THE HIDDEN ECONOMY
WHAT ARE THE ISSUES?

Michael Carter
Discussion Paper No. 84
December 1983

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This paper discusses a number of questions concerning the so-called hidden economy. What is the hidden economy? How big is it? Is it really growing? Does it matter? What should we do about it? The paper does not purport to be an exhaustive survey of the literature on the hidden economy. Its objective is more modest - namely to present an overview of the state of research, identify the major themes and issues and provide a framework for further work.

Most of the economic literature on the hidden economy revolves around measurement technique. This emphasis on measurement is accordingly reflected in this paper but attention is also paid to definition, causes and consequences. Section 1 considers the definition of the hidden economy. Section 2 surveys the variety of techniques which have been adopted to measure size and growth, while Section 3 analyses the reasons for that growth. The consequences of the hidden economy are addressed in Section 4. Finally Section 5 suggests a checklist of important issues which deserve further study.
THE HIDDEN ECONOMY

What are the issues?

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Spurred on by the growing resistance to ever increasing tax burdens coupled with clear evidence that the burden has become rather unevenly distributed, economists and other social scientists have recently been encouraged to re-examine their definitions and measurements of economic activity. Their research has spawned a burgeoning literature on the hidden (alias underground, informal, irregular, twilight, black, cash, subterranean) economy. It is now common ground that the hidden economy is large and growing. But how big? Is it really growing? What is the hidden economy anyway? Does it matter? What should we do about it? These questions form the basis of this paper.

Most of the economic literature on the hidden economy revolves around measurement technique. This emphasis on measurement is accordingly reflected in this paper but attention is also paid to definition, causes and consequences. Section 1 considers the
definition of the hidden economy. Section 2 surveys the variety of techniques which have been adopted to measure size and growth, while Section 3 analyses the reasons for that growth. The consequences of the hidden economy are addressed in Section 4. Finally Section 5 suggests a checklist of important issues which deserve further study.

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I Definition

One thing that is clear about the this murky area is that we are very unclear as to exactly what we are talking about. Definitions are almost as numerous as the multitude of names which have been applied to the phenomenon. To add to the confusion many authors propose one definition and attempt to measure something else.

The broadest definition of the hidden economy is simply that economic activity which goes unreported or is not measured by the society's current techniques for monitoring economic activity (Feige[1979], p6). This definition would encompass household activity for example.
Tanzi[1980] restricts the hidden economy to "GNP that, because of unreporting and/or underreporting, is not measured by official statistics" (p.28). Similarly Britain's Central Statistical Office defines the hidden economy "the economic activity generating factor incomes which cannot be estimated from the regular statistical sources used to compile the income measure of gross domestic product" (MacAfee[1980], p.81). Note that Tanzi's and the CSO definition require prior definitions of GNP and factor incomes respectively.

A narrower definition was adopted in an OECD study which confined the hidden economy to three categories: undeclared legal activities, production of illegal goods and services and employee theft (OECD [1981]).

This last category, employee theft, has been emphasized by the Outer Circle Policy Unit who focus on "all those forms of personal reward which do not appear in the official audits" (Outer Circle Policy Unit[1978], p.5). These include not only tax evasion, but also social security fraud, employee pilferage and theft, and all manner of "fiddle" whether at the cost of the employer, the customer or the state.

Many writers (for example Burns[1975], Gershuny[1979]) have a much broader image of the hidden economy. They would embrace all economic activity which for whatever reason is not included in the measure of aggregate economic activity. Strict definitions are few. One major
component is work done within the home. The omission from GNP of the traditional household and childrearing activities of women is of course extremely contentious. But attention has also been drawn to the diversion of many other activities from external market into the home, this transformation being stimulated by the availability of household capital equipment - the "self-service economy" (Gershuny[1978]).

Informal production embraces another large sector of economic activity excluded from the conventional measures of economic activity. This includes the production of goods and services which are not exchanged for money, such as in communes and certain cooperatives. Also included are activities which involve monetary transactions but which are not sufficiently formalised to be included in national accounting. A common example is the "second" economy of Italy involving the widespread irregular employment of large numbers in small scale production and work in the home. (OECD[1981], p7. See also Contini[1982] and Del Boca & Forte[1982].) Informal production does not necessarily involve any element of deliberate concealment. It may involve perfectly legal activity conducted openly but overlooked by normal statistical measures. That is not to deny that tax avoidance may be one of the motives encouraging much informal activity. In principle informal production would be included in national output. Its exclusions stems from measurement difficulties.

Hill[1979] provides a consistent criterion for identifying productive household activity which should be included in a measure of
aggregate economic activity. Goods provide no problem. The difficulty is in the definition of productive services. The criterion advocated by Hill is whether or not the service is capable of being performed by another economic unit other than the consumer. "The non-service activities are clearly those such as eating, drinking, sleeping, reading, studying, taking exercise or recreation which an individual cannot pay someone else to do on his behalf no matter how valuable his own time is" (p35). Some economists have recently attempted to incorporate household activity into a comprehensive measure of economic activity (for example Eisner[1978] and Kendrick[1979]).

Feige's definition of the hidden economy is sufficiently broad to embrace all forms of economic activity including household and informal production. Household production is excluded from the definitions of Tanzi and the Central Statistical Office but informal production would be included by Tanzi. The position of the Central Statistical Office is unclear in respect of informal activity since they specifically cite "regular statistical sources". Both household and informal production are explicitly excluded from the OECD definition.

Another segment of economic activity which is explicitly excluded from the OECD definition of the hidden economy is unproductive illegal activity. By this they mean illegal activity which does not result in the production of goods and services but rather the redistribution of income and wealth (OECD[1981], p8). Examples cited include burglary and extortion. Strictly interpreted, I believe that the other
definitions (Feige, Tanzi, Central Statistical Office) would also
exclude this activity from their measure of the hidden economy.
However it is not clear that this exclusion is carried out in
practice. In particular those measures of the hidden economy which are
based on inferences from the use of currency inevitably encompass some
unproductive illegal activity.

This last example highlights the interconnection of definition and
measurement. Problems of measurement are inextricably linked with
questions of definition. Differing definitions of the hidden economy
result from different concepts of the objectives and scope of economic
measurement but definitions are also tempered by the availability and
cost of measurement tools. In turn the measurements obtained depend
upon the definition adopted. This relationship between definition and
measurement can be clarified by distinguishing between bias and
measurement error.

