feige, "How Big Is the Irregular Economy?" Challenge Magazine, November/December 1979.

[7] Peter Gutmann, "Statistical Illusion, Mistaken Policies," Challenge Magazine, November/December 1979.

A substantial enforcement effort here undoubtedly will increase the degree of political opposition to the tax enforcement system by the many millions of small businessmen. The public is already more than unhappy with a tax system so structured that government is the clearest beneficiary of the inflation which drives everybody into higher tax brackets without any increase in real income. The current tax revolt, the adoption of widened propositions 13's (such as the just passed proposition 4 in California), and the general tax malaise will undoubtedly be spurred on by more rigid tax collection practices.

For these reasons, we should not forget Newton's third law: for every action, there is an equal and opposite reaction. This is valid in physics. But in life, the reaction may be much the greater of the two. At this time in our national history, caution is advisable in our tax collection practices, lest we live to regret the social and economic results of the constitutional and legislative restrictions on taxes which may be imposed as a result of public displeasure with more vigorous tax collection practices.

The IRS can use its existing resources more effectively, particularly in document matching. Of course, in the allocation of the existing IRS resources, there is a natural tendency to eventually allocate resources so that the largest number of dollars are collected for each administrative dollar spent. This resource allocation obviously will lead to the concentration of tax collection efforts in those areas where it is easier to collect taxes and to the avoidance of those areas where tax collection proves more difficult. This puts a premium on that type of tax evasion which is difficult to detect.

For this reason, maximization of taxes collected must not be the sole criterion for allocation of administrative resources. A good deal of administrative effort should also be allocated to economic sectors where the directly measurable tax yield per dollar of administrative effort is relatively meager. Some real effort has to be made here if we are to slow down the erosion of the tax collection system. I now want to turn to some of the implications of the subterranean economy.

1. *Unemployment rate.*—The government, in calculating the official unemployment rate, assumes that the subterranean economy does not exist. Thus, we now have a strange situation: the IRS believes the subterranean economy to be somewhat under 10 percent of the legal national output, the General Accounting Office thinks it is several percentage points higher than that, while the Bureau of Labor Statistics in effect assumes that it is zero percent.

The official unemployment rate is overstated, since some of those counted as unemployed are actually working in the subterranean economy, off the books, paid in cash. The overstatement due to this factor is a little under 0.4 percentage points. Hence, the official 6.0 percent seasonally adjusted unemployment rate for October, 1979 should be reduced to about 5.6 percent due to the subterranean factor alone—and should be reduced to an even lesser figure, once several additional factors are considered. This latter figure, the real unemployment rate, is about 4.5 percent for October, 1979.[8]

2. *U.S. labor force.*—The U.S. labor force is larger than the official statistics indicate, by some 4 to 5 million workers, amounting to a little less than 4 to 5 percent of the U.S. legal labor force. This understatement in the official statistics derives from the exclusion from the labor force of the vast majority of those whose income is drawn exclusively from the subterranean economy.

3. *Subterranean labor force.*—The subterranean labor force is composed of two groups—first, those who work exclusively in the subterranean economy, either on a full time or part time basis and, second, those who receive subterranean untaxed income in addition to their legal, taxed income.

The first group, those who derive all their income from the subterranean economy, numbers approximately 4 to 5 million. The second group, who derive only part of their income from the subterranean economy, numbers into the many, many millions. Allan Voss of the General Accounting Office thinks that both groups together total 15 to 20 million.[9] Probably, about a fifth of all those who now work in the United States are involved, in one way or another, with the subterranean economy.

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[8] Peter Gutmann, "The Grand Unemployment Illusion," Journal of the Institute of Socioeconomic Studies, vol. IV, No. 2, 1979, and Peter Gutmann, "Are the Unemployed, Unemployed?" Financial Analysts Journal, September/October 1978.

[9] Quoted in "The Underground Economy," U.S. News and World Affairs, Oct. 22, 1979.

4. *Small business.*—The subterranean economy is very important for the health and prosperity of small business. Small business is prominent in those areas of the economy where cash receipts are a substantial portion of total receipts. Small business effectively receives a subsidy, not as a matter of law, but as a matter of practice, through the substantial amount of cash income which escapes the tax collector. As noted earlier, according to the IRS study team report, around two-fifths of the legal source income from self employment which is supposed to be reported on tax returns is actually not reported. This effective subsidy allows less efficient small business to compete with more efficient large business.

5. *Poverty.*—There is less poverty in the U.S. than appears in government statistics, since these official statistics do not take into account the subterranean income of low income households.

6. *Economic models.*—Consumption ratios and savings ratios, consumption functions and savings functions—component parts of econometric models of the economy—often lead to biased results. This is so because a portion of income receipts, from which consumption and savings are made, is subterranean income, which is not included in making the calculations.

7. *Economic predictions.*—Economists, making predictions and delivering advice to policymakers, depend upon the statistics they peruse and analyze. Unbeknowst to economists, these statistics are often biased reflections of reality. Hence, the predictions based on them are biased, and the policy advice poor. Policies often do not have the results anticipated by policymakers who base their anticipations on the predictions of economists. As a result, confidence in economists and their work diminishes, confidence in policymakers diminishes, and confidence in government diminishes.

8. *Standard of living.*—The U.S. income per capita is understated by about 10 percent very conservatively estimated, and some 13 to 14 percent more realistically estimated, due to the existence of subterranean income, which does not enter the statistics.

9. *Subterranean capital gains.*—Subterranean income leads both to subterranean savings and expenditure. The transfer of the savings derived from subterranean income, out of currency which is depreciating rapidly as a result of inflation, fuels the price rises of many of those asset markets—such as coins, stamps, paintings, prints, antiques, etc.—which are not monitored very closely by the Internal Revenue Service. Rising asset values, in turn, allow achievement of subterranean capital gains.

10. *Productivity.*—Productivity is greater than official statistics indicate, since these official government statistics do not include subterranean income. This is particularly important in those economic sectors where subterranean income from skimming, off the books employment for cash, and theft is relatively significant. Business sectors which handle a great deal of currency, such as retailing and services, are important examples.

11. *Productivity growth.*—The forces which create the subterranean economy in turn create a set of perverse incentives which affect real national productivity growth adversely. The subterranean economy draws resources into those areas which offer substantial opportunities for untaxed income, mainly economic sectors where cash receipts are significant. Many of these sectors—e.g., retailing and services—are sectors which have had below average productivity growth historically (although, as previously noted, their actual productivity level is higher than official statistics indicate). Hence, insofar as resources shift from higher productivity fully taxed sectors to lower productivity, partially subterranean and untaxed sectors, national productivity growth suffers.

12. *Growth in national output.*—The growth rate of U.S. national output is somewhat greater than official statistics indicate, since the official statistics do not take into account the growth rate in subterranean output which is greater than that of legal output.

What caused the growth of the subterranean economy? The subterranean economy is the creature of high taxes, government regulations, changing morality, decline in confidence in government, and selective obedience of the law. It has expanded hand in hand with growth in size, complexity, function and impact of government.

It is not confined to the United States. It is a worldwide phenomenon. It is called "fiddling" in England, "Schwarzarbeit" in West Germany, "travail au noir" in France, "lavoro nero" or "l'economia sommersa" in Italy. In Russia it

goes by several names including, "the second economy," "the parallel market" and the "unofficial economy". Sweden, Japan, Canada, the Eastern European countries, and other nations all have their subterranean sectors.

Subterranean income is a pervasive phenomenon. No one quite knows what to do about it. Most governments shut their eyes to its true extent and hope that it will go away. They prefer not to think about it at all if possible. If they must think about it, they prefer to think that it is small. In that way it can be dismissed as a flea on an elephant, a small cost which is a necessary, if negligible concomitant of social and economic policies which require extensive taxation and government regulation. To its credit, the Internal Revenue Service does not take this view now, since its study team in its September report has found the subterranean economy to be substantial in size, far greater than the IRS had previously admitted.

The causes of the subterranean economy are multifold. (1) High taxes create obvious incentives to get off the books income. (2) Government rules and regulations create incentives to avoid them by dealing in cash. (3) The classical illegal activities must deal in cash since they are illegal per se. (4) Inflation redistributes income from income earners to government as taxpayers in turn are pushed into higher tax brackets; squeezed taxpayers in turn try to push part of the cost of inflation onto the government by getting off the books income. (5) "The new morality", which has grown by degrees over many years, has reduced the opprobrium which formerly attached to tax evasion. (6) The unpopular Vietnam war caused opposition to taxes for the financing of the war, opposition which then persisted and spread. (7) The Federal Government fails to deliver much in way of services to the great majority of taxpayers. (8) In the past two decades, the Federal tax and expenditure system has become a large income redistribution scheme, which means that a dollar collected in taxes from one person will be paid out to another person. (9) The increase in the size of government leaves a lesser share of national output for direct consumption by income earners. (10) Government is perceived as wasteful and inefficient by the general public, making inadequate use of their hard earned tax dollars. (11) The tax system is immensely complex, requiring inordinate taxpayer time, paperwork and expense.

What can be done about the subterranean economy? There are no simple solutions. More money spent on tax enforcement will increase tax collections; at the same time it will increase the share of output consumed by costs of government.

But, ever more vigorous tax enforcement is scarcely any solution. It strikes at symptoms rather than causes of the subterranean economy. We need to consider more fundamental remedies. Briefly, we must consider the following.

1. How large should the size of government be? What proportion of total national output should government be allowed to spend, directly or indirectly?

2. How extensive should government regulation be? How many regulations are creating incentives to go off the books?

3. We have to consider the expenditure side of government. Can government provide more valued services to taxpayers in return for taxes paid?

4. How much income redistribution can reasonably be carried out through the government tax and expenditure system without seriously affecting the taxes paid?

5. Can we reform the tax system? Can we levy taxes which are less unpopular than the current crop? To what extent will a value tax (VAT)—which tends to be more invisible—be better in reducing the incentive to earn subterranean income?

6. Can we control inflation, or at least index the tax brackets, so that government cases to be the chief beneficiary of inflation at the expense of the taxpayer?

7. The present system of tax collection effectively gives a subsidy to cash type businesses, particularly much of small business, since a substantial portion of the taxes due is not collected in cash type businesses. Would it not be better to bite the bullet, recognize reality, and give these types of businesses more specific advantages in the law, rather than doing so surreptitiously in the way the present law is administered. Once the law is in realistic conformity with actual policy, then the law can be enforced; currently, it cannot. Where effective policy differs greatly from the law, law and government will be brought into disrespect.

8. We have to look at the objectives of the tax system. The trouble with the present system is that it erects grave barriers to economic and social mobility,

both upward and downward, as explained in my article. "Tax System: Bar to Social Mobility" (Wall Street Journal, Dec. 15, 1976). It is too hard to get rich and too easy to stay rich. As a result, people will try to avoid the barriers to social mobility set up by the tax system by resorting to subterranean income.

It would be wise to face the issues posed by the subterranean economy. If we fail to do so, more and more of the economy will go underground.

Senator JAVITS. Mr. Fogel, please proceed.

STATEMENT OF RICHARD L. FOGEL, ASSOCIATE DIRECTOR, GENERAL GOVERNMENT DIVISION, GENERAL ACCOUNTING OFFICE

Mr. FOGEL. Thank you, Senator Javits.

My testimony today concerns, one, the size of the underground economy as presented by the Internal Revenue Service (IRS) in its September 1979 report entitled "Estimates of Income Unreported on Individual Income Tax Returns," two, how the existence of an underground economy may distort the Government's data on the unemployment rate and other economic indicators, and, three, actions the IRS and other Government agencies can take to deal with the underground economy problem.

In its report, IRS estimates that during tax year 1976 as much as $135 billion in income went unreported and that as a result as much as $26 billion in potential tax revenues to the Government went uncollected.

Those are staggering estimates, yet they are probably understated. IRS's study focused only on individual taxpayers and certain types of illegal income. For example, including unreported income such as kickbacks received by corporations would obviously increase the amount of tax loss. IRS did not include estimates of unreported illegal-source income for many type activities because, to quote the study, "(of) the chaotic state of the statistical information in this area." No figures are available on illegal-source income obtained from such activities as arson for profit; smuggling goods other than drugs; bootlegging of cigarettes, films, tapes, records; protection rackets, embezzlements, or theft.

Had IRS been able to make estimates of the illegal income derived from such activities there is no doubt the illegal-source income figure cited would have been much higher. For example, in 1974, the U.S. Chamber of Commerce estimated that total losses from white collar crime in both the public and private sectors exceeded $40 billion annually.

Other studies of the underground economy have estimated unreported income to be larger than $135 billion. The studies' definitions and methodologies vary and are subject to debate. Moreover, their estimates of the problem vary substantially. However, their conclusions are similar—unreported income and the resulting uncollected taxes constitute a serious national problem.

There are two basic types of ways to try to measure the extent of the underground economy. One is to try to estimate the amount of each type of activity and aggregate the estimates to arrive at an overall estimate. The other is to estimate the overall size without attempting to measure individual activities by looking at discrepancies and discontinuities in published data on macroeconomic activity. In develop-

ing its estimate, IRS used the first approach and indeed, if one is interested and concerned about taxpayer compliance and allocating resources where the need is greatest, it is critical to know the sources of income, active, as opposed to passive, legal as opposed to illegal and so forth, that comprise the underground economy.

Therefore, from a policy standpoint in the tax administration area, we believe the approach taken by RS is superior to any other method that has been used to estimate the size of the underground economy. However, that does not mean that the IRS method has to be used to develop estimates that relate to the extent to which the underground economy might have economic implications for our Government's policy.

Even if we accept the findings of the IRS study as a low estimate, the results indicate that some of our economic indicators and unemployment rate statistics may be overstated. On the basis of the results of IRS's work and our own findings in our July 11, 1979, report to the Congress on people who do not file income tax returns but should, it is probably safe to conclude that some people involved in the household survey from which unemployment rates are calculated are not telling the truth. Some of these people may have income that they are not reporting.

For example, detailed results from our report on nonfilers show that many people in socioeconomic categories that we might expect to exhibit high unemployment rates were required to file tax returns in 1972 and did not.

Fifty-two percent of the people required to file tax returns in 1972 but who did not had incomes below $5,000. Only 19 percent of the filers had income in this range. Laborers and service workers made up about 33 percent of the nonfiler population whereas they represented only about 18 percent of the filer population. Overall, 13 percent of the laborers and service workers required to file tax returns were nonfilers.

Some categories of laborers and service workers had particularly high nonfiling rates. For example, about 33 percent of all farm laborers and 64 percent of private household workers were nonfilers.

The implications of these findings are that certain policies designed to stimulate the economy to increase employment may be exacerbating the inflationary situation because the data triggering these policies overestimates the true unemployment rate. The problem is that we are not sure by how much the unemployment rate is off. Indeed, I noted that Professor Gutmann did have some specific estimates. But our office has not taken a detailed look at those estimates and we are not at this time willing to say whether we agree or disagree with his estimates.

If sales, output, and income statistics are also understating the true magnitude of economic activity, then our economic policymakers need to know the magnitude of the problem and adjust their decisionmaking accordingly. Again, assuming that the existence of a fairly large underground economy means that our economy is more healthy than we may realize, it is possible that the inflationary consequences of a given macroeconomic policy will be more severe than we planned.

It is obvious that one of the key steps that the Government must take to get a better picture of how the underground economy affects

our policies is to get more extensive data on the size and scope of the problem. But there are certain actions that the Government can begin to take now to better come to grips with the problem. Many of those actions relate to the activities of the Internal Revenue Service.

It is essential that the Government improve its tax administration activities so more of the income earned in the underground economy is subject to taxation. We have to reduce the economic incentive that individuals perceive they have to become part of the underground economy. To do this IRS needs to determine the extent to which it is presently detecting unreported income from the various pockets of noncompliance. It then needs to consider reallocating its resources based on that determination and assess the need for additional resources to close the tax gap for each source of unreported income.

IRS also needs a more effective national criminal enforcement strategy to deal with the extensive amount of illegal income on which no taxes are paid.

Withholding of income at source and document matching must be extended. These are the primary tools available to insure that most taxpayers properly report the amount of income on which they are obliged to pay taxes. In this regard the GAO supports the recommendations of the Treasury Department that there be a 10-percent withholding of income from independent contracts. We think this type of withholding is very important if we are going to reduce the amount of noncompliance in that sector of our economy.

Senator JAVITS. Would that include independent contractors, doctors, lawyers, or what?

Mr. FOGEL. It would primarily include such people as skilled craftsmen who, let's say, work for a housing contractor.

Senator JAVITS. What about professionals? That is the big one.

Mr. FOGEL. No, there would not be withholding at source, for example, from lawyers or doctors. They are considered self-employed, not independent contractors.

Senator JAVITS. OK.

Mr. FOGEL. More research needs to be done to determine exactly who the underreporters and nonfilers are, what types of income they are receiving, and why people either do not pay or underreport their income. In this regard, IRS currently has a study underway to determine why people pay or do not pay all of their taxes. This information is critical to determine what type of tax administration strategies should be taken to enhance the integrity of our voluntary tax assessment system.

It is also important that IRS initiate action to periodically try to estimate the size and analyze the characteristics of the nonfiler and underreporter population. Such estimates should include gathering the operational information necessary to determine the best methods for detecting and pursuing these individuals and for increasing compliance with the filing requirements.

While IRS can thus take certain specific actions to expand the tax base to include those individuals who are now part of the underground economy, there are some other policy changes that the Government should consider. While I have not seen any hard data to support this

contention, I believe that some people are reluctant to report all or part of their income because they perceive that our current tax laws are unfair and are designed to benefit the wealthy taxpayers more so than the average taxpayer. Reform of the tax laws and simplification of the code should help reduce such taxpayers' antipathy.

It is fundamental to all of these concerns that we have good information. The Government and various members of the academic communty have made a start at developing such information. It is critical that these efforts be continued and refined so that we can have a more reliable picture of the exact scope of the problem we are dealing with.

This concludes my statement, Senator Javits.

Senator JAVITS. Thank you, Mr. Fogel.

Mr. Henry, would you be good enough to confine your statement to 10 minutes?

Mr. Henry. Thank you, Senator Javits. I have a few charts that I will share with you.

Senator JAVITS. All right.

STATEMENT OF JAMES S. HENRY, ECONOMIST, McKINSEY & CO., INC., NEW YORK, N.Y.

Mr. HENRY. Senator, I am pleased to appear before this committee today to testify on the size and growth of the illicit sector in the U.S. economy, a subject which may have serious implications for the measurement of such economic variables as unemployment, productivity, tax evasion, and income distribution.

My own approach to this subject has been that of the monetary economist, trying to explain the demand for currency over time. About 3 years ago I published an article which argued that there was an unusual amount of cash in circulation, especially in large bills, that cash demand had been growing at a high rate relative to demand deposits since the 1930's, and that regression analysis could attribute at least part of this demand—perhaps $14 billion to $18 billion of the $94 billion cash stock outstanding at the end of 1976—to increases in tax burdens.

I also suggested that many other forms of illegal activity depended upon the existence of an exchange medium which is widely available, easy to hide and transport, highly liquid, and hard to trace; these activities include drug traffic, illegal gambling, bribery, and the avoidance of foreign exchange controls. While the size of these activities is radically uncertain, I had no doubt that they also played a role in accounting for the extraordinary amount of big bills in circulation, which reached more than $100 per capita in 1976.

Finally, as a half-serious policy recommendation for administering a stock treatment to this sector, I proposed a currency recall, similar to those which were conducted by the Central Bank of Colombia and by our own military in Vietnam. I am informed that this scheme unfortunately attracted only very fleeting attention at the Federal Reserve, so the criminal community must have breathed an enormous collective sigh of relief.

Great attention has subsequently been paid to the "subterranean economy," which makes it clear that my initial findings were not com-

plete fantasy. Professors Gutmann and Feige have both used very different cash models to yield estimates of the "underground economy," which exceed my own by at least 30 percent in GNP terms, and, in the case of Professor Feige, by almost 300 percent.

I may point out, Senator, that in terms of the numbers on the board here, the real growth rate shown in Professor Gutmann's estimates from 1976 to 1978 is actually lower than the real growth rate in this illegal economy from 1968 to 1976 because the earlier rate of inflation was obviously lower.

That three professional economists can come to such radically different interpretations of the same basic data is not entirely without precedent in the history of the profession, but it has prompted me to take a closer look at the problem.

Let me summarize the main conclusions obtained from this review, which will be expanded in my prepared statement for the record. As this chart indicates, there appears to be an unusually high demand for cash in the economy, which has recently been dominated by a rising demand for $100 bills.

Treasury estimates of cash outstanding have reached nearly $1,500 per household in the United States in 1979, including—without taking account of the amount of cash held overseas or in banks—an average of almost five $100 bills per household.

The most dramatic growth has been in the larger denominations, especially $50's and $100's.

These Treasury estimates of cash outstanding probably contain errors, since there is no accurate survey of the volume of cash "out there" that is actually still in existence—some of it gets destroyed. Nor is there much direct evidence on the volume of U.S. currency outstanding that is held offshore.

Nevertheless, relatively accurate data are available on the net currency payouts from Federal Reserve banks in the 1970's, which confirms the dramatic growth in cash demand and the relative increase in large bills. As you can see from the chart here, $100 bills accounted for about 43 percent of the increase in cash outstanding in the 1970's.

A simple measure of income velocity—retail sales/currency outstanding—gives an idea of the extent to which there has been any shift in the relationship of cash demand to ordinary transactions' requirements. This measure indicates that the velocity of $100 bills fell sharply in the last decade, which is in contrast to the velocity of all currency outstanding and higher in velocity relative to the other bills in circulation.

Among the explanations available for cash demand, I favor a combination of those that are best able to account for the volume and relative increases of "big bills" in circulation. These include tax evasion, especially by self-employed in higher income tax brackets since they have higher marginal incentive to cheat, since they have presumably greater opportunities to evade taxes, they are often involved in cash business, and since they are more likely to have incomes large enough to require storage of the tax-evaded income in large bills. The low-income tax evader probably just spends, what he gets rather quickly.

There is some evidence that the self-employed's chances of being convicted—given indictment for tax evasion and being sent to jail,

given conviction—is lower than for accused evaders from lower income groups as the next table makes clear, comparing the prosecution of doctors and semiskilled laborers by the IRS in the first half of 1978. As you can see the doctors, of 29 doctors indicted, 4 were sentenced to prison. Of 75 semiskilled laborers indicted, 29 were sentenced.

This theory is also consistent with my own reestimations of the regressions reported in my initial 1975 paper, which show a reasonably strong relationship between tax burdens and the demand for currency, and estimate that excess cash stock held for cash evasion purposes was between $14 billion and $18 billion in 1976.

The second factor I would like to emphasize is profit-motivated crime, especially drug traffic and gambling. Much of the evidence here is purely anecdotal. The IRS estimates of this activity seem to me as good as any introduced. I only have one piece of hard factual data to add to this argument, evidence on regional currency flows in the Federal Reserve System.

As we mentioned earlier there has been a large net payout of currency by the banking system in the last decade. This has been true in almost all of the 37 local Federal Reserve offices. The most glaring exceptions to this rule are indicated in exhibit 4a to my prepared statement. Miami and Jacksonville have consistently shown a large increasing surplus of currency, especially large bills. Last month, alone, for example, October 1979, the Federal Reserve in Miami received a surplus of $100 million in $100 bills.

Furthermore, I am told that many of the $100 bills which show up in Miami were issued in New York. The meaning of this data is not completely self-evident since there is a great deal of tourist traffic between New York and Miami, but there is also a great deal of drug traffic. So there is clearly more research to be done on this question.

On the question of organized crime, we also know that the Central Bank of Colombia in the early 70's requested that a special branch be opened by the Federal Reserve in Bogota just to handle the large receipts of U.S. bills that were showing up there.

The third factor I would emphasize in trying to explain this growth in cash demand is the obvious factor of changes in absolute price levels. Whenever I discuss this with relatively affluent or upper-income people, they always tell me, well, the cost of a dinner has actually grown quite fast and it's not that unusual to see $100 bills being spent in ordinary transactions.

So it is true to some extent, inflation has shifted distribution of transactions so that with fixed denominations, many more transactions are only efficient if conducted in large bills.

On the other hand, this factor fails to explain the changes which have occurred in regional currency flows in the Federal Reserve System.

The explanations mentioned above have all received attention in my earlier work on this problem, as well as in the work of many others. To this list I should now like to add one more factor which may help to account for the extraordinary growth in the net payouts of $100 bills which has been observed recently in some Federal Reserve branches; large block purchases of new $100 bills for transfer abroad, to destinations which are often uncertain, but apparently

in the Middle East. The exact dimensions and purpose of this activity are unclear. Federal Reserve branch banks maintain inventories of "new" and "fit"—that is, used—$100 bills on hand, and try to estimate bank demand for them ahead of time so as to avoid outages.

Unusual block purchases of currency are only noticed if they threaten to exhaust the existing inventories. Apparently this came close to happening to the New York Fed in July 1977 when it began receiving orders of about $20 million per day for new $100 bills from its member banks. The demands continued for a period of 2 to 3 weeks, and then apparently shifted; as one official remarked to me, "They exhausted the New York Fed, went on to Boston and then Chicago."

The total demand involved is still unclear, but apparently at least $150 million was purchased during this one period.

Senator JAVITS. Mr. Henry, can you bring your statement to a close.

Mr. HENRY. Yes. Similar demands have occurred several times in the past 2 years. The most recent such problems were created for the Houston Federal Reserve office which began receiving orders for large quantities of new bills from the First City National Bank of Houston in October 1978, to the tune of about $50.8 million in new notes between October 1978, and May 1979. The officials asked about the question were quite sure it was going to Saudi Arabia for the National Commercial Bank in Jeddah, Saudi Arabia.

I have been into this detail not to suggest that anything is necessarily illegal but to demonstrate that we have yet another major gap in our understanding of the demand for U.S. currency. I have only——

Senator JAVITS. Please. You have taken up much more time than any of us. Please make your point.

Mr. HENRY. This is pertinent to the question of the size of distortion in unemployment statistics which I think is quite an important question. I think a basic problem that I have with this argument is that earlier we saw here that a major piece of cash demand had to do with the size and growth of the demand for large bills. I wonder whether the typical under-the-table worker, who is probably often employed in a small establishment at relatively low wages, really is to be thought of as bringing home the bacon in bundles of Ben Franklins. Is he really accumulating enough income to acquire huge hoards of $100 bills?

Thank you, Senator Javits.

Senator JAVITS. Thank you, Mr. Henry.

[The prepared statement of Mr. Henry, together with attached charts, follows:]

PREPARED STATEMENT OF JAMES S. HENRY[1]

INTRODUCTION

I am pleased to appear before this committee today to testify on the size and growth of the illicit sector in the U.S. economy, a subject which may have serious implications for the measurement of such economic variables as unemployment, productivity, tax evasion, and income distribution.

[1] Mr. Henry is a member of the New York Bar. He is completing his doctoral dissertation in Economics at Harvard University.

My own approach to this subject has been that of the monetary economist, trying to explain the demand for currency over time. About 3 years ago I published an article which argued that there was an unusual amount of cash in circulation (especially in large bills), that cash demand had been growing at a high rate relative to demand deposits since the late 1930's, and that regression analysis could attribute at least part of this demand—perhaps $14 billion to $18 billion of the $94 billion cash stock outsanding at the end of 1976—to increase in tax burdens.[2]

I also suggested that many other forms of illegal activity depended upon the existence of an exchange medium which is widely available, easy to hide and transport, highly liquid, and hard to trace; these activities include drug traffic, illegal gambling, bribery, and the avoidance of foreign exchange controls. While the size of these activities is radically uncertain, I had no doubt that they also played a role in accounting for the extraordinary amount of big bills in circulation, which reached more than one $100 bill per capita in 1976.

Finally, as a half-serious policy recommendation for administering a stock treatment to this sector, I proposed a currency recall, similar to those which were conducted by the Central Bank of Colombia and by our own military in Vietnam. I am informed that this scheme unfortunately attracted only very fleeting attention at the Federal Reserve, so the criminal community must have breathed an enormous collective sigh of relief.

Great attention has subsequently been paid to the "subterranean economy," which makes it clear that my initial findings were not complete fantasy. Professors Gutmann and Feige have both used very different cash demand models to yield estimates of the "underground economy," which exceed my own by at least 90 percent—in the case of Professor Feige, by almost 300 percent![3]

That three professional economists can come to such radically different interpretations of the same basic data is not entirely without precedent in the history of the profession, but it has prompted me to take a closer look at the problem.

SUMMARY OF MAIN CONCLUSIONS

Let me summarize the main conclusions obtained from this review, which will be expanded in a later submission to the record.

There still appears to be an unusually high demand for cash in the economy, which has recently been dominated by a rising demand for $100 bills:

Treasury estimates of cash outstanding have reached nearly $1,500 per household in the United States in 1979, including an average of almost five $100 bills per household.

The most dramatic growth has been in the larger denominations, especially $50's and $100's (exhibit 1).

These Treasury estimates of cash outstanding probably contain errors, since there is no accurate survey of the volume of cash "out there" that is actually still in existence; nor is there much direct evidence on the volume of U.S. currency outstandings that are held offshore, which is a major gap in our knowledge.

Nevertheless, relatively accurate data are available on the net currency payouts from Federal Reserve banks in the 1970's, which confirm the dramatic growth in cash demand and the relative increase in large bills (exhibit 2a).

A simple measure of income velocity (retail sales/currency outstanding) gives an idea of the extent to which there has been any shift in the relationship of cash demand to ordinary transactions' requirements. This measure indicates that the velocity of $100 bills fell sharply in the last decade, both absolutely and relative to the velocity of other denominations (exhibits 2b and 2c).

This contrasts with the trend in the income velocity of all currency outstanding, which has actually risen in the last decade (exhibit 3).

Among the explanations available for cash demand, I favor a combination of those that are best able to account for the volume and relative increases of "big bills" in circulation. These include:

Tax evasion, especially by the self-employed in higher income tax brackets (including the farm sector). They have higher marginal incentives to cheat;

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[2] See "Calling in the Big Bills," Washington Monthly, May 1976, p. 27–33.

[3] Professor Gutmann's estimate for the size of the "subterranean economy" in 1976 is $176 billion. Professor Feige's preferred estimate is $369.1 billion. My own methods do not yield such point estimates, but they are consistent with a range of values from $110 billion to $140 billion, depending upon what is assumed about the velocity of "illegal cash," the size of organized crime, and corporate tax evasion.

they have greater opportunities to evade taxes; and they are often involved in cash business:

Proprietors of businesses: 559 out of 3,101 fiscal year 1978 IRS "open investigations," as of June 1978.

Professionals who deal directly with their clients.

They are more likely to have incomes large enough to require storage of the tax-evaded income in large bills. (The low-income tax evader probably just spends what he gets rather quickly.)

There is some evidence that their chances of being convicted (given indictment for tax evasion) and being sent to jail (given conviction) is lower than for accused evaders from lower income groups.

TABLE 1.—TAX EVASION PROSECUTIONS: DOCTORS AND SEMISKILLED LABORERS FIRST HALF OF 1978

[IRS prosecution outcomes, fiscal year 1978]

	Indicted	Percent	Convicted	Percent	Sentenced to prison	Percent
Doctors	29	100	22	76	4	14
Semiskilled laborers	75	100	65	87	29	39

This theory is also consistent with my own reestimations of the regressions reported in my initial 1975 paper, which show a reasonably strong relationship between tax burdens and the demand for currency, and estimate that excess cash stock held for cash evasion purposes was between $14 billion and $18 billion in 1976 (exhibit 6).