1.1 Bias and measurement error

Any measurement process has to cope with the twin problems of bias
and measurement (or sampling) error. Measurement begins with an
idealised concept of some quantity which it is desired to measure. In
an attempt to obtain an operational definition which can be implemented
the compass of the quantity to be measured is restricted somewhat. The
difference between the idealised objective and the operational measure
constitutes bias. Further errors are introduced in the process of actually conducting the measurement. These constitute sampling or measurement errors.

The concepts of bias and measurement error can be illustrated by the measurement of human intelligence. The broad concept of intelligence is intuitively understood but it is too vague to be directly measured. One popular operational measure of intelligence is the intelligence quotient (IQ) which is a normalized score on a standardized quiz. It is recognized that the IQ test only measures certain dimensions of intelligence - the omitted dimensions constitute the bias of the test. Furthermore any given individual may achieve different scores on the same test on different days or different scores on different tests on the same day. This random variation in scores constitutes measurement or sampling error. An economic example is the use of the Consumer Price Index as a measure of the cost of living. There is a difference between the abstract notion of the cost of living and the price of a specific basket of goods (bias). Further errors are introduced in the process of sampling to assess the average cost of a given basket of goods (measurement error).

This example of intelligence measurement illustrates two features of the debate over economic measurement the hidden economy:

1. It is not always clear whether a given deficiency is a problem of bias or measurement error. IQ tests are frequently criticized on the grounds that they are culturally biased in favour of Western
and particularly white culture. In our terms, the dimensions of intelligence which are omitted from the IQ disadvantage certain groups. Yet it could be argued that these deficiencies result from the inadequacy of the particular questions used rather than from a defect in the definition of IQ. In other words they result from measurement error rather than from bias. Similarly it is not always clear whether the omission of certain economic activity from GDP results from measurement error or from bias. For example is informal production involving barter excluded from GNP because GNP is restricted to monetary exchange (bias) or because the economy lacks suitable means to assess its value (measurement error)?

2. IQ tends to become elevated to a target of interest in its own right rather than as merely one measure of an underlying attribute, intelligence. Attention is focused on those attributes of "intelligence" which figure prominently in the measure of IQ. Other aspects of intelligence are diminished in importance. Intelligence tends to be equated with IQ, restricting in subtle ways the analysis and debate about the wider concept of intelligence. Exactly the same phenomenon is observed in the measurement of economic activity where aggregate activity becomes identified with a particular measure of activity - gross domestic product. Activities which are not included in this measure are diminished in importance and often overlooked completely. Economic analysis is constrained to some extent by
the narrowness of the conventionally accepted definition of output. One of the strongest protests against the omission of household work from GDP is that household work inevitably appears to hold less social importance than other activity. It is an important but often overlooked fact that categories and measures fashion our analysis and interpretation of data.

In the case of economic measurement, the fundamental underlying concept is that of aggregate output or production: the total value of all goods and services produced in the economy. "Production is the process whereby labour, natural resources, accumulated capital assets and knowledge are applied to the provision of goods and services." (ABS[1981], p6) This is a very broad definition which the ABS goes on to explain:

"Nor in its widest sense is production confined to the production of goods and services which are clearly of monetary value because they are bought and sold. Goods and services are produced which do not enter the market. They are made available freely by the person or organization producing them (e.g. most goods and services produced by governments and non-profit organizations), or are for the direct personal use of the producer.

The ABS immediately recognises that this is too wide a view of production to be operational: "For national accounting purposes it is necessary to take a restricted view of production. It is not feasible to put a realistic value on the whole of economic production in the sense defined above." (p6) There is an obvious trade-off between bias and measurement error. Recognising that the above definition of production will incur very large measurement errors, the ABS opts very
a narrower definition of production. They trade off measurement error for bias. The definition of GDP becomes that component production which is measurable. That is:

> The aim in the Australian system is to cover all goods and services which actually enter the market as well as that part of production which does not enter the market but for which it is reasonably practicable to impute a value on the basis of closely related or analogous market transactions. (p6)

The problem with this approach is that it lacks consistency. A value is imputed to rental services of owner-occupied dwellings but the labour of the owner-occupier in maintaining the dwelling is not recorded. Similarly the value of services derived from consumer durables is not estimated. This is not intended as a criticism of the ABS whose practice is in line with the United Nations System of National Accounts. However we should recognise that our conventional definition of GNP involves many arbitrary definitions which are made in order to trade-off bias against measurement error.

1.2 The informal economy and the underground economy

It would be congenial to be able to consider separately the problems of bias and measurement error in economic measurement. Thus we could divide the hidden economy into two categories:
1. Economic activity which is excluded from GNP by definition (bias). We might call this the informal economy.

2. Economic activity which is excluded from GNP through measurement error. We might call this the underground economy.

The difficulty with this categorisation is that the categories are not independent. Many of the activities which are excluded from GNP by definition (informal) are excluded only because of the difficulty of measurement and not on any theoretical basis. In attempting to measure the hidden economy it is really not sufficient to concentrate purely on measurement error. We must realise that many activities which are definitionally excluded from GNP are excluded for precisely similar measurement difficulties which our estimates are designed to circumvent. It is inappropriate to regard the conventional definitions of GNP as sacrosanct.

It is important to understand just what is being discussed in any treatment of the underground, informal or hidden economy. Some authors (particularly economists) confine their attention narrowly to the underground economy. Others emphasize the truly informal economy such as household production and cooperatives. Still others have both sectors in mind. I belong to the third group. In coming to grips with the full extent of the hidden economy we need to have both definition and measurement error in mind.
2 Measuring the Hidden Economy

Although it is arguably not the most important aspect, most attention regarding the hidden economy has been devoted to measurement. It might be suggested that any attempt to measure a phenomenon whose existence stems from a desire to avoid observation is either brave or foolhardy. Yet the alternative to measurement is unfounded speculation. While direct measurement of the unmeasurable is obviously impossible, hidden activity leaves traces in measured activity through which it can be assessed indirectly. The methods that have been used show considerable ingenuity and creativity. O'Higgins[1980] provides a useful typology for the measurement techniques which have been adopted, and his typology forms the basis of the following discussion. The primary distinction is between macro measures which are based on aggregate data and micro measures which rely on individual data such as surveys. A number of different measures have been attempted in each category.