It is consistent with the estimates of underreporting recently made by the IRS, which attributed about 60 percent of unreported "legal" labor income to self-employment.

Profit-motivated crime, especially drug traffic and gambling:

Much of the evidence here is purely intuitive or anecdotal: "exchange crimes" require cash, especially large bills, to avoid the risks of detection and default associated with the use of checks or credit cards.

At the moment, the recent IRS estimates of the size of this activity in 1977 are as good as any:

[In billions of dollars]

	Income
Illegal drugs	16.2 to 23.6
Bookmaking and numbers	6.4 to 8.0
Criminal sector total	25.3 to 35.2

I have only one piece of hard factual data to the above argument: evidence on regional flows of currency in the Federal Reserve System. As we mentioned earlier, there has been a large net payout of currency by the banking system in the last decade: this has been true in almost all of the 37 local Federal Reserve offices. The most glaring exceptions to this rule are indicated in exhibit 4a. Miami and Jacksonville have shown a large increasing surplus of currency, especially large bills; last month, alone, for example, Miami received a surplus of $100 million in $100 bills. Furthermore, I am told that many of the $100 bills which show up in Miami were issued in New York, which suggests the correlation displayed in exhibit 4b.

Anecdotal evidence

New York drug dealer's "Treasury";

Central Bank of Colombia requesting a Federal branch in Bogota to handle cash, early 1970's;

The 1977 conviction of Chemical Bank for violations of the Bank Secrecy Act (exchanging large bills for small ones without reporting, allegedly for narcotics dealers).

Changes in absolute price levels

Over time, inflation shifts the distribution of transactions so that, with fixed denominations, many more are only efficient if conducted in large bills.

Possible offsetting changes, however, are continuing growth in the use of credit cards and checks for "ordinary" transactions, the payment of interest on demand deposits, and the availability of cash machines.

Great Britain, which has experienced more rapid inflation than the United States over the last decade, also had a 171-percent rise in currency outstanding between 1971 and 1976, while U.S. outstandings grew 152 percent.

On the other hand, this factor fails to explain the changes which have occurred in regional currency flows in the Federal Reserve system.

This is a subject for further research and a reminder that it is important to distinguish between the real and nominal size and growth rates of the "underground economy."

The explanations mentioned above have all received attention in my earlier work on this problem, as well as in the work of many others. To this list I should now like to add one more factor, which may help to account for the extraordinary growth in the net payouts of $100 bills which has been observed recently in some Federal Reserve branches.

Large block purchases of new $100 bills for transfer abroad, to destinations which are often uncertain, but apparently in the Middle East:

The exact dimensions and purpose of this activity are unclear. Federal Reserve branch banks maintain inventories of "new" and "fit" $100 bills on hand, and try to estimate bank demand for them ahead of time so as to avoid outages. Unusual block purchases of currency are only noticed if they threaten to exhaust the existing inventories. Apparently, this came close to happening to the New York Fed in July 1977, when it began receiving orders of about $20 million per day for new $100 bills from its member banks. The demands continued for a period of 2 to 3 weeks, and then apparently shifted, first to the Boston branch and then to Chicago. The total demand involved is still unclear, but apparently at least $150 million was purchased during this one period. Inquiries to the commercial banks involved concerning the identities of the purchasers were not answered, except that some indication was given of a "Middle East" destination.

Similar demands apparently have recurred several times in the past 2 years. Again, these demands are only noticed when they create unusual supply problems for the Fed. The most recent such problem was created for the Houston Federal Reserve office, which began receiving orders for large quantities of new $100 bills from the First City National Bank of Houston in October 1978. Between October 1978, and May 1979, some $50.8 million in new $100 notes was delivered to the Main Bank of Houston, one of First City National's correspondent banks. The notes are believed by Federal Reserve authorities to have been destined for Jeddah, Saudi Arabia, for the National Commercial Bank of Saudi Arabia. (Moody's 1979 Bank and Finance Manual, 1121, indicates that the Main Bank of Houston was 70 percent owned by one Khaled Bin Mahfovz as of September 1978. John B. Connally III was also listed as one of the bank's directors at that time.) These shipments have apparently continued; another $10.4 million purchase has been ordered for next week.

I have gone into this in much detail, not to suggest that anything is necessarily illegal about these transactions, but only to demonstrate that we have yet another major gap in our understanding of the demand for U.S. currency. This factor may also help us to understand some of the data we have for the New York Federal Reserve district, which shows a sharp rise in its share of net payouts of large bills in the 1970's, despite a decline in its share of net payouts for all currency (exhibits 5b and 5c). The importance of the New York Fed's role in $100 bill payouts has been growing throughout the 1970's (exhibit 5a); in 1977–1978, the net New York payout of $100's rose 62 percent, to nearly $2.6 billion, while non-New York payouts rose only 14.9 percent. Furthermore, New York payouts of new $100 bills rose 85 percent between 1976 and 1978, while the rest of the system's payouts of new $100's rose just 38 percent.

There are many possible reasons why foreigners might be interested in acquiring stocks of U.S. currency, including:

Preferences for holding wealth in tangible form;

Salary payments or cashing facilities for "guest labor"/mercenaries;

Possible avoidance of exchange control regulations;

Currency speculation;

Means of financing various kinds of payoffs and bribes.

Let me turn now to those proposed explanations which have the least plausibility for explaining cash demand. These include: (a) "irrational hoarding be-

havior, apart from any criminal intent, and (b) "under-the-table" work done by people who might also be counted in the unemployment statistics.

Hoarding has been proposed by (among others) Paul Anderson of the Boston Fed as a possible explanation for the unusual demand for cash. The argument leans very heavily on the correlation observed, especially during World War II, between personal savings rates and cash demand. I simply note the following objections:

Even if the savings argument explains the World War II period, it does not fit recent data very well. This makes sound economic sense, since savings in the form of cash hoards was much less costly and "irrational" under World War II price controls than it is in today's inflationary environment.

It is perfectly plausible for increased savings and tax evasion to have been complementary to one another during World War II.

One variant of the "cash hoard" argument does seem to fit the data of the early 1930's fairly well, which is that bank failures lead people to withdraw their deposits; something like this may have been at work during 1974, when the Franklin National problem apparently induced a "blip" in currency demand. But most of it should have later been returned to deposits.

To the extent it does exist, this savings practice is completely unproductive from a social standpoint, since none of these funds are made available for investment; query the extent to which denominations should be available which facilitate this practice.

"Under-the-table" unemployment has been proposed by Professors Gutmann and Feige as an enormous contributor to cash demand and the underground economy, and as a rationalization for the claim that observed U.S. unemployment statistics are vastly overstated.[4]

There are many points to be made about this unemployment story, some of which I have covered in detail in two recent articles.[5] Let me focus first on Professor Gutmann's argument; many of the comments will apply to Feige too.

I have serious doubts about Professor Gutmann's simplistic ratio extrapolation technique for estimating the size of the "underground economy," since it attributes all increases in the ratio to changes in illegal activity, and does not control for the many other influences that affect the relative size of currency and demand deposits. But this aspect of the problem has been adequately addressed by many others already,[6] and Professor Gutmann's actual estimates of the size of illegal activity are not so vastly different from my own (relative to the degree of uncertainty due to other problems) that this warrants immediate attention. (We might differ much more about the growth rate of illegal activity.)

My real dispute with Professor Gutmann is that I disagree strongly about the precise nature of this demand for cash. Aside from overlooking the importance of large cash transactions for organized crime, I think he places far too much emphasis on "under-the-table" work. There are several problems with this:

Earlier we saw that a major piece of the cash demand mystery has to do with the size and growth of the demand for large bills. The "under-the-table" argument simply does not address the distribution of denominations in circulation. Is the typical "under-the-table" worker, who is probably often employed in a small establishment (or a household) at relative low (if untaxed) wages, really to be thought of as bringing home the bacon in bundles of Ben Franklins? Is he really accumulating enough income to acquire huge hoards of $100 bills?

Gutmann and Feige also imply that respondents to the Census Bureau's monthly survey of the unemployed are lying about their job status, despite the fact that—because of the survey's strict confidentiality—they have no actual reason to do so. Well, all right. But, if "under-the-table" unemployment is to account for the relative increase in cash demand since the 1930's, we should find a positive relation between this cash demand and the long-run average rate of unemployment. We do not.

What we do find is a rise in nominal cash demand in the 1970's, especially from 1973 on. This was coincident with the sharp rise in measured unemployment during the 1975 recession. The "under-the-table" argument might lead us

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[4] See Professor Gutmann's estimate that the August 1979 unemployment rate of 6 percent "is, in reality, only 4.5 percent." "Statistical Illusions, Mistaken Policies," Challenge, October 1979.

[5] See "The Unemployment Numbers Game," Working Papers, May/June 1978 (pt. I), and March/April 1979 (pt. II).

[6] See, for example, G. Garcia and Simon Pak, "The Ratio of Currency to Demand Deposits in the United States," Journal of Finance, June 1979.

to attribute this to a sudden rise in employment (and lying to the Census)! But there is plenty of other evidence, independent of the measured unemployment rate, to let us know that the 1975 recession really was the most severe in 40 years. For example:

It was not only the United States which suffered in 1974–1975. Every other major capitalist country recorded higher unemployment for these years than at any time since the late 1940's, and drastic declines in their growth rates.

There are many other indicators of cyclical behavior which have pointed in the direction of slower U.S. real growth in the 1970's, including private capital formation, capacity utilization, business failures, housing starts, and real consumption. Some of the observed worsening in the relation between inflation and unemployment may simply be due to these "demand-side" factors. Furthermore, if we need supply-side explanations, changes in the age-sex composition of the labor force will take us most of the way toward explaining the worsened trade-off, without having to resort to stories about enormous "underground" growth.[7]

It is also well to remember that mere increases in employment (whether "above, below, or on" the table) are not at all necessarily inconsistent with the presence of quite a bit of slack in the labor market. Employment gains may even be caused by increased slack, if a temporary shortage of good jobs induces workers to accept inferior jobs below their productive potential rather than search. I suspect that many "under-the-table" jobs fall into this category of 'disguised unemployment," positions which would be much more difficult to fill if labor markets were tighter and primary firms were doing more hiring. In this sense, high unemployment may be a cause of increased "under-the-table" work, instead of the reverse.

Again, in my view it is far more likely that the self-employed (who have tiny unemployment rates, almost by definition) are the major agents in the underground economy (along with professional criminals, whose "employment" we should probably not count as part of the labor force anyway), not the young, black, or female workers who constitute most of the nation's unemployed, and are certainly subject to its lowest tax rates.

As the Professor Feige's approach to the question, I have a hard time believing that it was meant to be taken seriously. His one major contribution is that he has made Professor Gutmann's procedures seem eminently respectable by comparison. Feige achieves what I believe may well turn out to be a new plateau for credulousness. If one applies his methods to the years between 1940 and 1957, one gets negative estimates of the size of the "underground" economy for most of these years (for 1956, the estimate is $118 billion)![8]

Just to illustrate the general point that forming the ratios of two uncertain quantities can give you anything your heart desires, let's design an argument to show that unemployment statistics are drastically understated. If some groups of workers should be deleted from the labor force and unemployment data because their true status is uncertain, there are others who could be added back into the ranks of the unemployed because, while ignored by the official statistics, they really are part of the labor supply. An example of the subtractions to be made from the employed category is the self-employed workers mentioned earlier, who almost by definition have a tiny measured unemployment rate: if they are looking for work they are no longer self-employed. Their numbers have been growing since 1968, and have by now reached (the BLS tells us) about 7.3 million. An example of the additions to be made is the group of workers who leave the labor force during periods of high unemployment because they give up searching. In 1975, this group numbered about 1.1 million workers. Furthermore, we can also take account of those workers who remain in the same jobs but involuntarily work part time, and also the "subemployed" workers who have accepted jobs below their potential wages because of high unemployment. When these adjustments are made to the official unemployment rate, the "true" rate for 1975 becomes at least 12 percent, compared with the measured rate of 8.5 percent.

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[7] See, for example, Michael L. Wachter, "The Demographic Impact on Unemployment: Past Experience and Outlook for the Future," in Demographic Trends and Full Employment (National Commission for Manpower Policy, December 1976).

[8] See Richard D. Porter, "Some Notes on Estimating the Federal Reserve System," U.S. Treasury, August 1979.

POLICY IMPLICATIONS

As for the policy implications of my findings, my general feeling is that our knowledge of the underground economy is still far too thin for us to advocate anything but a lot more careful and soft-spoken research than has been done so far. This applies to my own proposal for a cash recall, as well as to any proposed adjustments of the economic targets that we use for macropolicy.

We need much better information from commercial banks and the Federal Reserve on just where cash demand is coming from.

We need to consider the serious impact that tax evasion may be having on income distribution—effects which I believe, on balance, to increase inequality.

We need to reexamine the long-run effects that a more complete EFTS system of transactions, with less use of cash, might have on various forms of illicit activity.

We need to understand the size and purpose of large transfers of U.S. bills offshore, as well as their impact on observed money supply growth rates.

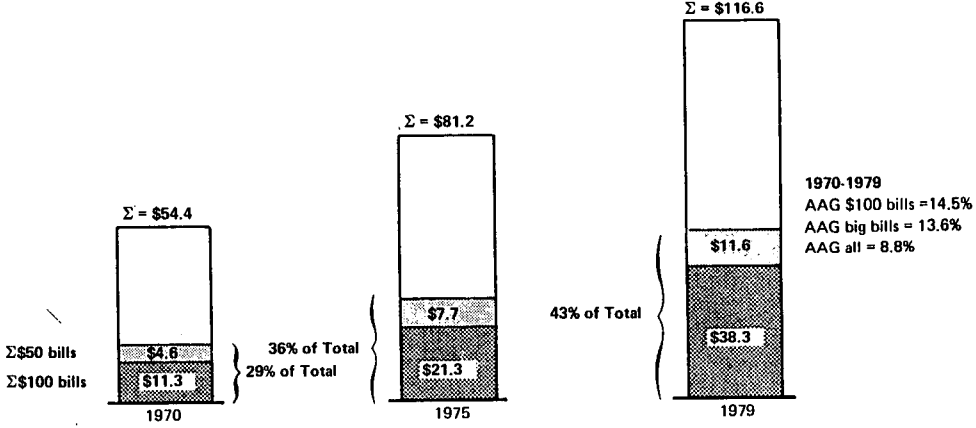
We need to consider the efficiency cost of at least a gradual reduction in the number of large denominations in circulation.

We need to consider possible benefits that a switch to producer taxes (for example, VAT) might have on the problems of tax compliance and enforcement.

We need to study the impact that changes in tax policies have had on the demand for currency and the underground economy in other countries.

Overall, we need to think much more rigorously about conducting economic policy in an environment where most economic variables—not just target variables like unemployment, employment, and inflation, but also planning variables like money supply, effective tax rates, and the federal deficit—are measured with error. Hopefully, some of these errors will prove to be offsetting.

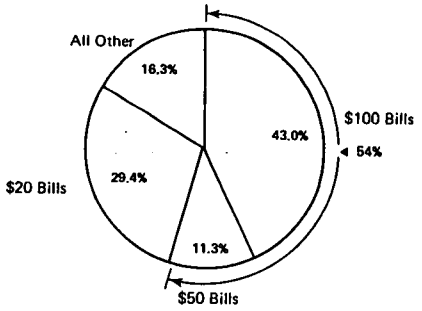
GROWTH IN BIG BILLS, RELATIVE TO ALL CURRENCY AND COIN IN CIRCULATION, 1970-1979
($ Billions; June Data)



Source: U.S. Treasury Department Data.

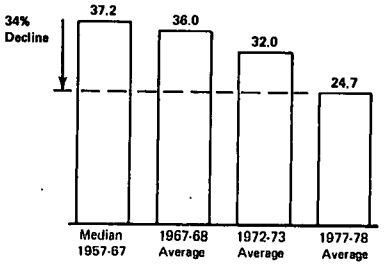
(2a)

PROPORTION OF TOTAL INCREASE IN CASH, 1970-1979
(Percentage; June Data)
Σ = $62.26



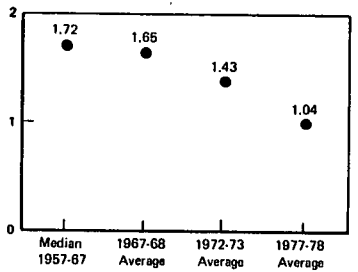
(2b)

VELOCITY OF $100 BILLS IN CIRCULATION, 1957-1978
(Retail Sales/June $100 Bills)



(2c)

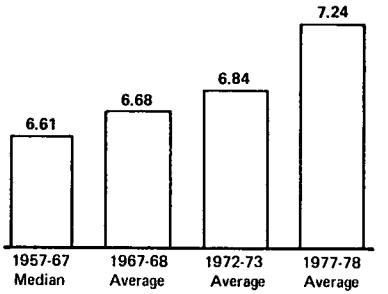
RELATIVE VELOCITIES, $100 BILLS AND $20 BILLS, 1957-1978



Source: U.S. Treasury data; our analysis.

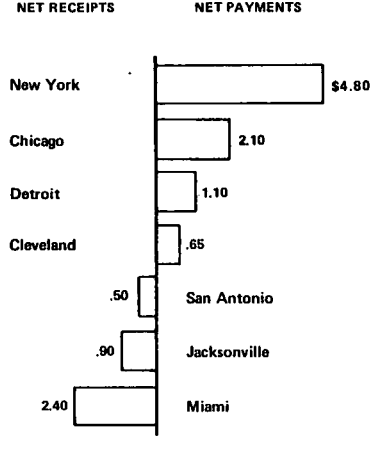
Exhibit 3

VELOCITY OF ALL CURRENCY IN CIRCULATION, 1957-1978
(Retail Sales/Currency in Circulation)



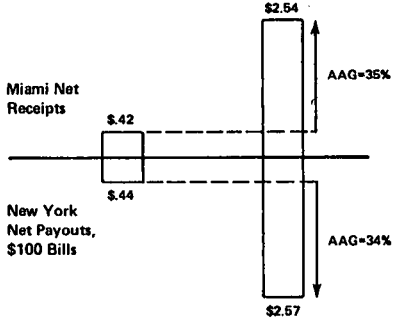
(4a)

CITIES WITH LARGEST NET PAYMENTS OR NET RECEIPTS OF CURRENCY, 1978
($ Billions)



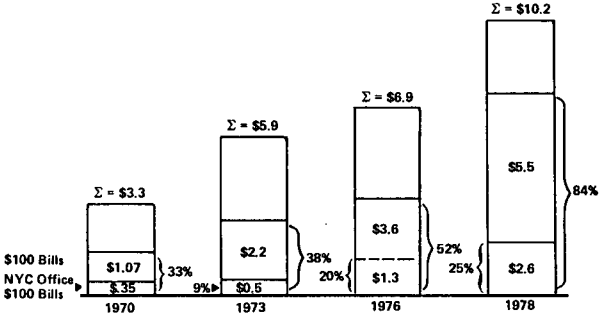
(4b)

GROWTH OF MIAMI NET RECEIPTS AND NY NET PAYOUTS ($100 BILLS) OF CURRENCY (1972-1978)
($ Billions)



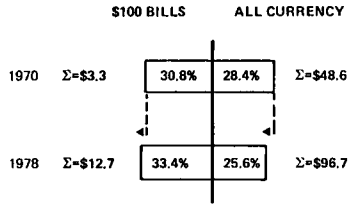
(5a)

NET CURRENCY PAYOUT BY THE FEDERAL RESERVE, 1970-1978 ($ Billions)



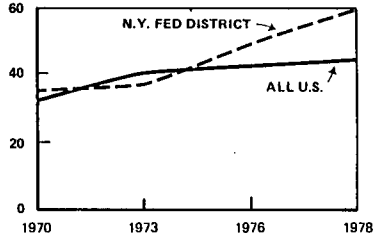
(5b)

NEW YORK: PROPORTION OF GROSS FEDERAL RESERVE PAYOUTS ($ Billions)



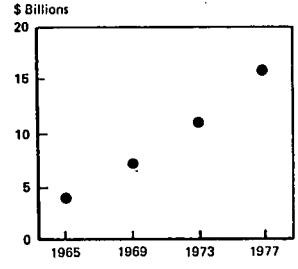
$100 BILLS: NET PAYOUT/GROSS PAYMENT, 1970-1978

(5c)

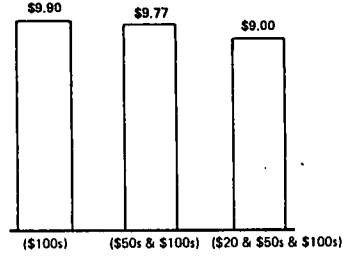


EXCESS CURRENCY STOCK ESTIMATES, VARIOUS METHODS

REGRESSION METHOD*:
TAX EVASION STOCK OF CURRENCY



VELOCITY METHOD
(FIXED TRANSACTIONS TECHNOLOGY)
(Estimates for 1977) ($ Billions)



*Fitting $\frac{C}{P}_t = A Y_t^{\alpha} T_t^{b} r_t^{c} \left(\frac{C}{P}_{t-1}\right)^{d}$

where $\frac{C}{P}$ = a measure of real currency stock at time t

Y_t = real gnp per capita in year 5

r_t = interest rate

Using Box – Jenkins estimation.

Senator JAVITS. Gentlemen, we have a time problem on asking you questions. I didn't expect to stay here this long. Senator Bentsen is caught in other appointments. I have asked the staff, Mr. Albertine and Mr. Manchester, respecting questions. I understand it to be their desire that questions be submitted to you in writing which we will ask you to answer in writing. We will ask you, if you will, to give us your answers within 10 days after you receive them.

Let me thank you for your testimony. I came this morning because I consider this very important. Coming from the big city that I do, New York City, I have a very strong feeling about this matter. So you have been very instructive, very helpful. And I am confident that your views and the disclosures of the IRS will lead us to some action in contemplation of this situation. We thank you very much.

Mr. Henry, may we have facsimiles of your charts?

Mr. HENRY. Copies of the charts are attached to my prepared statement.

Senator JAVITS. Very good. They have been made part of the record. Without objection, the record will be kept open until receipt of your replies to the questions. The hearing is adjourned subject to the call of the Chair.

[Whereupon, at 11:33 a.m., the committee adjourned, subject to the call of the Chair.]

[The following additional written questions and answers were subsequently supplied for the record:]

RESPONSE OF HON. JEROME KURTZ TO ADDITIONAL WRITTEN QUESTIONS POSED BY SEVERAL COMMITTEE MEMBERS

CONGRESS OF THE UNITED STATES, JOINT ECONOMIC COMMITTEE,
Washington, D.C., December 3, 1979.

Hon. JEROME KURTZ,
Commissioner, Internal Revenue Service, Washington, D.C.

DEAR MR. KURTZ: Several Members of the Joint Economic Committee have expressed their regrets to me that they were unable to attend the November 15 hearing on the underground economy. They have asked me to forward the following questions to you. We would like to receive your responses by December 21.

(1) In response to a question by Senator Bentsen, you indicated that your staff has prepared an analysis of the estimate of the size of the underground economy recently made by Professor Edgar Feige (How Big Is the Irregular Economy?" Challenge, November/December 1979). Please submit a copy of this analysis.

(2) You have stated that each dollar spent on compliance programs yields an estimated $5 of assessments. Does this suggest that we should increase our expenditures in this area? Also, this is only the direct effect on assessments—presumably there is also an indirect effect in that this encourages other who are not audited to comply with the tax laws. Do you have any rough idea as to how large this indirect effect might be? What nonfinancial considerations should be taken into account in making these decisions?

(3) In his article, Professor Feige stated that with regard to the type of method used by IRS in its study:

"To measure the magnitude of such activity directly would require microeconomic observations on each illegal activity and the aggregate of these observations into an overall total. For an economy whose modus vivendi is to avoid detection, such an approach is fraught with hazards, since law enforcement statistics typically are limited to arrest or seizure data and require an arbitrary blowup factor to arrive at the total volume of such activities."

What is your response to Professor Feige's comments?

If you have any questions, please contact Paul Manchester of the Committee staff.

Sincerely,

JOHN M. ALBERTINE,
Executive Director.

COMMISSIONER OF INTERNAL REVENUE,
Washington, D.C., March 14, 1980.

Mr. JOHN M. ALBERTINE,
Executive Director, Joint Economic Committee,
Washington, D.C.

DEAR Mr. ALBERTINE: We enclose our response to your request for answers to three questions identified in your letter dated December 3, 1979, as a followup to hearings on the "underground economy."

Please let me know if we can be of further assistance.

With kind regards,

Sincerely,

LAURALEE A. MATTHEWS,
Assistant to the Commissioner.

Enclosure.

Question 1. In response to a question by Senator Bentsen, you indicated that your staff has prepared an anlysis of the estimate of the size of the underground economy recently made by Professor Edgar Feige ("How Big Is the Irregular Economy?" Challenge, November/December 1979). Please submit a copy of this analysis.

Answer. This evaluation has already been supplied as an insert for the record (see p. 15) on December 18, 1979, with our suggested editorial changes to the hearing transcript.

Question 2. You have stated that each dollar spent on compliance programs yields an estimated $5 of assessments. Does this suggest that we should increase our expenditures in this area? Also, this is only the direct effect on assessments—presumably there is also an indirect effect in that this encourages others who are not audited to comply with the tax laws. Do you have any rough idea as to how large this indirect effect might be? What nonfinancial considerations should be taken into account in making these decisions?

Answer. It is important to understand that the ratio referenced above relates total yield to total cost for the entire existing Examination program (which includes employment, excise, estate, etc. as well as corporate and individual income tax returns). It does not, therefore, denote marginal yield, i.e., the additional yield resulting from additional expenditures. We would not necessarily expect to yield $5 for each additional dollar of cost applied across the board to our examination program. In some areas, we might anticipate a much greater yield than this (e.g., large corporations) and in others a smaller yield.

However, the Service must strike a careful balance in its planning strategy between additional yield and the need to encourage voluntary compliance. Indeed, in some audit classes where our data shows taxpayers' voluntary compliance to be relatively low, we already provide increased examination coverage even though the resultant marginal yield-to-cost ratio may be lower than for other classes. In no case do we increase coverage to the point where this ratio falls below 1.

The determinaton whether to increase Examination expenditures in this area depends on a combination of factors including the need for a balanced tax administration program and overall budgetary considerations.

As to the question of the indirect effect of audits, we believe that such an effect does exist. We do not yet have definitive data that would enable us to quantify this indirect effect.

Question 3. In his article, Professor Feige stated that with regard to the type of method used by IRS in its study:

"To measure the magnitude of such activity directly would require microeconomic observations on each illegal activity and the aggregation of these observations into an overall total. For an economy whose modus vivendi is to avoid detection, such an approach is fraught with hazards, since law enforcement sta-

tistics typically are limited to arrest or seizure data and require an arbitrary blowup factor to arrive at the total volume of such activities."

What is your response to Professor Feige's comments?

Answer. As stated in the report, data on the illegal sector is soft. In Chapter IV it is stated that, "Measuring unreported income earned illegally presented extraordinary difficulties. No combinations of data sources . . . come even close to yielding an estimate of total unreported income associated with illegal activities. This deficiency made it necessary to limit the class of illegal activities for which reporting gaps were estimated to those for which reasonably adequate sources of information were available."

We note that not all the illegal source statistics used in the report are limited to arrest or seizure data. See Appendix H (attached) and the sources cited in that Appendix.

Appendix H—Estimates of Illegal-Source Incomes

The study team developed separate estimates of unreported incomes from gambling, illegal drugs, and prostitution. These were the only incomes measured from the current production of illegal goods and services. Given the reports' concern with the value-added approach to measurement of income, these illegal-sector estimates were derived after netting out expenses incurred in the production of such incomes. Accordingly, the reader is cautioned that the estimates presented in this appendix are not directly comparable with many figures available in the published literature dealing with organized crime and other criminal activities.[1]

Table H–1 shows the estimates for illegal gambling, which for estimation has been divided into the numbers racket, bookmaking, and other illegal gambling. The sources are documented in the footnotes to Table H–1. Note the various percentages of gross incomes from illegal gambling which are believed to be spent in the legal sector (covered in the NIPA). These percentages, which are roughly estimated as ranging from 0 percent to 15 percent, must be "backed out" of gross receipts to obtain estimates of illegal income. Note the further downward adjustment which is required by the fact that some illegal incomes will in fact be reported on tax returns, perhaps after being "laundered." The magnitude of this further adjustment is assumed to average between 10 percent an 15 percent of taxable income. Obviously, the fraction of illegal income which is reported may vary widely. However, the 10–15 percent estimate shown is compatible with the experience of the IRS in dealing with the reporting of illegal incomes generally.

The assumptions just stated form integral parts of the estimation procedures outlined in Table H–1. Other assumptions and measures which were also needed to estimate the magnitudes of unreported income generated in illegal gambling operations are explained in footnotes to that table. Aggregating the final figures derived from each component of gambling income, it was found that the total amount of unreported income from illegal gambling fell in a range extending from $8.0 billion to $10.0 billion. Half, or from $4.0 to $5.0 billion, of these gains were made in bookmaking on sports events—at present the most popular form of illegal gambling.

Turning next to the illegal drug traffic, Tables H–2 through H–5 show the derivations of separate estimates for unreported incomes from heroin cocaine, marihuana, and a residual category comprising all other illegal drugs (including illegally imported psychotropics). These estimates were based on statistics furnished primarily by the Drug Enforcement Administration of the Department of Justice concerning the supply and consumption of illegal drugs.[2] Starting with the basic DEA estimates, which are to be regarded as official for the di-

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[1] In general, statistics mentioned in the published literature refer to the dollar values changing hands in connection with criminal activities. Thus, such estimates correspond to a gross rather than to a net social accounting concept.

[2] In fact, these statistics were taken from the now published interagency report cited in footnote 2 to Table H–2. Most of the staff work for the drug traffic estimates presented in this report was done within the DEA.

mensions of the traffic in 1977, these figures were first stepped back to 1976, taking into account the impact of enforcement activity, inflation, and changes in the pattern of the traffic. Next, the adjusted estimates were converted from gross receipts to estimates of value added in the illegal sector. Thus, the legal-sector expenditures of drug traffickers in the United States had to be backed out of the estimates, as well as all payments to foreign suppliers.[3] The particular assumptions used in developing this further set of adjustments were developed cooperatively with the DEA.

A further set of adjustments was also made to reflect the fact that at least some illegal drug incomes are in fact reported on tax returns, usually as Other income on Form 1040 or as sole proprietorship income on Schedule C. Based on actual return information provided from two districts, the study team estimated that 10 percent of illegal drug incomes could have been reported in this way. In addition, the marihuana income estimates were reduced by a final factor to take into account incomes earned by individuals below the filing requirement, reflecting the substantial numbers of young or otherwise low-income individuals involved in the distribution of marihuana in small quantities.

Combining the estimates derived in the four drug tables, the midpoint estimate of unreported incomes from illegal drugs in 1976 is $199 billion, with a range of from $16.2 billion to $23.6 billion. Note that the magnitude of this range is largely attributable to the high variances in the estimates for cocaine and marihuana. The difficulty in developing more precise national estimates for both of these drugs mainly stems from the wide variations in quantities or frequencies of their use, which make consumption-based estimates of the volume of the traffic in these drugs much more uncertain than the corresponding estimates for heroin trafficking.