Bearing in mind that the distinction between the informal and underground economy is rather fuzzy (Section 1.2), the following discussion relates to attempts which have been primarily directed towards measuring the underground economy. For measurement estimates of the informal economy, see for example Eisner[1978], Kendrick[1979], and Snooks[1983].
2.1 Macro measures

2.1.1 Expenditure-income divergence in GDP

GDP is estimated by measuring both expenditure and income flows. Since it is argued that income flows are more likely to be undervalued than are expenditure flows, the residual discrepancy between the two measures might be used as an estimate of the underground economy. The obvious shortcoming of this measure is the assumption that expenditure flows are not undervalued. This is unlikely. By disaggregating final expenditure and assessing the scope for underreporting in each item, Fisher[1983] estimates that unrecorded expenditure in Australia amounts to 3.5% of GDP. Care must also be exercised in interpreting the residual as an estimate of the hidden economy since many nations already make some adjustment for unreported income. For example the ABS makes a small adjustment to income flows for undeclared legal transactions. This is of the order of 0.2% (OECD[1981] p.11). It is not regarded as an accurate estimate by the ABS.

These caveats notwithstanding it has been noted in Great Britain that the statistical discrepancy (expenditure - income) is large and growing. This has been taken as evidence for the growth of the hidden economy. Given the widespread belief that underreporting is more prevalent on the income side, it is interesting that the statistical
discrepancy for Australia is neither large nor growing. Table 1 compares the recent statistical discrepancy for Australia and Great Britain. Compared to the British data, the statistical discrepancy for Australia is remarkably small and typically negative. If it is the case that income is more likely to be underreported than expenditure, Table 1 gives us some cause to question whether there is a rapidly growing hidden economy in Australia. Of course Table 1 reflects the outcome of all adjustments made by the Statistician to account for hidden activity. I have already mentioned that the ABS makes a small adjustment to the income side to compensate for underreported income.

<table>
<thead>
<tr>
<th>Year</th>
<th>Australia</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970/1</td>
<td>0.01</td>
<td>-0.12</td>
</tr>
<tr>
<td>1971/2</td>
<td>-0.001</td>
<td>0.05</td>
</tr>
<tr>
<td>1972/3</td>
<td>-0.012</td>
<td>0.32</td>
</tr>
<tr>
<td>1973/4</td>
<td>-0.029</td>
<td>1.25</td>
</tr>
<tr>
<td>1974/5</td>
<td>0.021</td>
<td>2.02</td>
</tr>
<tr>
<td>1975/6</td>
<td>-0.005</td>
<td>0.73</td>
</tr>
<tr>
<td>1976/7</td>
<td>-0.003</td>
<td>1.06</td>
</tr>
<tr>
<td>1977/8</td>
<td>-0.007</td>
<td>0.97</td>
</tr>
<tr>
<td>1978/9</td>
<td>0.008</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Source: Australia: ABS Australian National Accounts: National Income and Expenditure 1981/82 Table 1
United Kingdom: O'Higgins[1980] Table 1

2.1.2 Ratio of currency to M1

With the extension of demand deposits, the proliferation of credit cards and other financial instruments, we might expect the demand for
currency to decrease relative to the size of demand deposits. In fact, however, the ratio of currency to demand deposits has risen in many countries in recent years (see Figures 1 and 2). Gutmann[1977] argued that the additional currency was required to support a growing underground economy. Taking the 1937-41 level as normal, Gutmann estimated the size of the underground economy in United States in 1975 at 10% of GNP. Fisher[1983] cites a similar study by Norman[1982] which estimates the size of the underground economy in Australia in 1981/82 at 13.4% of GDP.

Several problems with this approach spring to mind.

- It is very sensitive to the choice of base year.

- The assumption that the ratio of currency to economic activity in the underground economy is identical to that in the formal economy is fundamental.

- There are many factors other than illegality which influence the holding of cash (Cagan[1958]).

In an attempt to cope with the latter problem, Tanzi[1980] estimated an explicit demand for currency equation in which the ratio of currency to total money (M2) is a function of the tax rate, the interest rate on time deposits, the share of wages and salaries in personal income and real per capita income. Tanzi estimated the size of the underground economy in the US at 8-12% of GNP. A similar study
by Evans and Renehan [undated] for Australia (using the ratio currency to demand deposits) obtained comparable estimates. ¹

However it appears that these well meaning efforts may be pursuing an illusion. There has indeed mean a marked increase in the ratio or currency to demand deposits in Australia in recent years. But this has been brought about by a reduction in demand deposits rather than an increase in currency holdings. Figure 1 shows currency holdings and demand deposits in real per capita terms for Australia. Adjusted for inflation, currency per capita is lower than it was 30 years ago. Expressed in 1981 dollars, per capita holdings of currency fell from $497 in 1950 to $309 in 1966 returning to $454 in 1974. During the late seventies which is commonly regarded as the heyday of the underground economy, currency holdings per capita remained almost static in real terms. On the other hand, demand deposits per capita adjusted for inflation have declined by almost 50% over the 30 year period. It is this which accounts for the increase in the ratio of currency to demand

¹ Isachsen, Kovland and Strom [1982] estimated a demand for currency equation for Norway (rather than the ratio of currency demand deposits) which yielded an estimate of 6.3% of the GNP for the hidden economy. This approach avoids the problem discussed in the next paragraph.
deposits. Similar remarks apply to the US data which is illustrated in Figure 2.  

Since the fall in demand deposits has not been matched by a corresponding rise in the holdings of currency, the hidden economy explanation for the undoubted rise in the ratio of currency to demand deposits seems to me implausible. I suspect that the explanation will be found in changes in the real costs of holding and using demand deposits (higher interest rates, bank charges and government taxes) and the development of alternative means for holding transactions balances. For example, Bankcard is often regarded as an alternative to holding cash. It might more appropriately be regarded as a substitute for demand deposits. Contrary to the oft-made claim, the size of currency holdings in Australia do not support a rapid growth in the cash economy.

2.1.3 Relative magnitude of large and small bank notes

Some authors (see O'Higgins[1980] p17-9) have noted that large

2. Figures 1 and 2 relate to total holdings of currency and demand deposits. It might be thought that the reduction in demand deposits reflects the changing financial practices of corporations and that concentrating on household holdings would show a pattern more consistent with the hidden economy hypothesis. However estimates of the currency and demand deposits of household sector obtained from Pagan and Trivedi[1981] Table 4 for the period 1956 to 1979 reveal the same behaviour as the aggregate data.
Figure 1

Currency and demand deposits per capita ($1951) - Australia

Ratios of currency to demand deposits


Year


Year

$ (Real per capita)
denomination bank notes have increased at a faster rate than currency as a whole. Inflation would be expected to induce some change towards higher denominations. But the relative increase in higher denomination is much greater than can be explained by the impact of inflation. This, it is argued, is indicative of the expansion of the underground economy. The major difficulty with this approach is the absence of any convincing rationales as to why underground activity should have any special affinity for large denomination bank notes.

2.1.4 Relationship between total transactions and observed income

Following Irving Fisher, Feige[1979] argues that the total value of monetary transactions in the economy is a good measure of aggregate economic activity. The total value of transactions can be estimated from bank records coupled with estimates of the turnover rates of currency. He suggests that any increase in the ratio of transactions to measured GNP is due to the growth of the underground economy. Taking 1939 as the base year, Feige estimated the underground economy in the US in 1978 at 33% of GNP. This is easily the most spectacular estimate yet recorded. In latter work Feige[1980] has modified his approach to take account of some perceived deficiencies and arrives at a revised estimate that the hidden economy in the US amounted to 27% of GNP in 1979.

Feige's method can be illustrated by starting from Fisher's simple
identity

\[ MV = PT \]

where \( M \) = the quantity of money (currency + demand deposits)
\( V \) = transactions velocity
\( P \) = the price level
\( T \) = volume of transactions

The relationship between the volume of transactions and the total income in the economy will depend upon factors such as the relationship between intermediate and final transactions, the volume of transfers and the extent of financial transactions. This relationship can be represented as:

\[ PT = kPY \]

Combining these two equations, we have

\[ MV = kPY \]

which can be rewritten as

\[ PY = (V/k)M \]

This equation reveals the essence of Feige's transactions approach. From information on \( M \), \( k \) and \( V \) he uses this equation to estimate the total nominal income \( PY \). This exceeds reported income (GNP) and the difference is an estimate of the hidden economy.

In effect Feige turns the demand for money equation on its head. He regards money supply and velocity as exogenous and uses these to
estimate the level of income. To estimate the transactions velocity \( V \), we consider currency and demand deposits separately. Estimates of the turnover of demand deposits can be obtained from bank records.

Estimating the turnover of currency is more difficult. Feige relies on some estimates of the effective physical life of currency. As for the ratio of transactions to income \( k \), Feige treats this as a constant.

Assuming that the hidden economy was zero in 1939, he uses that year's observed income to calculate a value for \( k \) which is then applied to all subsequent years.

Feige's estimates are critically dependent upon the assumed constancy of \( k \) and on his estimates of the turnover rate of currency. Even if we accept his estimates of the velocity of currency, the constancy of \( k \) is extremely dubious. There have been a multitude of social and economic changes since 1939 which would be expected to increase \( k \) - the massive growth of the tax and transfer system and the development of financial markets to mention just a couple. The implausibility of Feige's attribution of the observed increase in income velocity to the hidden economy is also revealed by Figures 1 and 2 which disclose a marked decrease in real per capita demand deposits.

The distinction between Gutman's and Feige's approaches to measuring the hidden economy is the latter's belief that the underground economy is transacted in cheques as much as in cash. Molefsky (1982) has shown Feige's estimates imply that cash accounted for only 37% of underground transactions. The rest must have been conducted by cheque. This amounts to 14% of all cheque transactions. This seems highly
implausible.

2.1.5 Employment trends

Denison[1982] has argued that a significant growth in the underground economy would be accompanied by a decline in recorded employment. Wages and salaries comprise such a large proportion of GDP that underestimation of the latter implies some underestimation of the former. Since wages and salaries and employment are derived from the same data source they can be expected to share any bias. That is if wage and salaries and underestimated, then employment must be similarly understated. Therefore, Denison argues, any growth in the underground economy must be reflected in a decline in employment. However employment rates in the United States, whether aggregate or age specific, have not declined in recent years. This is inconsistent with the supposed rapid growth in the underground economy.

It is possible to counter Denison's employment figures by arguing that employment rates would have grown had it not been for the underground economy. There is no convincing way in which we can postulate a "normal" trend for employment rates. However the stability of recorded employment certainly poses some problem for the proponents of a rapidly growing hidden economy.

Denison's argument receives some support in a recent Australian
study. Fisher[1982] examined labour statistics in Australia to assess the scope for underreporting. While he identified some specific opportunities for underreporting, he concluded that there is "no major discrepancy consistent with anecdotal reporting of informal labour market transactions" (p31).

2.1.6 Problems with aggregate measures

By their very nature, macro measures of the underground economy only attempt to measure the change over some period of time. To infer an absolute size requires the specification of some "standard" such as a base year in which the underground economy is assumed to be non-existent. Gutmann and Feige chose the late 1930's as the period when the economy was entirely above board. This is clearly quite arbitrary and it has been shown that estimates of this type are very sensitive to the choice of base year. In the United Kingdom the currency ratio declined in the late 1960s and 1970s. By appropriate choice of the base year it is possible to "show" that the hidden economy in the United Kingdom is now negative (O'Higgins[1980] p 15, Dilnot & Morris[1971] p157).

A second difficulty with these measures involves the attribution of causation. Some specific counterfactual is postulated arbitrarily, and the difference between the observed outcome and the postulated outcome is attributed to the hidden economy. In Gutmann's work for
example it is assumed that the currency to demand deposit ratio would have been constant but for the growth of the hidden economy. For Feige it is the ratio of transactions to income which is assumed constant. The divergence from the postulated constant is attributed to the hidden economy. More sophisticated models such as that of Tanzi[1981] go some way to meeting this challenge. But the causal interpretation of the observed changes as being due to the hidden economy remains somewhat arbitrary. A further example of this problem is given by Denison's use of employment ratios. His assumption that employment ratios would have remained constant in the absence of any growth in the hidden economy is arbitrary and even unlikely. Yet it is equally difficult to provide a more convincing counterfactual.