Other unreported illegal-source incomes except incomes from illegal prostitution could not be estimated. There is too much uncertainty with respect to the size of total incomes generated by such crimes as loan sharking, welfare fraud, various forms of larceny and white-collar offenses, including bribery and illegal kickbacks.[4]

The prostitution estimates were based on estimates of the volume of activity, as derived from arrest records (streetwalkers) and from information collected by police departments regarding the volume of the call girl business. The total unreported income from prostitution was estimated at between $1.1 and $1.6 billion in 1976.

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[3] It may be possible to clarify this phase of the estimate with reference to the following "telescoping" principle. If individual 1 is a foreign supplier who sells abroad a quantity of drugs to Individual 2 for $A, who happens to be a U.S. middleman who in turn sells the drugs for $B to Individual 3, a street-level distributor who then sells it to drug abusers for $C, the U.S. values added respectively by the three traffickers may be summarized in the following table:

Individual:	*U.S. value added*
1	0
2	$B–$A
3	$C–$B

This means that the total U.S. value added over the entire distribution chain will be ($C–$B) + ($B–$A) = $C–$A, which is a quantity directly interpretable as retail sales ($C) less payments abroad to the foreign supplier ($A). This example shows how the value added by the middleman has been "telescoped out" of the financial computation, using an identity principle equating the receipts of one trafficker in the distribution chain to the expenses of the next trafficker.

In this simple example, no legal sector spillover was assumed. To complete the calculation of U.S. value added as a result of the illegal traffic, one should also reduce $C not only by the payment to the foreign supplier ($A) but also by any such expenditures on legal goods and services, e.g., cost of front operations or attorney's fees. Such "backing out" percentages are shown explicitly in Tables H–2 through H–4 in the text.

[4] Some private experts believe that annual gross incomes from loan sharking may amount to as much as $5 billion or more. Others at the Drub Enforcement Administration feel it could be in the neighborhood of $0.5 billion if interest in kind (i.e., in the form of illegal drugs such as heroin or cocaine) is excluded. According to the FBI specialist in this area, however, reliable data on aggregate loan sharking incomes are not available. About the uncertainties in illegal-source income estimates, see also footnote 9 to the main text.

TABLE H–1.—*Unreported income from illegal gambling*

[Dollars in billions]

I. The numbers racket:

(1) Estimated gross wagers per year [1]	$7–$9
(2) Assumed percentage of gross wagers returned to bettors [2]	60
(3) Percentage of gross wagers retained by game organizers at all levels	40

(4) Unreported income per year by type of game organizer [3]:

	Collectors	*Controllers*	*Bank*	*Total*
Allocation of gross wagers retained [4] (percent)	25	10	5	40
Dollar amounts retained (in billions)	$1.75–$2.25	$0.70–$0.90	$0.35–$0.45	$2.80–$3.60
Percent remaining in the illegal sector [5]	95	95	90	
Dollars amounts remaining as income to organizers	$1.7–$2.1	$0.7–$0.9	$0.3–$0.4	
Percent declared for Federal income taxes	10	10	15	
Unreported income (in billions)	$1.5–$1.9	$0.6–$0.8	$0.3–$0.3	$2.4–$3.0

II. Bookmaking:

(1) Estimated gross wagers per year [6]	$33–$41
(2) Assumed percentage of gross wagers, returned to bettors [7]	85
(3) Percentage of gross wagers retained by game organizers at all levels	15

(4) Unreported income per year by type of game organizer [3]:

	Bookmaker	*Sheetwriter*	*Clerical*	*Total*
Allocation of gross wagers retained [8] (percent)	5.2	7.5	2.2	15
Dollar amounts retained (in billions)	$1.7–$2.2	$2.5–$3.1	$0.7–$0.9	$5.0–$6.2
Percent remaining in the illegal sector [5]	85	95	100	
Dollar amounts remaining as incomes to organizers	$1.5–$1.8	$2.4–$2.9	$0.7–$0.9	
Percent declared for Federal income taxes	15	10	10	
Unreported income (in billions)	$1.3–$1.6	$2.1–$2.6	$0.7–$0.8	$4.0–$5.0

III. Other gambling [9]:

(1) Estimated gross wagers per year [10]	$5.2–$6.4
(2) Assumed percentage of gross wagers returned to bettors [11]	60
(3) Percentage of gross wagers retained	40
(4) Amounts of gross wagers retained	$2.0–$2.6
(5) Percent of (4) remaining in the illegal sector	85
(6) Dollar amounts remaining as income to organizers	$1.8–$2.2
(7) Percent declared for Federal income taxes	10
(8) Total unreported income	$1.6–$2.0

[1] Estimate obtained from the FBI.

[2] J. Rubinstein and P. Reuter, "Numbers: The Routine Racket," Policy Sciences Center, Inc., January 1978. This percentage is quite similar to the 54 percent shown as the "average annual takeout rate per capita" for the numbers racket quoted in Gambling in America (Final Report of the Commission on the Review of the National Policy Toward Gambling, Washington, D.C. 1976), p. 63.

[3] All calculations were carried out in terms of unrounded numbers. Final results are presented as rounded numbers.

[4] Rubinstein and Reuter, "Numbers."

[5] Difference between the percentages shown and 100 percent is assumed to be spent on legal goods and services.

[6] Estimate obtained from the FBI.

[7] J. Rubinstein and P. Reuter, "Bookmaking in New York," Policy Sciences Center, Inc., January 1978.

[8] Ibid.

[9] Includes illegal dice games, illegal card games, punchboards, illegal coin machines and other illegal gambling.

[10] Based on 1976 figures from the President's Commission on Law and Enforcement Task Force on Organized Crime.

[11] It is assumed that the return to the bettor is comparable to that for the numbers racket.

TABLE H–2.—*Unreported income from the heroin traffic* [1]

[Dollars in billions]

(1) Estimate of total retail value in 1977 [2]	$8.8
(2) Price ratio 1976 ÷ 1977 (130/159) [3]	
(3) Quantity ratio 1976 ÷ 1977 (6/5.5) [3]	
(4) Estimated retail value in 1976—$8.8 billion × (2) × (3)	$7.8
(5) Dollar outlays to foreign drug exporters, as percent of retail value [4]	4.1
(6) Financing expenses at the importation point (one-half of $360 million outlay to foreign exporters) (percent)	2.1
(7) Expenditures on legal activities, including courier expenses, legal expenses, front operations, and money laundering (percent)	2.0
(8) Seizures in the domestic market [5] (percent)	0.6
(9) Total expenses (percent)	8.8
(10) Heroin income retained by U.S. distributors	$7.1
(11) Percent estimated to be declared for Federal income taxes	10.0
(12) Unreported heroin income	$6.4

[1] All calculations were made with unrounded numbers.
[2] The National Narcotics Intelligence Consumers Committee, "The Flow of Illicit Drugs Into the United States and Its Economic Significance, 1977," December 1978, ch. 14.
[3] Figures from the Drug Enforcement Administration (DEA).
[4] Derived from "Flow of Illicit Drugs," fig. 1–1.
[5] Based on 1976 domestic removal statistics appearing in Drug Enforcement Administration, "Summary of Achievements: Statistics Through September 1978."

TABLE H–3.—*Unreported income from the cocaine traffic* [1]

[Dollars in billions]

(1) Estimate of total retail value in 1977 [2]	$14.4
(2) Price ratio 1976 ÷ 1977 (53/64) [3]	
(3) Quantity ratio 1976 ÷ 1977 (estimated to be 100/110)	
(4) Estimated retail value in 1976—$14.4 billion × (2) × (3)	$10.8
(5) Dollar outlays to foreign drug exporters, as percent of retail value [4]	1.8
(6) Expenditures on legal activities (categories similar to heroin) [5] (percent)	3.0
(7) Seizures in the domestic market [6] (percent)	1.6
(8) Total expenses (percent)	6.4
(9) Cocaine income retained by U.S. distributors (higher estimate)	$10.1
(10) Cocaine income retained by U.S. distributors (lower estimate) [7]	$4.9
(11) Percent estimated to be declared for Federal income taxes	10.0
(12) Estimated range of unreported cocaine income	$4.4–$9.1

[1] All calculations were made with unrounded numbers.
[2] Midpoint of range shown in fig. 1–1 of Flow of Illicit Drugs.
[3] Figures from DEA.
[4] Derived from Flow of Illicit Drugs, fig. 1–1. Note that financing expenses are not included as a separate line in the present table. By contrast to the mode of organization of the heroin traffic, that of the cocaine traffic has been substantially more decentralized, with less penetration by organized crime into the U.S. market.
[5] This percentage is higher than in the case of heroin to recognize the fact that money laundering costs through money exchanges alone are estimated at 2 percent by DEA sources.
[6] Based on 1976 domestic removal statistics appearing in Drug Enforcement Administration. "Summary of Achievements: Statistics Through September 1978."
[7] The lower estimate was derived by averaging the higher and lower estimates of cost to the consumer of cocaine prepared for the 1978 Annual Report of the Office of Drug Abuse Policy, p. 69.

TABLE H–4.—*Unreported income from the marihuana traffic* [1]

I. Estimation of average retail price in 1976:	
(1) Average 1977 higher price ($/oz.) of marihuana from: [2]	
Colombia	$45.00
Mexico	$30.00
Jamaica	$22.50
(2) Weighted higher average price ($/oz.) in 1977 [3]	$38.10
(3) Price ratio 1976 ÷ 1977 (54/69) [4]	
(4) Weighted higher average price ($/oz.) in 1976	$35.34
(5) Weighted higher average price ($/gram) in 1976	$1.26
(6) Lower average price ($/gram) in 1976 [5]	$0.64
(7) Preferred average price ($/gram) in 1976—(5) + (6) ÷ 2	$0.95
II. Estimation of volume in 1976 (in metric tons):	
(1) Estimated quantity consumed in 1977 or 1976 [6]	8,025
(2) Estimated quantity imported in 1977 [7]	12,500
(3) Estimated quantity imported in 1976—(2) × 100 ÷ 110	11,363
III. Estimation of value added in 1976 (dollar amounts in billions):	
(1) Higher estimate of total retail value in 1976—I(7) × II(3)	$10.8
(2) Dollar outlays to foreign drug exporters as percent of retail value [8] (percent)	7.2
(3) Expenditures on legal activities, including inland transportation, money laundering, as well as legal expenses (percent)	6.0
(4) Seizures in the domestic market [9] (percent)	1.2
(5) Total expenses (percent)	14.4
(6) Marihuana incomes retained by U.S. distributors	$9.2
(7) Percent declared for Federal income taxes	10
(8) Higher estimate of unreported marihuana incomes, including incomes of legitimate nonfilers	$8.3
(9) Estimated percent of (8) earned by legitimate nonfilers [10]	8.7
(10) Higher estimate of unreported marihuana incomes, excluding legitimate nonfilers	$7.6
(11) Lower estimate of unreported marihuana incomes, excluding legitimate nonfilers—(10) × II(1) ÷ II(2)	$4.9

[1] All calculations were made with unrounded numbers.
[2] Derived from "Flow of Illicit Drugs," Fig. 1–1.
[3] Figures from DEA.
[4] Figures from DEA.
[5] Figures from DEA.
[6] Average of higher and lower estimates of U.S. consumption presented in "Flow of Illicit Drugs," ch. 6, p. 3.
[7] Average of higher and lower estimates presented in "Flow of Illicit Drugs," fig. 1–1. Note that domestically produced marihuana is excluded since the DEA did not have a firm enough basis to estimate this quantity.
[8] From fig. 1–1. ibid.
[9] Based on 1976 domestic removal statistics appearing in Drug Enforcement Administration, "Summary of Achievements: Statistics Through September 1978."
[10] Based on data from the Exact Match File.

TABLE H–5.—*Unreported income from other illegal drugs*

[In billions of dollars]

Estimate of total retail value in 1977 or 1976 less dollar outlays to foreign drug exporters: [1]	
(1) Hashish	0.3
(2) Psychotropic drugs	0.1–0.2
(3) Total (1) + (2)	0.4–0.5
(4) Unreported other illegal drug income [2]	0.5

[1] Estimates from fig. 1–1 of "Flow of Illicit Drugs."
[2] The higher estimate of the income retained by U.S. distributors was taken as the study team's estimate of unreported income without any subtractions similar to those shown in the previous three tables. This approach seemed appropriate in view of the fact that the DEA estimates were limited to imported psychotropic drugs only. The DEA did not have an estimate of domestically manufactured psychotropic drugs.

RESPONSE OF PETER GUTMANN TO ADDITIONAL WRITTEN QUESTIONS POSED BY SEVERAL COMMITTEE MEMBERS

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C., December 3, 1979.

Professor PETER GUTMANN,
Department of Economics and Finance, Baruch College, City University of New York, N.Y.

DEAR PROFESSOR GUTMANN: Several Members of the Joint Economic Committee have expressed their regrets to me that they were unable to attend the November 15 hearing on the underground economy. They have asked me to forward the following questions to you. We would like to receive your responses by December 21.

(1) What are your comments on the estimate of the size of the underground economy recently made by Professor Edgar Feige ("How Big Is the Irregular Economy?" Challenge, November/December 1979).

(2) In your testimony you stated that the underground economy plays havoc with government statistics because it is excluded from normal reporting. Because policymakers rely on these statistics their advice is often out-of-step with the economy. By excluding the underground economy, are statistics always biased downward?

If so, could the underground economy be the reason that the recession has not yet hit us, even though most economists predicted it would do so?

(3) Your estimate of the size of the underground economy is based primarily on the increase in the ratio of currency to demand deposits. This ratio increased from 1940 to the late 1940's, fell from the late 1940's to about 1960, and has increased sharply since 1960. I have two questions about this:

A. What accounts for the drop in the ratio during the 1950s? Was the underground economy shrinking?

B. Critics of your work have argued that there are many factors besides the size of the underground economy that affect this ratio. Have you taken any of these factors (such as interest rates and new developments such as increased use of credit cards and telephone transfers of funds between accounts) into account?

(4) What is the basis for your estimate that if the official unemployment rate were adjusted for unemployed who are actually working "off the books" and being paid in cash, the true rate would have been 5.6 percent rather than 6.0 percent last month? And what are the "additional factors" which would further reduce this to 4.5 percent?

(5) You have stated that "productivity is greater than official statistics indicate, since these official government statistics do not include subterranean income." But don't these same statistics also omit the labor input in the underground economy, so that the net impact on measured productivity is less clear? In fact, if productivity in the underground economy is less than the above-ground economy, then overall productivity would be less than the official measures indicate.

(6) If the underground economy grew, due in part to high taxes and high inflation, what would happen if taxes and inflation were lowered? Would the underground economy shrink? Or, because people now know how to operate in the underground economy would they keep doing it, regardless of tax cuts and inflation?

(7) Are there any levels of society which do not participate in the underground economy? It is obvious that criminal activity should be underground. But what about dentists, doctors, and lawyers swapping their services with no cash changing hands? What about people paying a handyman or maid in cash to avoid taxes? Where does it stop?

(8) Some observers feel that we pay our own people not to work and tax them if they do, and that we burden our small businesses with regulations. Has this contributed to the creation of sweatshops and the hiring of illegal aliens in this country?

(9) Do you have any estimate as to how much of the underground economy is controlled by organized crime?

If you have any questions, please contact Paul Manchester of the Committee staff at 225–1773.

Sincerely,

JOHN M. ALBERTINE,
Executive Director.

BARUCH COLLEGE,
THE CITY UNIVERSITY OF NEW YORK,
DEPARTMENT OF ECONOMICS AND FINANCE,
New York, N.Y., December 31, 1979.

JOHN M. ALBERTINE,
Executive Director, Joint Economic Committee,
U.S. Congress, Washington, D.C.

DEAR MR. ALBERTINE: I enclose responses to the questions you posed in your letter of December 3.

Sincerely yours,

PETER GUTMANN,
Professor of Economics and Finance.

Enclosure.

1. My comments on the estimate of the size of the subterranean economy made by professor Edger Feige (How Big Is the Irregular Economy?" Challenge, November/December, 1979) are in an article which appeared in the same issue of Challenge as professor Feige's article. (Statistical Illusions, Mistaken Policies," Challenge, November/December, 1979), as well as in my testimony before the Joint Economic Committee on November 15, 1979.

Professor Feige's estimates of the size of the subterranean economy for 1978 are more than triple my own. Moreover, he concludes that the size of the subterranean economy very nearly doubled in the two years from 1976 to 1978: he calculates an annual growth rate of 38 percent from 1976 to 1978. Clearly, this is unrealistically high. Richard Porter of the Federal Reserve Board has projected Feige's method backward over time and finds that, for most years, the size of the subterranean economy comes out to be a negative number, obviously an impossible situation.[1] Moreover, most of the huge increase in the subterranean economy from 1976 to 1978 estimated by Feige derives from increase in turnover of checking accounts, rather than cash. Hence, Feige must be assuming that the increases in subterranean activity largely derive from use of checking accounts rather than cash—a most unlikely condition. Unfortunately, when Feige gets unrealistic results, instead of examining what is wrong with his method, he relentlessly moves ahead and publishes these numerical results.

Feige is also wrong in his claim that, "the true inflation rate, which would include all goods and services produced by the economy (regular and irregular), is clearly below the reported rate".[2]

On the contrary, the true inflation rate, including both the legal and the subterranean economy, is above the official inflation rate, which is based solely on the the legal economy.

The subterranean economy is composed more heavily of services, retailing and construction than the legal economy. These are sectors which have had below average productivity growth historically. Hence, they have been sectors with above average rates of price increase (i.e., inflation) historically. For this reason, the rate of price increase (i.e., inflation) in the subterranean economy is higher than that in the legal economy. Thus, the true inflation rate, including both the legal and the subterranean economy, is greater than the official inflation rate, which is based solely on the legal economy.

Feige confuses the level of prices with the rate of change of the level of prices (i.e., inflation). The level of prices for the same activity—e.g., a home repair job—is less in the subterranean economy than in the legal economy. But the rate of change of the level of prices (i.e., inflation)—as noted above—is greater in the subterranean than in the legal economy.

2. By excluding the subterranean economy, statistical biases appear; as a result, policymakers often pursue erroneous policies, since their perception of reality is mistaken.

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[1] R. D. Porter, "Some Notes on Estimating the Underground Economy," Aug. 10, 1979, processed, Federal Reserve Board.

[2] Feige, op. cit. (see text).

However, by excluding the subterranean economy, statistics are not always biased downward. The official unemployment rate is biased upward, i.e., the true unemployment rate is less than the official unemployment rate. The official growth rate of the economy is biased downward, i.e., the true rate of economic growth is greater than the official rate of economic growth. The official inflation rate is biased downward, i.e., the true rate of inflation is greater than the official rate of inflation, as noted in the discussion in item 1 above. (Please note that this result is separate from the question of which type of index now available is preferable in the measurement of inflation.)

3. a. The drop in the currency to demand deposit ratio from the end of World War II to the beginning of the 1960's indicated that it took a long time to liquidate the huge currency buildup which had accumulated rapidly during World War II, with its tremendous growth in subterranean activities. Although there was a very substantial reduction in subterranean activities with the expiration of the black markets, excess profits taxes and wartime controls at the end of the war, the decline in the currency ratio clearly should not be interpreted as indicating a continued decline in subterranean activities throughout this period.

b. The currency to demand deposit ratio is affected by factors other than the subterranean economy, factors which may pull the ratio in either direction. These have been discussed by myself and others in several articles and comments in the Financial Analysts Journal (November/December, 1977; March/April, 1978; November/December, 1978).

4. The basis for my statement that the official unemployment rate is overstated is discussed in two of my articles ("Are the Unemployed, Unemployed?" Financial Analysts Journal, September/October, 1978; "The Grand Unemployment Illusion," The Journal, Institute of Socioeconomic Studies, Summer, 1979). The figures cited in my testimony are derived by basing my estimates on the latest available month at the time of my testimony, namely, October 1979.

The official government unemployment rate statistics, which are based on responses in a monthly national household survey, are biased upward. In other words, the actual unemployment rate is less than the official unemployment rate. In calculating the official unemployment rate figures, the government makes one wholly unjustified assumption. namely that all respondents tell the truth. In reality, some respondents lie. Most of the upward bias of the official unemployment rate is due to this unrealistic assumption, an assumption which the government makes no attempt to justify. (See articles cited above.)

5. Productivity is indeed greater than official statistics indicate. As noted in my testimony, I have made a conservative estimate that subterranean income amounts to a little more than 10 percent of the legal U.S. gross national product, with a more realistic estimate of the subterranean economy at approximately 13 to 14 percent of the U.S. legal national output. I also estimated the U.S. labor force at about 4 to 5 percent greater than the official legal labor force. Since the unmeasured output is a greater percentage of the officially measured national output than the unmeasured labor force as a percentage of the officially measured national labor force, the actual output per worker is greater than that indicated by official statistics. In this connection, it should be noted that a substantial portion of subterranean income is derived from skimming of cash, goods and services, and from skimming of expense accounts, in legitimate businesses. For this type of activity, there will be an official understatement of output produced, but not an understatement of labor input.

6. If taxes and inflation were decreased, the subterranean economy would shrink. I have just published an article on the tax aspects of this. ("Taxes and the Supply of National Output," Financial Analysts Journal, November/December, 1979.)

If taxes are lowered, people will shift activities from the subterranean to the legal economy, since they have less incentive to partake of the subterranean, as opposed to the legal economy. If inflation is decreased, people will have less difficulty in meeting their bills and will be less affected by the inflationary shift to ever higher income tax brackets which makes the government the chief beneficiary of inflation. As a result, they will tend to reduce their subterranean activities.

However, the mere fact that people have learned to operate in the subterranean economy will tend to reduce the speed of adjustment and the shifting back to the legal economy in case of decline in taxes or in inflation.

7. Participation in the subterranean economy is very widespread. As noted in my testimony, probably about a fifth of all those who now work in the United States are involved, in one way or another, in the subterranean economy. Just about all levels of society participate in the subterranean economy. But some have the opportunity to participate much more than others. This is particularly true of those who are in cash type businesses. There is also a wide dispersion of incomes from the subterranean economy. Some draw large amounts, some very little.

8. People respond to incentives. Since the government has established many incentives which stimulate participation in the subterranean economy, the public—not surprisingly—has increased its participation in subterranean activities accordingly.

It has been said that our taxation and expenditure system penalizes work and rewards non-work. Perhaps better said, our taxation and expenditure system penalizes legal work and rewards subterranean work and non-work.

Similarly, it has been said that regulations penalize business, including small business. Better said, regulations penalize legal business and reward subterranean business.

The substantial recent and expected increases in social security payments, for example, provide greater and greater incentive to hire workers off the books, paid in cash. Minimum wage law regulations also provide incentives to hire workers off the books, paid in cash. Inadvertently, the Federal Government provides larger and larger incentives for entry of illegal aliens whose tenuous legal position makes them particularly receptive to the blandishments of subterranean employment. New York and Los Angeles sweatshops, to cite just one small example, are full of illegal aliens. When we offer substantial incentives for entry of illegal aliens, we should not be surprised that they respond by coming to take advantage of these government created opportunities.

9. The classical illegal activities—those which are illegal even without tax evasion—comprise about one-quarter to one-third of the subterranean economy. Only a fraction of this one-quarter to one-third is controlled by organized crime. I have made no estimate of the size of this fraction.

Response of Richard L. Fogel to Additional Written Questions Posed by Several Committee Members

Congress of the United States,
Joint Economic Committee,
Washington, D.C., December 3, 1979.

Mr. Richard L. Fogel,
Associate Director, General Government Division, General Accounting Office, Washington, D.C.

Dear Mr. Fogel: Several Members of the Joint Economic Committee have expressed their regrets to me that they were unable to attend the November 15 hearing on the underground economy. They have asked me to forward the following questions to you. We would like to receive your responses by December 21.

(1) What are your comments on the estimate of the size of the underground economy recently made by Professor Edgar Feige ("How Big Is the Irregular Economy?" Challenge, November/December 1979).

(2) You have stated that "we are not sure by how much the unemployment estimate is off," but Professor Gutmann has given us such an estimate. What are your comments on his estimate?

(3) The underground economy affects many government programs in many different government departments. Do you believe that it would be useful to have an interagency group study this problem? Also, do many government agencies follow an ostrich-type approach and simply hope the underground economy will disappear?

(4) How often should IRS study this problem? Annually?

(5) GAO has reported that the Treasury Department cut the IRS proposed budgets for tax enforcement by 8 percent in 1977 and also by 8 percent in 1978, prior to submission to the Office of Management and Budget, where further cuts were made. Do you believe that it would be preferable if IRS were somewhat

autonomous from the Treasury Department, in which case their budget would be submitted directly to OMB?

(6) If the underground economy grew, due in part to high taxes and high inflation, what would happen if taxes and inflation were lowered? Would the underground economy shrink? Or, because people now know how to operate in the underground economy, would they keep doing it, regardless of tax cuts and inflation?

(7) Are there any levels of society which do not participate in the underground economy? It is obvious that criminal activity should be underground. But what about dentists, doctors, and lawyers swapping their services with no cash changing hands? What about people paying a handyman or maid in cash to avoid taxes? Where does it stop?

(8) Some observers feel that we pay our own people not to work and tax them if they do, and that we burden our small businesses with regulations. Has this contributed to the creation of sweatshops and the hiring of illegal aliens in this country?

(9) Do you have any estimate as to how much of the underground economy is controlled by organized crime?

If you have any questions, please contact Paul Manchester of the Committee staff at (202) 225–1773.

Sincerely,

JOHN M. ALBERTINE,
Executive Director.

U.S. GENERAL ACCOUNTING OFFICE,
GENERAL GOVERNMENT DIVISION,
Washington, D.C., December 21, 1979.

Mr. JOHN M. ALBERTINE,
Executive Director, Joint Economic Committee, Congress of the United States.

DEAR MR. ALBERTINE: In response to your December 3, 1979, letter requesting answers to questions provided by your Committee, I am enclosing our answers.

If we can be of further assistance please don't hesitate to contact us.

Sincerely yours,

RICHARD L. FOGEL,
Associate Director.

Enclosure.

Question 1. What are your comments on the estimate of the size of the underground economy recently made by Professor Edgar Feige?

Answer. Edgar Feige has estimated the size of the "irregular" U.S. economy to be some $704 billion in 1978. This is equal to one-third of the official GNP for that year. Given his 1976 estimate of $369 billion (a litle mroe than a quarter of 1976 GNP), this implies a near doubling of irregular GNP in 2 years. It also implies an annual growth rate of about 11 percent in real GNP (gross of irregular activities.)

At first glance these estimates appear implausibly high. They are implausibly high at second and third glances too. While it is not our intention to deny the existence of the irregular economy, or even to deny its significance, Professor Feige has simply failed to provide us with a reasonable estimate of its size.

Feige's methodology is markedly better than that of Peter Gutmann. The procedure is clever, and the principle employed is theoretically correct. However, the limitations of available data and Feige's inadequate method of adjusting them leaves us still with no acceptably accurate estimate of the size of the irregular economy.

Feige compares two measures of economic activity. The first is GNP—the conventional income measure of all final goods and services produced in a given period (in this case, a year). The second measure is one suggested by Irving Fisher before the principles of National Income Accounting (and, of course, GNP) were developed. This is simply the total value of all transactions in a given period. The difference between the two measures lies in the words "final" and "produced."

Total transactions includes all transactions for the final goods and services in GNP. It also includes those that were for intermediate goods; goods that are used to produce something else. Moreover, it includes transactions made for goods produced in previous periods that are changing hands. These transactions are

trades in ownership claims, sometimes called financial transactions. If one can subtract the intermediate and financial transactions from the total then the two measures (transactions and GNP) will be equivalent except for the irregular component excluded from GNP.

Feige doesn't subtract them explicitly, but assumes that a particular amount of transactions is generated by a given level of GNP. He starts with a year in which he assumes there was little or no irregular activities: 1939. He examines input output information to find if growing economic intergration reduces the need for as many intermediate transactions. Determining that it does, he ignores the effect since he desires a lower, not higher, bound estimate. He then adjusts his transactions data for financial transactions and figures how much GNP should have been generated by the transactions in 1976 and 1978 given the ratio in 1939. The difference between the actual and the estimated GNP is attributed to irregular activities.

It is in his adjustment for financial transactions that Feige appears to have erred most. First of all, the figures for demand deposit debits (which made up 90 percent of his transactions) were collected in different ways in all three periods.[1] Only in 1976 were the data listed in the way that he describes in his article. The adjustments he made for this are not explained. One thing is clear, the data revision alone could have accounted for the phenomental growth in his estimates for both 39–76 and 76–78. To what extent this statistical error contributed to his estimate is impossible to know without knowing how he actually calculated his figures.

Aside from the unacknowledged changes in the data series, the method he has used for excluding financial transactions is inadequate. He has reduced the transactions figure by assuming that all financial transactions have occurred in seven standard metropolitan statistical areas that are known financial centers. He, thus, uses demand deposit turnover data from the remaining SMSA's combined with demand deposit data from all areas reporting. Hence, all financial transactions performed outside these seven areas are still counted. He recognizes the existence of this problem, but does not appear to understand its importance.

Financial transactions include not only the purchase and sale of stocks and bonds, but of all assets including homes, used cars, and second hand consumer durables. Even the boondock banks can count these kinds of transactions in their figures. Since financial transactions appear to have risen as a proportion of total transactions and since every financial transactions outside New York and six other SMSA's is still included in his figures (as are an awful lot of financial transactions still counted from those seven areas), Feige's estimates will reflect a substantial upward secular bias. Even if he properly accounted for the changes in the statistical series he used, he could have obtained accurate irregular economy estimates for 1976 solely due to the growth of financial transactions.

Secular bias would not explain the rise from 1976 to 1978. However, since the 2 years do not occupy comparable positions in the business cycle, some cyclical bias may have resulted. 1976 is the trough of a business cycle while 1978 is near the peak. If, as it seems, financial transactions are a more important component of total transactions during an expansion or near a business cycle peak, then this also could have produced the phenomenal 2-year growth in his irregular economy estimates.

Feige's estimates are a solid attempt at measuring the extent of these activities. However, there is little reason to have much faith in them. It may indeed be possible yet to get a good handle on the size of the underground activity. But in

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[1] To perform his calculations as he describes, Feige required debit or demand deposit figures (either would do) and demand deposit turnover rates for banks from 233 Standard Metropolitan Statistical Areas plus turnover rates for banks from 226 of those SMSA's (excluding the financial centers of New York, Boston, Philadelphia, Chicago, Detroit, San Francisco-Oakland and Los Angeles-Long Beach).

These data exist for the period of January 1964 through June 1977. From 1943 through 1964 the data are not listed by SMSA but by reporting centers, which are cities and counties. The data still permits the exclusion of seven financial centers. This change resulted in an increase in deposit coverage of 19 percent and debits coverage by 12 percent.

The 1939 figures are for all commercial banks. New York City banks can be separated out as well as "100 other leading cities." This breakdown is in no way comparable to the 64–77 series. Similarly the 1978 system did not consist of a SMSA breakdown either. Rather, it is made up of only a sample of 300 reporting banks. The only division within this category is between major New York City banks and all others. No breakdown exists for other financial centers. For a year of common coverage, 1976, this new method increased turnover figures by about 7 percent.

assessing any such estimates one should be aware of indicators that cast doubt on the Feige figures.

(1) Extraordinary growth rates. If the growth rate of total economic activity grossly exceeds historical norms it is probably because the irregular component has been calculated too high.

(2) Distant comparisons. Since estimates like these usually require the constancy of some economic ratio (i.e., GNP/Transactions, Demand Deposits/currency), the further you get from your base year the less justification your estimate has. 1939 pushes things a bit.