A special difficulty faced by monetary studies of the United States is the fact that the US dollar is an international currency. Thus the OECD[1981] argues that this explains rapid growth of currency/money ratios in the US, a pattern which has not been matched in other countries. This is also a problem for the transactions approach of Feige.

2.2 Micro measures

2.2.1 Evasion surveys

Tax authorities are in a position to make an assessment of tax
evasion on the basis of audits which they conduct. A major study was
made by the US Internal Revenue Service [1979] which is discussed by
Tanzi [1980]. The IRS estimated that between 4.4% and 5.8% of legal
income was unreported (Tanzi [1980] Table 1). Not surprisingly this was
heavily concentrated amongst the self-employed who accounted for 44% of
unreported income.

2.2.2 Household surveys

Using data from the British Family Expenditure Survey, O'Higgins [1980] found that the self-employed consistently spent a
higher proportion of their reported income than employees. Since it is
widely acknowledged that the self-employed have much greater
opportunities for tax evasion, this discrepancy can be used as a
measure of tax evasion. On this basis, O'Higgins estimates that income
tax evasion by the self-employed in Britain amounted to 18% of their
income amounts or 2% of national income.

His interpretation however demands some care. Self-employed
incomes are considerably more variable than wages and salaries,
therefore we should expect the expenditure ratio of the self-employed
to vary with their income and consequently with the state of the
economy. In other words we are really interested in the ratio of the
permanent expenditure to permanent income. Household expenditure
surveys inevitably incorporate transitory components. The observed
ratios will be sensitive to economic conditions at the time of the survey.

These reservations are supported by corresponding Australian data. Australia has conducted only two household expenditure surveys (1974/5 and 1975/6); another is due to be conducted next year. The relevant data are summarized in Table 2. The first survey reveals a higher expenditure ratio for the self-employed whereas in the second survey the self-employed report spending a lower proportion of their income than employees. These two surveys differ not only in date but also in coverage. The 1974/5 survey is confined to the capital cities and thus excludes farmers who comprise a large percentage of the self-employed. It is also worth noting that the average income of the self-employed is consistently lower than employees; the opposite is the case in the British data.

<table>
<thead>
<tr>
<th>TABLE 2</th>
<th>Household expenditure ratios</th>
<th>Australia</th>
<th>1974/75</th>
<th>1975/6</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Self</td>
<td>Employees</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Employed</td>
<td>Employees</td>
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<td></td>
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<tr>
<td>Total expenditure</td>
<td>221.53</td>
<td>247.24</td>
<td>245.18</td>
<td>218.33</td>
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<tr>
<td>Total income</td>
<td>236.38</td>
<td>232.32</td>
<td>266.33</td>
<td>250.62</td>
</tr>
<tr>
<td>Ratio of expenditure to income</td>
<td>0.94</td>
<td>1.06</td>
<td>0.92</td>
<td>0.87</td>
</tr>
</tbody>
</table>

The real puzzle posed by these results is why the self-employed do not report consistently higher expenditure ratios given the fact that they clearly have much better opportunities for evasion. Is it perhaps that they underreport both income and expenditure? Or is it the case that they do not underreport income in the household surveys? Another possibility is that employees also understate incomes and particularly gross incomes.

Dilnot and Morris[1981] have made an extensive analysis of the individual records from the British Family Expenditure Survey. After making various adjustments to this data they identified all households whose expenditure exceeded income by a certain threshold. These households were then systematically examined to filter out those for whom reasons other than underground activity might explain the discrepancy. By this process they selected two subsamples - a lower bound and an upper bound sample - whose responses provided evidence of the unreported income. The lower bound sample differed from the upper bound sample in that it resulted from the application of a more stringent filter. For example all pensioners and the (temporarily) unemployed were excluded from the lower bound sample on the grounds that there expenditure could be accounted for by the utilization of previously accumulated wealth. They were included in the upper bound sample. Approximately 9.6% of households surveyed qualified for the lower bound sample whereas the upper bound sample comprised 14.8% of the sample. Extrapolating these percentages to the total population and multiplying by the average discrepancy between income and
expenditure, they obtained an estimate of the hidden economy. Their results are summarized in Table 3.

TABLE 3
Lower and upper bounds for the hidden economy in Great Britain 1977

<table>
<thead>
<tr>
<th>Proportion of FES sample</th>
<th>9.6%</th>
<th>14.8%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average discrepancy between income and expenditure (pounds per week)</td>
<td>31</td>
<td>30</td>
</tr>
<tr>
<td>Implied proportion of GDP</td>
<td>2.3%</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

Source: Dilnot and Morris[1981] Table 2

This attempt by Dilnot and Morris to estimate the hidden economy is one of the most carefully conceived and implemented approaches. As such it obviously deserves more respect and consideration than the heroic extrapolation of a single ratio from an arbitrary base year. But this approach too has its problems. It rests on two assumptions which are unlikely to hold. Firstly it assumes that respondents who underreport their income do not tend to systematically underreport their expenditures. Secondly it assumes that the survey records an unbiased sample of those engaged in underground activity. However since the FES survey is voluntary and has only a 70% response rate, it seems likely that those who engage in underground activity would be less likely than others to participate in the survey. Dilnot and Morris attempt to assess the extent to which the FES sample is representative of the population as a whole but with little conviction. It seems to me more productive to admit that these biases
are probably significant and make some attempt to estimate their magnitude. For these reasons the Dilnot and Morris estimates should probably be taken as a lower bound - a reasonably accurate lower bound on the extent of the hidden economy. Their approach also yields some interesting information on the characteristics of participants in the hidden economy. I will refer to this in the next section.

In a survey of 284 households in Detroit in 1977, Ferman, Berndt and Selio found that 25% of services purchased were obtained from the informal economy. More than half (51%) of the households surveyed reported purchasing at least one service from "irregular" sources (Ferman & Berndt[1981], p27).

In a survey conducted in Norway (Isachsen, Kovland and Strom[1982]) in 1980, 18% of the working age population acknowledged income from unreported work in the previous twelve months. 26% acknowledged that they had paid for such services. This was estimated as comprising 2.3% of GNP. Of relevance to Feige's contention of the importance of cheque transactions, it was reported that 80% of hidden labour transactions were conducted in cash. On average the price charged for irregular work was less than 40% of the price in the regular market.