(3) Bizarre cyclical behavior. There may be reasons to expect the irregular economy to move with the official portion. Conceivably it is more resilent, not falling much in contractions. But under no circumstance should we expect it to be either counter cyclical or violently procyclical. If this shows up in a time series, then the estimate is probably a statistical artifact with no relation to irregular activities.

Question 2. You have stated that "we are not sure by how much the unemployment estimate is off," but Professor Gutmann has given us such an estimate What are your comments on his estimate?

Answer. The official unemployment rate is calculated by dividing the number of unemployed by the size of the labor force. To the extent that workers in the subterranean sector are not counted as being in the labor force and that some who are counted as officially unemployed and in the labor force work in the subterranean sector, the official unemployment rate will be too high. The existence of the subterranean economy can influence both the numerator and the denominator used to compute the unemployment rate. The magnitude of the error which occurs when the subterranean sector is neglected depends upon the degree to which numerator and denominator are misstated.

To estimate the error in the denominator (i.e., the size of the civilian labor force,[1] Professor Gutmann observes that the labor force participation rate of civilian males ages 25–34 and 35–44 declined respectively by approximately 2 percent between 1961 and 1977. A large fraction of the workers represented by this decline Gutmann believes moved into the subterranean sector. That is, they are still in the labor force, but work apart from the official economy.

To correct the official data for this oversight, Gutmann increases the labor force by 2 percent, which is then its "true" size—both official and subterranean.

It remains for him to calculate the number of those who, while officially classified both as a part of the labor force and as being unemployed, work in the subterranean economy. He believes this number to be equal to from 10 percent to 20 percent of the total subterranean labor force. As a compromise, he fixes the number at 15 percent.[2]

Finally, since the official data on the labor force and unemployed used by Gutmann fail to distinguish full-time from part-time workers, he adjusts them to reflect only full-time workers. This adjustment reduces his estimates only slightly.

Our comments on his method relate both to his adjustment of the numerator and denominator of the official data.

(1) We can find no compelling reason for using the decline in the labor force participation by adult males between the ages of 25 and 44 to estimate the size of the subterranean labor force. While the participation rate by this group did decline between 1961 and 1977, it has shown some variation over time. For example, the participation rate for both age groups shows a slight tendency to rise in the period 1975–77 and, for the 25 to 34 age group, the participation rate in 1948, 49 and 50 was almost identical to the rate in 1971–77. However, of a more critical nature to his method of computation is the participation rate of females. During the 1961–77 period, the labor force participation by females age 25–34 rose from 36.4 percent to 59.5 percent and in age group 35–44 from 43.8 percent to 59.6 percent.[3] Surely women participate in the subterranean economy as do men. Where did these women come from? Gutmann's logic would

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[1] We take as Gutmann's method for computing the bias in the unemployment data that explained in detail in this paper in Financial Analysts Journal (September/October 1978): 26–29.

[2] Gutmann adds these individuals to the labor force to obtain its true size. Since these workers are supposedly already in the official labor force, to add them again appears to us to be double counting.

[3] These data are from Employment and Training Report of the President (1978): 186–187.

suggest from the subterranean sector which surely must have precipitated its collapse. Overall, labor force participation by both sexes in the 1961–77 period rose. In age group 25–34, from 65.6 percent to 76.9 percent and in group 35–44, from 69.5 to 76.9 percent.

(2) The estimate made by Gutmann of the proportion of subterranean workers both in the official labor force and unemployed is a pure guess. The reasonableness of the guess is adduced by reference to the average monthly seasonal adjustment to the official unemployment statistics and some data compiled by State officials who discovered individuals both drawing unemployment benefits and working "off the books." It should be noted that the States uncovered only a small number doing both. Professor Gutmann repeats their fear that this may only be the "tip of the iceberg." As a result, his number is from 4 to 6 times as large as the cases uncovered by State officials.

In summary, we doubt that the method used by Professor Gutmann has uncovered the extent of the number of individuals employed in the substerranean economy and the consequent bias in the unemployment rate.

It appears to us curious that Professor Gutmann did not use his own computation of the size of the subterranean economy to estimate the size of its work force. We are, of course, aware that each dollar of GNP does not generate the same amount of employment in each sector. Even more to the point, we believe the subterranean economy to more nearly approximate in terms of substance and employment the service sector of the official economy. Nevertheless, as a very crude measure of its labor force, one can compare the official 1977 GNP and employment data and obtain a comparable estimate of employment in the subterranean sector, given Gutmann's estimate,[4] or

$$\frac{\$1{,}887.2\ \text{GNP}_{1977}}{90.546\ (\text{Employment}_{1977})} = \frac{\$212.8\ (\text{GNP}_{\text{Gutmann}})}{\times\ (\text{Employment})}$$

$$\times = 10.21 \text{ million}$$

That is, if the structure of the underground economy paralleled the organized economy, its work force should be 10.21 million workers in 1977 (or some 5 times larger than Gutmann's estimate for 1978). We do not offer this as GAO's estimate of the size of the work force in the subterranean economy, but as suggestive of its crude size if Gutmann's data are used.

While Professor Gutmann has made the case that the official figures overstate the unemployment rate, the extent of the overestimate remains to be computed.

Question 3. The underground economy effects many government programs in many different government departments. Do you believe that it would be useful to have an interagency group study this problem? Also, do many government agencies follow an ostrich-type approach and simply hope the underground economy will disappear?

Answer. It would be appropriate for the effected governmental agencies to form a study group to assess the policy implications of the underground economy on their various programs. Once the policy implications have been addressed the interagency group could further refine the role each agency could play in further developing detailed data on the extent of the problem and on who is involved. However, it appears, on the basis of information available to date, that the Internal Revenue Service has the most extensive reservoir of information that could be useful to develop on a continuing basis detailed statistics regarding the scope of the problem. Accordingly, IRS should be the lead agency in continually studying the scope of the problem.

We have no evidence to indicate that appropriate government agencies are not concerned about the extent of the underground economy and how it might effect governmental policies. Rather, we believe that on the basis of information that has been made public in the past year, most agencies are now becoming very concerned about the extent to which this problem exists. Many agency officials we have talked to are concerned about whether the underground economy is growing or not but recognize that it is difficult at this point in time to make any

[4] The 1977 data on GNP and official employment taken from Economic Report of the President (1979) pp. 183 and 216. Gutmann's GNP estimate provided by Congressional Research Service.

specific assessment of the trend. One of the issues that an interagency study group should address is the need to develop accurate trend data on this problem.

Question 4. How often should IRS study this problem? Annually?

Answer. In order for IRS to obtain data which would be useful to it for tax administration purposes, we believe that an update of its September 1979 findings could be made every 3 to 5 years. Any final decisions on how often IRS should update its findings on this problem, however, should be made within the broader context of the policy concerns of the other governmental departments or agencies affected by the existence of an underground economy. The issue of the extent to which trend data is needed and how often that data should be updated should be resolved by the interagency study group.

Question 5. Do you believe it would be preferable if IRS were somewhat autonomous from the Treasury Department in which case their budget would be submitted directly to OMB?

Answer. IRS has never been an independent agency in the Executive Branch. There have been various proposals over the years to make it independent but there has never been serious consideration given to that idea either within the Executive Branch or by the Congress. We have not seen anything in the course of our work at Treasury to indicate that IRS is having serious administrative or policy problems thus warranting removing it from the Treasury Department. Even if IRS were a separate entity it would still be subject to the same administrative and policy constraints that would apply to all Executive Branch agencies. Thus, there would be no guarantee that OMB would be more sympathetic to IRS's budget request if there was no intermediate review by the Treasury Department. In fact, the opposite might occur because OMB could take the position that it has to give the budget closer scrutiny because no one outside of the Service has reviewed it before it gets to the Executive Office of the President.

Question 6. If the underground economy grew, due in part to high taxes and high inflation, what would happen if taxes and inflation were lowered? Would the underground economy shrink?

Answer. The underground economy is composed of two types of activities. One is illegal under current law: prostitution, drugs, gambling, theft, loansharking, etc. The other consists of legal activities which are concealed to escape taxation. It is only this latter group of activities that will display any sensitivity to changes in inflation or income taxation. Depending upon the size of each of these two components, a reduction in inflation or income taxation could have a substantial or a negligible effect on the size of the underground economy. For example, if 90 percent of underground GNP were due to classic illegal activities, lowering taxes would have little effect. However, if the relevant percentage were 10 percent one could expect a large reduction in underground transactions.

This is not to say that the reduction in underground activities will be immediate. Nor will abolition of the incentives to engage in these activities fully reverse them, bringing wayward tax avoiders back one for every one originally chased into the underground sector. Non compliance with tax laws involves costs. It is only when the extra benefit of tax avoidance falls below the extra cost that individuals will return to the surface.

The benefits of underground activities are the taxes saved. The costs are twofold, the fixed cost of learning the ropes and establishing the connections that make cheating possible, and the variable cost of running the risk of being caught. Tax reduction can reduce the benefits—but it must reduce them below the risk cost. The larger the sunk cost of setting up, the more deeply one is committed to his underground activity and, moreover, the more likely it is that he has reduced his risk of being caught. In short, reducing the tax rate will deliver many back into the surface economy by virtue of lowering the tax savings below the cost of possible conviction. But some are now too deeply emeshed in their off the books work to be lured back. Thus, the return to the legal fold will be incomplete. How much so will depend on how costly it was to leave and how costly it is to return.

Question 7. Are there any levels of society which do not participate in the underground economy?

Answer. We have defined the underground economy to consist of people who either (1) do not file tax returns and should, or (2) underreport their income. Such income could be derived from legal or illegal activities. There is no evidence to indicate that nonfiling or underreporting is limited to any particular sector or socioeconomic level of our society. The problem pervades our society. However, some information developed by IRS in its study indicates that the problem

of underreporting income may be more severe for those individuals wha are self-employed as opposed to those people who are employees and have their taxes withheld. It is important for IRS, or other appropriate agencies, to try to determine why various levels and sectors of our society participate in the underground economy. In this regard IRS has a very important study underway now to determine why people do or do not pay their taxes. The results of this study should be useful to IRS in determining how to most effectively allocate its compliance dollars. IRS has to refine the information developed in its September 1979 report on the underground economy to be able to identify sectors or groups who are particularly high underreporters or nonfilers and redirect its compliance resources more adequately towards those groups to increase the instance of voluntary compliance among them.

Question 8. Some observers feel that we pay our own people not to work and tax them if they do, and that we burden our small businesses with regulations. Has this contributed to the creation of sweat shops and he hiring of illegal aliens in this country?

Answer. We are not aware of any information that would allow us to comment on the extent to which the problem raised in the question might be contributing to the creation of sweat shops or the hiring of illegal aliens.

Question 9. Do you have any estimate as to how much the underground economy is controlled by organized crime?

Answer. No we do not.

RESPONSE OF JAMES S. HENRY TO ADDITIONAL WRITTEN QUESTIONS POSED BY SEVERAL COMMITTEE MEMBERS

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C., December 3, 1979.

Mr. James S. Henry,
McKinsey & Co., Inc., New York, N.Y.

DEAR MR. HENRY: Several Members of the Joint Economic Committee have expressed their regrets to me that they were unable to attend the November 15 hearing on the underground economy. They have asked me to forward the following questions to you. We would like to receive your responses by December 21.

(1) What are your comments on the estimate of the size of the underground economy recently made by Professor Edgar Feige ("How Big Is the Irregular Economy?" *Challenge*, November/December 1979).

(2) Please provide us with your estimates of the regional variations in the size of the underground economy, as indicated by regional variations in currency flows. I have written to Mr. Charles Bennett of the Federal Reserve System to ask that they provide you with whatever data is necessary to respond to this question.

(3) You have stressed the importance of large-denomination bills in the underground economy. Does this suggest to you that the bulk of the income generated underground is received at the upper end of the income scale?

(4) You have assumed that each dollar of currency generates less final income in the underground economy than in the above ground economy; Professor Gutmann believes that the turnover is about the same; Professor Feige believes that the rate of turnover is faster below ground. Would you please comment further on this?

(5) Federal law requires reporting of instances where over $5,000 of currency leaves or enters this country, but the Federal Reserve System has indicated that they have virtually no idea how much U.S. currency is being held abroad. Does this suggest that this law is not being enforced, or that it is unenforceable?

(6) If the underground economy grew, due in part to high taxes and high inflation, what would happen if taxes and inflation were lowered? Would the underground economy shrink? Or, because people now know how to operate in the underground economy, would they keep doing it, regardless of tax cuts and inflation?

(7) Are there any levels of society which do not participate in the underground economy? It is obvious that criminal activity should be underground. But what about dentists, doctors, and lawyers swapping their services with no cash changing hands? What about people paying a handyman or maid in cash to avoid taxes? Where does it stop?

(8) Some observers feel that we pay our own people not to work and tax them if they do, and that we burden our small businesses with regulations. Has this contributed to the creation of sweatshops and the hiring of illegal aliens in this country?

(9) Do you have any estimate as to how much of the underground economy is controlled by organized crime?

If you have any questions, please contact Paul Manchester of the Committee staff at 225–1773.

Sincerely,

JOHN M. ALBERTINE,
Executive Director.

McKINSEY & Co., INC.,
New York, N.Y., February 1, 1980.

Mr. JOHN M. ALBERTINE,
Executive Director, Joint Economic Committee, Congress of the United States, Dirksen Building, Washington, D.C.

DEAR MR. ALBERTINE: Here at last are my responses to your questions of December 3 regarding my testimony on the size and growth of the "underground economy."

Question 1. What are your comments on the estimates of the size of the underground economy recently made by Professor Edgar Feige?

Answer. I have already responded briefly to this question in my initial statement before the Committee. Here I reiterate my overall view that Professor Feige's methods for estimating the size of the illicit sector are so full of holes that it is hard to believe his results were meant to be taken seriously. Among the numerous problems with his methods are:

Misleading use of "currency in circulation" data to estimate currency transactions in the United States, as if all of this currency were known to be circulating in the United States economy. In fact, as I argued in my testimony, a substantial and growing proportion of U.S. currency is in use offshore.

Neglect of the key role played by demand deposit turnover growth in accounting for recent increases in transactions/income ratio. It is highly unlikely that illegal activity accounts for this growth in deposit turnover.

Inadequate support for the contention that the ratio of transactions to income should have been expected to fall over the period from 1939 to 1976. Professor Feige defends this contention with several comparisons of price indices and input-output tables that simply will not withstand technical criticism.

Given these serious flaws, it should come as no surprise to us that Professor Feige's methods lead to bizarre results. Not only is his estimate of the absolute size of the underground economy—at least $542 billion of underground GNP in 1978 alone—implausible, but his implied growth rates for this sector are preposterous: even his "conservative" set of estimates implied that the underground economy *doubled* in size between 1976 and 1978! Furthermore, as Richard Porter of the Federal Reserve Bank has shown,[1] if one applies Feige's procedures to the years from 1940 to 1957, they yield *negative* estimates of the underground economy's size for most of these years!

Question 2. Please provide us with your estimates of the regional variations in the size of the underground economy, as indicated by regional variations in currency flows.

Answer. My preliminary analysis of the regional currency flows data provided by the Federal Reserve System has turned up several very interesting findings which warrant further study.

These data indicate that surplus currency inflows recorded by the Miami and Jacksonville branches of the Federal Reserve were not peculiar to the late 1970's; in 1970, the earliest year for which I have data, the Jacksonville branch already recorded a net currency inflow of $576 million,[2] more than three times the net surplus of any other FR branch, nearly half of the total net surpluses recorded by the 13 branches which ran positive "currency balances" that year, and over 90 percent of all branches' net surpluses of $100 bills. Clearly, part of the story behind the Florida currency surplus relates to factors that were in

[1] See Richard D. Porter, "Some Notes on Estimating the Federal Reserve System," U.S. Treasury, unpublished, August 1979).