Another rich source of data which does not appear to have been used yet to assess the extent of hidden activity is time use surveys (see for example Gerhsuny and Thomas[1980, 1983] and Krupinski and Mackenzie[1979]).
2.2.3 Multiple job holding

One of the means available to employees to avoid tax is to undertake a second job in such a way that its income can be concealed. Reported second job holding in many countries is remarkable for its consistency from year to year as indicated in Table 4:

<table>
<thead>
<tr>
<th>Year</th>
<th>Australia</th>
<th>UK</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td></td>
<td></td>
<td>5.2</td>
</tr>
<tr>
<td>1971</td>
<td></td>
<td>3.1</td>
<td>6.1</td>
</tr>
<tr>
<td>1972</td>
<td></td>
<td>3.1</td>
<td>6.1</td>
</tr>
<tr>
<td>1973</td>
<td>3.3</td>
<td>3.5</td>
<td>5.1</td>
</tr>
<tr>
<td>1974</td>
<td></td>
<td>4.0</td>
<td>4.5</td>
</tr>
<tr>
<td>1975</td>
<td>3.5</td>
<td>3.0</td>
<td>4.7</td>
</tr>
<tr>
<td>1976</td>
<td></td>
<td>3.0</td>
<td>4.5</td>
</tr>
<tr>
<td>1977</td>
<td>3.0</td>
<td></td>
<td>5.0</td>
</tr>
<tr>
<td>1978</td>
<td></td>
<td></td>
<td>4.8</td>
</tr>
<tr>
<td>1979</td>
<td>3.2</td>
<td></td>
<td>4.9</td>
</tr>
<tr>
<td>1981</td>
<td></td>
<td>2.9</td>
<td></td>
</tr>
</tbody>
</table>

Source: Australia: ABS Multiple Job Holding, 5215.0, August 1981, Table 10 (adjusted for unemployment)
U.K.: Aldren(1981) Table 3.1

These data do not give the impression of a rapid expansion in tax avoidance through secondary employment. However, to the extent that tax evasion is an important factor in holding a second job, we might expect these statistics to underestimate the incidence of multiple
employment.

Moonlighting is particularly prominent in certain professions such as fireman, police and teachers. A recent study in Wichita, Kansas found that 76% of fireman and 39% of policeman had second jobs (Aldren[1981], p50). In a study of multiple job holding in Cardiff, Aldren[1981] found that 65% gave economic reasons as the primary motive for having a second job.

2.2.4 Problems with micro measures

Although they avoid some of the problems of aggregate measures, micro measures of the hidden economy have problems of their own. Firstly such data is very difficult and costly to collect. Conducting a well-designed survey is an expensive and time-consuming business which may be difficult to justify merely on the grounds of investigating the hidden economy. On the other hand surveys which are conducted with other purposes in mind, such as for tax enforcement, may give an incomplete or inconsistent picture.

A second difficulty is a direct consequence of the first: the cost of undertaking micro studies means that they are likely to be irregular and to lack intertemporal consistency. This makes it very difficult if not impossible to chart the development the hidden economy over time. One of the great advantages of the aggregate methods surveyed in the
previous section is that the data on which they rely is available for long periods of time and hence it is relatively easy to compile of lengthy time series. This is not possible at present from micro studies.

The third difficulty faced by micro measures involves sample bias, response bias and deliberate deception. Studies like the household expenditure survey and time use studies are voluntary. It is possible that the sample who agree to participate are unrepresentative of the population as a whole. In particular participants in the hidden economy may be significantly less willing to collaborate than those economic activity is regular and official. Moreover, when they do take part in a survey, those engaged in hidden activity may be inclined to conceal some or all of that activity, wittingly or unwittingly. It is impossible to estimate the extent of this bias.

2.3 Conclusion

We are all aware of a vast array of anecdotal evidence regarding the black economy. Attempts to give a more precise quantitative measure to this phenomenon have yielded an impressive range of estimates: anywhere from 2 to 33% of GNP. Almost invariably it is the aggregate measures which lie at the higher end of this range. A closer analysis of the data and methods suggests that these estimates should be treated with generous scepticism. Additional cause for scepticism
is provided by Denison’s[1982] observations on the stability of recorded employment which does seem implausible if the hidden economy was growing as rapidly as some of the estimates suggest.

On the other hand it is likely that the bias in the micro measures lies in the opposite direction. For the reasons already discussed, such as incompleteness, sample bias and deception, micro measures probably tend to underestimate the size of the total hidden economy.

The two different approaches lend themselves to interpretation as upper and lower bounds respectively. That is the macro approaches can be regarded as providing an upper bound on the size of the hidden economy; the micro approaches yield lower bounds. My own judgement is that the truth lies closer to the lower bound.

The underground economy (excluding household production) is probably not as extensive as is commonly believed. How then do we explain the prevalence of anecdotes about cash transactions, irregular labour services and so on? Even if in aggregate the hidden economy is small, it can be large and significant in many sectors. The government sector is probably exempt from hidden activity and it is likely to be much less prevalent in the corporate sector. Therefore most hidden activity is probably concentrated in the unincorporated sector. The opportunities for hidden activity are not uniformly distributed and some areas such as building and construction lend themselves readily to irregular activity. Therefore there is ample scope for a rich supply of anecdotes even if the aggregate size of the hidden economy is
small. Moreover what is small depends upon your perspective. Even if the underground economy amounts to only 3% of GDP, that requires an average expenditure per household in 1980/81 of $841. That is a fairly substantial purchase. The hidden economy may be quantitatively small in aggregate yet pervasive.

3 Causes of the hidden economy

Although there is wide variation in the definition of the hidden economy, there is a remarkable degree of agreement about its cause. It is almost invariably assumed that the growth in the hidden economy is a direct result of higher and higher taxes. Yet despite the frequency with which this has been asserted by economists, journalists and politicians, virtually no evidence has ever been offered to support this proposition (see Feige[1980]).

In a recent paper Frey and Weck[1983] assemble some evidence which should caution against naive views of the causes of the hidden economy. If taxes and government restrictions are the main causes of the growth in the underground economy (Tanzi[1980], p428-30), then we might expect that countries in which taxes are relatively high or government restrictions rather more pervasive to have larger than average underground economies. Frey and Weck attempt to test this
proposition by ranking 17 OECD countries on two criteria: (i) the share of taxes (including social security contributions) in GNP of taxation and (ii) the proportion of public administrators in the total workforce. Combining these two measures in a variety of ways, Belgium, Denmark, the Netherlands and Sweden consistently rank highly and therefore would be expected to have rather large underground economies. Conversely Italy, Ireland, Japan, Spain and Switzerland have low ranks and would therefore be expected to have small shadow economies. These results conflict sharply with many preconceptions. In particular, Italy is often cited as an economy in which the underground economy flourishes. Though crude, these comparisons should caution against a naive acceptance of the belief that the hidden economy is merely a response to high taxation and other restrictions.