[2] The Miami Federal Reserve branch was not opened until 1971.

place and operating well before the "cocaine boom" of the 1970's. Among the factors in need of further exploration are:

Tourist traffic.

Patterns of criminal transactions that predate the 1970's (drug traffic, organized crime "head offices").

Spending from cash hoards by Florida residents (especially by the retired or immigrant communities).

While the Florida cash surplus is not new, it *has* shown remarkable growth in the 1970s, by several different measures:

In current dollar terms, the Florida bank branches' net cash receipts grew from $576 million in 1970 to $3.27 billion in 1978, at an annual average growth rate of over 24 percent.

The most rapid period of growth occurred in the years 1976 to 1978, when Florida cash surpluses more than doubled in size. The growth of net receipts of $100 bills was even faster: they rose from $319 million in 1976 to $824 million in 1978.

Since gross currency payouts in Florida grew fairly steadily from 1970 to 1978, the increase in net surplus taken in by banks was due almost entirely to an increase in the growth rate of gross currency receipts.

Even in real terms (deflating surplus figures by the PCE index), Florida's currency surplus grew at an average annual rate of about 10 percent from 1970 to 1976, and nearly a 40 percent annual rate from 1976 to 1978. The $100 bill surplus grew at over 51 percent in real terms from 1976 to 1978.

When these currency surpluses are standardized by the Bureau of Census' estimates of personal income in Florida for 1970 to 1978, the surpluses recorded from 1970 to 1976 begin to look less unusual, but the 1976 to 1978 period shows a relatively steep rise in the value of this cash surplus/income ratio (Exhibit 1).

The behavior of the Florida currency surpluses, especially since 1976, does not appear to be explicable in terms of variables that reflect ordinary activities like tourist traffic and expenditures or the growth of personal income:

Trials conducted with statistical regression models relating Florida surpluses to Florida tourist traffic (visits per year) and Florida personal income failed to explain much of the variance in the dependent variable, and yielded especially large residuals for the years 1976 to 1978.

Since a Federal Reserve survey conducted in the mid-1970's found that many of the larger denomination bills turning up in Florida were originally issued in the New York branches, an attempt was made to relate net cash payouts in New York branches to net cash receipts in Miami and Jacksonville branches. There turned out to be a strong relationship for $100 bills, with a 1-year lag for the years 1970 to 1976. But this relationship broke down completely during 1976 to 1978, when the Florida surplus growth greatly exceeded what might have been expected on the basis of New York payouts.

Overall, my review of the Florida currency flow evidence suggests that while net currency surpluses had already appeared in the Florida banking system by the early 1970's, something rather odd began to occur around the mid-1970's which was apparently unrelated to traditional patterns of economic activity. This new factor—or set of factors—showed up in the form of rapid growth of currency receipts, especially of large denominations. The new, increased flows of large denominations were less well-correlated than early flows had been with currency payouts in other Federal Reserve districts, indicating that their immediate sources may have been offshore.

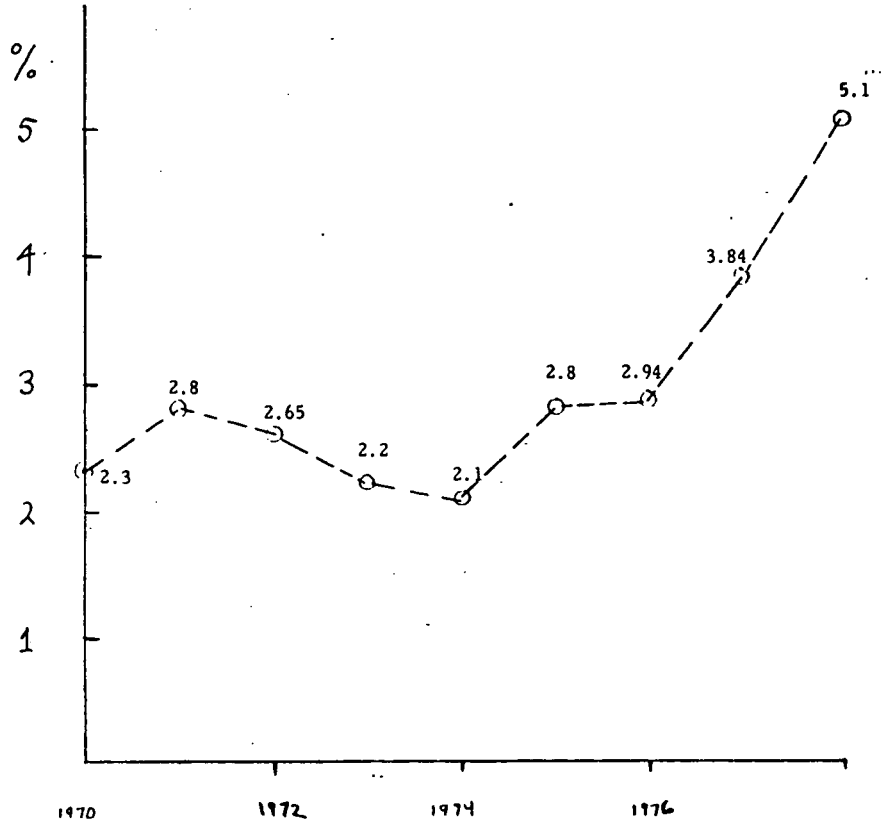
Data for the year 1979 has just been received, and a preliminary analysis shows that the unusual growth in the Florida currency surplus has continued. The surplus of all currency received amounted to $4.999 billion, an increase of 53 percent over 1978, while the $100 bill surplus reached nearly $1.5 billion, an 89 percent rise from 1978.

Question 3. You have stressed the importance of large-denomination bills in the underground economy. Does this suggest to you that the bulk of the income generated underground is received at the upper end of the income scale?

Answer. If we expand the range in this statement to include the "middle to upper range of the income distribution," the top three quintiles of the income

EXHIBIT 1

Florida: Ratio of Cash Surpluses* to Personal Income, 1970 - 1978



*Currently receipts minus currency payouts.

SOURCE.—Analysis of Bureau of the Census and FRB data.

distribution, I believe the answer would be yes, especially for tax-evaded income. As I observed in my testimony, this is one area where I differ sharply with Professor Gutmann, who has emphasized the role played in the underground economy by "under-the-table" workers. In my view, it is more likely that most tax evasion (for example) is done by middle- or upper-middle class citizens—especially those who are small proprietors or self-employed—than that it is done by people counted in official statistics as being unemployed or on welfare. This is true for a number of reasons. First, the former group pays the highest—and fastest-increasing—marginal tax rates, so it has the greatest incentive to cheat. Second, unlike most ordinary wage earners, small proprietors and the self-employed are not subject to a withholding method of tax collection, and they often have direct control over the forms of payment they will accept (e.g., "checks made out to cash"). Third, the middle- and upper group is the main recipient of unreported dividend and interest payments. Finally, only the members of this group have incomes large and stable enough to require storage in large denominations, which helps to explain the unusual demand for "big bills."

To get a rough idea of the impact that tax evasion might be having on our income distribution, consider the following. The Bureau of the Census' Current Population Report Series P-60 estimates that between 1960 and 1976, the share of total money income received by the bottom fifth of all families and unrelated

individuals in the United States rose from 3.2 percent to 3.8 percent.[3] This was largely in response to increases in government cash transfers during the period, in the form of such programs as public assistance, Social Security, and Medicare. What is striking about these share figures is that they have remained so small that the net impact of government cash transfers has apparently remained so slight.[4] Increased income tax evasion by middle-to-upper income groups may mean that even these share estimates are overstated: for a reasonable set of assumptions, tax evasion causes the income shares of the bottom fifth of the population to fall from 3.2 percent to 3.0 percent in 1960 and from 3.8 percent to 3.4 percent in 1976.[5] On the other hand, the value of taxes which might theoretically have been collected from tax-evaded income in 1976 was large enough so that, had it been fully redistributed, it could have nearly doubled the cash income of this bottom group.[6]

In general, of couse, illegal activity increases the variance of after-tax earnings among individuals, rewarding those who happen to be the least lawabiding and the most opportunistic. It should be clear that such effects are important enough to warrant further study.

Question 4. You have assumed that each dollar of currency generates less final income in the underground economy than in the above-ground economy. Would you please comment on this?

Answer. Actually, in my empirical work on the subject. I have always assumed a variety of values for the velocity of currency in the underground economy, precisely because we have so little direct evidence on its true. But I do lean toward the view that the velocity of underground cash is likely to be lower than, say, the observed income velocity of M_1 (currency plus demand deposits), for several reasons:

There are few close substitutes for cash in the underground economy, since cash transactions are essential to the existence of several kinds of illegal activity. The ability to economize on cash balances is therefore more limited than it is in the legal sector, so that underground velocities should be lower and less sensitive to fluctuations in the opportunity costs of holding money.

The absence of trade credit in most illicit-sector business means that average holdings of exchange mediums must be higher per sales dollar.

While the flows of "retail" currency receipts from any kinds of illegal activity are fairly steady (e.g., illegal drug traffic or gambling), "wholesale" disbursements or payoffs in this sector are often made only at long intervals and in large blocks. This pattern of receipts and expenditures, combined with the undergound economy's need for cash transactions, also leads to relatively high average cash balances in this sector.

Recipients of illegal income (especially tax evaders) also frequently engage in hoarding behavior, in order to reduce the risks of detection by authorities (or by friends and relatives!) This also serves to reduce the velocity of underground cash.

On the other side of the ledger, we have Professor Feige's contention that since service sectors in general are more "integrated" (in the sense that fewer intermediate transactions are required per dollar of final output), the velocity of underground cash may be higher than that of above-ground cash. This argument carries only slight weight, in my judgment. First, there has been no long-run tendency for the observed velocity of money in the United States economy to fall, despite the enormous relative growth of our service sector since the 1920s. Second, many intermediate inputs to the service sector—especially other services—are poorly measured, or are lost in aggregation, leading to an underestimate of the transactions/income ratio for that sector—. Third, the financing of criminal

[3] U.S. Department of Commerce, Bureau of the Census, Current Population Reports: "Money Income in 1976 of Families and Persons in the United States," Series P–60, No. 114. July 1978, p. 56.

[4] Even when account is taken of the income distribution effects that increased in-kind programs like Food Stamps have had during this period, the bottom fifth's income share is only raised by 1 to 2 percentage points. See John L. Palmer and Joseph J. Minarik, "Income Security Policy," in Henry Owen and Charles L. Schultze, editors, Setting National Priorities: The Next Ten Years, (Washington, D.C.: The Brookings Intitution, 1976), 531.

[5] Here we make use of the Census' estimates of aggregate money income for these 2 years, assume that tax-evaded income amounted to $20 billion in 1960 and $120 billion in 1976, and also assume that nearly all of this flowed to the top four quintiles of the income distribution.

[6] This assumes an average rate for unreported income of 30 percent. It also assumes that while the response of *evasion* activities (e.g., substitution of one means of payment for another) to increased taxation is fairly elastic, the elasticity of labor supply with respect to taxation is low.

services transactions is probably quite different from the financing of ordinary service transactions, as indicated above.

Question 5. Federal law requires reporting of instances where over $5,000 of currency leaves or enters this country, but the Federal Reserve System has indicated that it has virtually no idea how much U.S. currency is being held abroad. Does this suggest that this law is not being enforced, or that it is unenforcable?

Answer. My impression of the Bank Secrecy Act (Public Law 91–508) and the regulations designed to implement it (reported in 31 CFR 103) is twofold. First, there are numerous loopholes in the existing law and regulations which greatly limit their effectiveness, including:

The diffusion of responsibility for enforcement among a host of federal agencies (IRS, Customs, FRB, FDIC, and The Comptroller of the Currency, among others).

The possibility of avoiding reporting requirements simply by dividing exchanges up into a host of transactions beneath "bright line" thresholds.

The exemption for interbank transactions, especially among domestic and foreign banks.

The vague exemption for "established customers" of banks.

The absence of a clear-cut law of attempts among the criminal sanctions available for enforcing the statute.

It should be noted that some of these loopholes may be closed by divisions of the Regulations about to be adopted by the Treasury Department.

Second, we should recognize that this kind of statute is inherently difficult to enforce on an all-in basis, so that enforcement efforts should be carefully targeted. This means that those transactions, banks, and regions that are most important to criminal activity should be screened heavily, perhaps with the help of statistical procedures like those in use by the IRS audit selection process.

Question 6. If the underground economy grew, due in part to high taxes and inflation, what would happen if taxes and inflation were lowered? Would the underground economy shrink?

Answer. Presumably there are some costs associated with underground operations, especially the risk of prosecution. On the margin, therefore, people may be somewhat responsive to changes in the relative costs and benefits of criminal activity, including changes in tax rates or in the likelihood of prosecution.

But I suspect that this margin is often not very wide, and that (as your question suggests) it might take a rather long time for certain behavior to respond to changes in incentives. Some kind of profit-oriented crime would remain relatively lucrative even in the complete absence of taxes on legitimate activity. Others may be "habit-forming," or subject to scale economies or learning curve effects, so that the marginal costs of operation are trivial once costs of methods and organization have been mastered. On the whole there would probably be a sharp discontinuity between responses to, say, a slight change in tax rates and a radical shift: while a 100 percent tax cut (if maintained) would by definition wipe out all tax evasion, it is doubtful that a 50 percent tax cut would eliminate *half* of all tax evasion.

Incidentally, it is not inflation *per se* that is a cause of increased underground activity, but the combination of inflation and rigid tax brackets that are not indexed to the rate of inflation. This combination has had the effect of moving middle-class individuals into those tax brackets that were once reserved for upper-class incomes, eliminating much of the income tax's progressivity (given a fixed maximum tax rate), and increasing the tax burden on ordinary real incomes. Tax bracket indexation would be a powerful step toward a reduction in the tax incentives for underground activity.

Question 7. Are there any levels of society which do not participate in the underground economy?

Answer. As far as I can tell, only economists have completely resisted the extraordinary temptation to indulge in underground activity. But in all seriousness, the available evidence indicates that most underground activity has so far been concentrated in a relatively small fraction of the population that is confronted with rather special incentives and opportunities to engage in illegal behavior. There is as yet no concrete evidence available to support the contention that the vast majority, or even a significant minority, of Americans are engaged in any underground activities whatsoever.

Question 8. Some observers feel that we pay our people not to work and tax them if they do, and that we burden our small businesses with regulations.

Has this contributed to the creation of sweatshops and the hiring of illegal aliens in the country?

Answer. Still other observers believe that sweatshops and the exploitation of cheap labor are unfortunately long-standing institutions in the American economy, which did not arise with the growth of government regulation or the welfare state and would not vanish in their absence. In the case of sweatshops, these observers point out that government regulation has probably done much more to eliminate than to encourage the phenomenon. In the case of illegal aliens, they point to the role played on the supply side of the labor market by differential growth rates between the U.S. and its poorer neighbors; on the demand side, they simply express regret that there have apparently always been some employers who are prepared to flaunt the law and take advantage of the weak, the illiterate, and the unorganized.

For my own part, I am afraid that both sets of observers are indulging in too much rhetoric.

Question 9. Do you have any estimates as to how much of the underground economy is controlled by organized crime?

Answer. Not at this point. The Florida currency flows data, combined with other kinds of data, may eventually lead us toward better estimates of the size of "organized crime," if by this term we mean only the size of certain profit-oriented criminal transactions that occur on a repetitive basis.

Again, I wish to thank the Committee for the opportunity to testify. I have not yet fully exhausted the analysis of the data supplied to me by the Federal Reserve, and there seem to be rich untapped possibilities at the FRB for further research on this subject. Let me know if I can be helpful.

I wish to express my appreciation for the assistance provided in obtaining the data required for my analysis of currency flows to Mr. Robert B. Kaiman, Senior Operations Analyst, Board of Governors of the Federal Reserve System.

Yours respectfully,

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