It seems appropriate to distinguish between the incentive and the opportunity for hidden activity. High tax rates and pervasive regulation supply the incentive for hidden activity. The opportunity for evading taxes and regulations depends upon other factors such as the level of development, social structures, public acceptance of compliance - "tax morality" in Frey and Weck's terminology. The conventional assumption of a tax-lead hidden economy can be saved by arguing that those countries in which there is a high incentive to evade (Belgium, Denmark, the Netherlands and Sweden) have a low opportunity. Conversely economies such as Italy and Spain have ample for evasion which contributes to a large hidden economy, albeit that the incentive for evasion is quite weak. This apparent ascendency of
opportunity over incentive appears rather tenuous.

Indeed it is possible to turn the conventional proposition on its head and argue that taxes are low in countries where the underground economy is large. It might be that tax rates are low in Italy precisely because Italy has a flourishing hidden economy, whereas taxation is an effective means of raising revenue in Sweden because most economic activity is overt and measured. Italy makes do with a smaller public sector because it has inherited a large hidden sector.

No one seriously doubts that taxation is an important factor in motivating the hidden economy. But these inter-country comparisons do suggest that the relationship between taxation and hidden activity is not simple and unidirectional as it so often naively assumed. Furthermore they suggest that other factors may also play a role in promoting hidden activity.

Some insight into these other factors is provided by the household survey in Chicago referred to earlier. Reporting on this survey Ferman and Berndt[1981] write:

There are a variety of reasons for working in the irregular economy, and in most cases there is more than one factor involved. The economic benefits of participation are very important, but coupled with this may be the fact that opportunities for participation in the irregular economy surpass those available in the regular sector. Certain characteristics of irregular activities other than their economic benefits, such as the relative freedom and autonomy and flexibility they offer, are also important. (p35-6)

For some, irregular work is a way of surviving without submitting to the routine of a regular job, a way to develop new skills leading to a change in occupation; or an informal
market testing ground for a fledgling business venture. These and other considerations often combine to set the incentive for participation. A belief in self-sufficiency and the virtue of work can be as strong a motivation as a desire to beat the system. (p38-9)

Fisher[1982] points to the remarkably large share (more than 30%) of owner-builders in new single unit dwelling construction in Australia. He suggests that this has a lot to do with the avoidance of building regulations.

Ferman and Berndt found that the participants in the hidden economy came from all walks of life. They included full and part time employees, unemployed and people not in the labour force. Participants could not be characterized by race, ethnic origin, social group or occupation. They included people dependent on transfer payments and others who were financially independent.

Arguments that the irregular economy is the particular domain of any category based on distinctions of occupation, income level, employment status, social class, sex age or race are at present no more than unfounded speculation. . .

In our research we found little evidence to support popular contentions that the poor, the unemployed, the unskilled and the disadvantaged are actually gainfully employed in the irregular economy (Ferman & Berndt[1981], p39-40)

This assessment is supported by the work of Dilnot and Morris[1981] referred to earlier (Section 2.2.2). Table 5 shows the

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3. See the discussion above on household surveys (Section 2.2.2) for the methodology by which they created this sample. The lower bound sample is that to which the most stringent filter was applied. Recall that all unemployed were excluded from the lower bound sample.
occupation and employment status of their lower bound sample. We see that each occupational and employment group is represented in the underground economy although some more than others.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Self Employed</th>
<th>Full Time</th>
<th>Part Time</th>
<th>All Employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional and technical</td>
<td>9</td>
<td>10</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Administrative and managerial</td>
<td>33</td>
<td>12</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>Skilled manual</td>
<td>43</td>
<td>39</td>
<td>14</td>
<td>39</td>
</tr>
<tr>
<td>Semiskilled manual</td>
<td>11</td>
<td>21</td>
<td>42</td>
<td>20</td>
</tr>
<tr>
<td>Unskilled manual</td>
<td>1</td>
<td>4</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Others</td>
<td>3</td>
<td>14</td>
<td>25</td>
<td>12</td>
</tr>
<tr>
<td>All</td>
<td>22</td>
<td>71</td>
<td>6</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: Others includes teachers, clerical workers, shop assistants, members of the armed forces, retired and unoccupied.

Source: Dilnot and Morris[1981] Table 3

The heterogeneity of the distribution of the distribution of underground activity can be emphasized by reformulating the data in Table 5. If underground activity were evenly distributed across the population we would expect 9.6% of each occupational and employment status group to be in the lower bound sample. (The lower bound sample comprises 9.6% of households.) Table 6 reports the ratio between the observed number of households in each category and the number expected if underground activity were evenly distributed. Categories with
ratios greater than one have a relatively high incidence of underground activity and conversely.

**TABLE 6**

Ratio of expected to actual participation in the underground economy by occupation and employment status

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Self Employed</th>
<th>Full Time</th>
<th>Part Time</th>
<th>All Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional and technical</td>
<td>1.27</td>
<td>0.80</td>
<td>0.87</td>
<td>0.83</td>
</tr>
<tr>
<td>Administrative and managerial</td>
<td>2.27</td>
<td>0.87</td>
<td>1.05</td>
<td>1.19</td>
</tr>
<tr>
<td>Skilled manual</td>
<td>2.48</td>
<td>1.00</td>
<td>1.48</td>
<td>1.07</td>
</tr>
<tr>
<td>Semiskilled manual</td>
<td>2.89</td>
<td>0.98</td>
<td>1.36</td>
<td>1.01</td>
</tr>
<tr>
<td>Unskilled manual</td>
<td>1.48</td>
<td>0.92</td>
<td>0.54</td>
<td>0.70</td>
</tr>
<tr>
<td>Teachers</td>
<td>0</td>
<td>0.65</td>
<td>0.48</td>
<td>0.53</td>
</tr>
<tr>
<td>Others</td>
<td>3.29</td>
<td>1.01</td>
<td>0.97</td>
<td>0.98</td>
</tr>
<tr>
<td>All</td>
<td>2.22</td>
<td>0.94</td>
<td>1.01</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note: Others includes clerical workers, shop assistants, members of the armed forces, retired and unoccupied.

Source: Dilnot and Morris[1981] Table 4

Table 6 highlights the engagement of the self-employed in the hidden economy. In all occupations the self-employed are over-represented in this sample. Not unexpectedly part-time employees are more likely to be involved in hidden activity than the full-time employed. From the occupational perspective administrative and technical and skilled workers are more heavily involved than the unskilled. There is little distinction between skilled and semiskilled workers. Identification of the characteristics of the participants in the underground economy along the lines used by Dilnot and Morris[1981] is a promising avenue for further research.
Although surveys give us some insight into the motivations of the hidden economy, it remains of the most important and least understood issues. Economists have been too ready to attribute the apparent growth of the hidden economy to the ravages of taxation or other restrictions. No one would deny the importance of taxation in encouraging underground economic activity, but focusing on that factor alone is unlikely to produce either complete diagnosis or appropriate prescription.

4 Consequences of the hidden economy

The existence of a hidden sector in the economy has a number of consequences for economic analysis and policy. Some of these consequences are quite undesirable. Even if the hidden economy is small, the undesirable consequences could be severe. In this section I discuss several of the consequences of the hidden economy. For the purposes of this discussion I assume that the hidden sector is sufficiently large to for these consequences to be relevant.
4.1 Economic disinformation

Economic analysis and policy rely on official data which as we suspect reflects only a portion of the total activity in the economy. Provided that the relationship between the measured and hidden components of economic activity is constant, major economic indicators such as the growth rate, the level of unemployment and the inflation rate will not be distorted by the omission of the hidden economy from the economic data base. For the purpose of economic management, it does not really matter how big is the hidden economy provided it bears a constant relationship to the measured economy. However many suspect that the hidden economy is growing relative to the formal economy - that there has been a considerable transfer of resources and economic activity from the formal measured sector to both the informal and the underground economy in recent years. This has profound implications for the conventional picture of economic activity. In particular the primary economic indicators such as the growth rate of GDP, the rate of inflation, the unemployment rate and the growth rate of productivity will all be biased unfavourably.

Development economists have recognised that the apparent dramatic growth experienced by countries beginning the process of development is in part a statistical illusion, reflecting the incorporation into the measured economy of previously unmeasured economic activity. Exactly the reverse phenomenon will be experienced by an economy in which the
hidden sector is growing at the expense of the measured sector. The
dismal growth record of the advanced industrial in recent years could
be largely due to the growth of the hidden economy.

There is reason to suspect that prices in the hidden sector of the
economy are substantially lower than in the regular economy if for no
other reason than the lower rate of taxation incurred in that sector.
This relative price differential is a of course a powerful spur to the
further development of the hidden sector. The Consumer Price Index
(CPI) is based purely on transactions in the formal or measured
economy. If the hidden economy is growing at the expense of the formal
economy, the CPI will overstate the true rate of inflation in the
economy as a whole. Since the CPI plays a major role in future
inflation (through indexation and expectations), its overstatement can
stimulate further genuine inflation.

To the extent that participants in the hidden economy are
registered as unemployed, the unemployment rate will be overstated.
However some caveats are required. Any overstatement on this account
must be counter-balanced by persons who are genuinely unemployed but do
not register. The hidden employed may be more than offset by the
hidden unemployed. Secondly Ferman and Berndt[1981] in their household
survey in Chicago discussed above report that they found little
evidence to support the contention that the unemployed are actually
gainfully employed in the hidden economy (p40). Dilnot and
Morris's[1981] lower bound estimate of the underground economy
specifically excludes the unemployed. The difference between their lower and upper estimates (the latter includes the unemployed) is only 0.7% of GNP. Hence the understatement of the unemployment rate may be less than is commonly believed.

One of the unexplained mysteries of recent economic history is the markedly lower growth rate of measured productivity. The growth of the hidden economy provides a plausible explanation for these observations: namely that the reduction in output for the formal economy exceeds the reduction in inputs. Employees engaged in informal activity may use some of their paid time and other resources of their employer to engage in the informal activity. Informal activities give greater scope for overstating expenses and understating revenues. Informal activity may be less capital intensive and hence less productive.

In any period in which there is substantial flows of resources and activities between measured and unmeasured sectors, the picture of the economy derived from official statistics is likely to be seriously distorted. When the flow is from the measured to the unmeasured, the apparent health of the economy will be worse than its actual health.

These deficiencies in our measurements are not merely a matter of professional pride. Economic statistics are not only used to assess performance - they are an essential guide to policy. If the guide is significantly in error so might be the policy. Feige [1980, 1981] regards the growth of hidden economy as the root cause of the economic malaise which has afflicted industrialized countries during the
previous decade. He argues that the period of 1951-1959 was the "golden age of economics". During this period there was a constant relationship between the measured and the hidden sectors so that economic policy was based on an undistorted view of economic activity. It appeared that economists had attained a high level of control over the economy.

But this achievement was shortlived. The economic consensus has evaporated with the unexpected and unexplained simultaneous occurrence of unemployment and inflation. Feige's explanation is simply that the disease is a mirage, a statistical illusion based on the fact that our economic database applies to a dwindling component of the total economy. This he calls the unobserved income hypothesis which he describes as follows:

Most simply stated, the UIH suggests that systematic biases, unwittingly introduced into our official data, have fundamentally distorted our perceptions of economic realities. A distorted information system lead rational individuals and well-intentioned policy-makers to undertake actions that transform initial statistical illusions into real economic maladies.

(Feige[1981] p205)

In other words the flow of resources from the measured to the unmeasured sector seriously distorts our picture of economic performance. In responding to the inaccurate economic statistics, governments and other decision makers implement policies which are inappropriate to the true state of the economy. These policies in turn do real damage to the economic performance. Simultaneously they
further promote the transfer of resources to the hidden economy, magnifying the inadequacies of conventional statistics and promoting more inappropriate policies.

4.2 Government finance

The growth of the hidden economy affects both sides of the government budget. On the revenue side, it is undoubtedly true that one of the main incentives for the underground economy is the avoidance or evasion of taxation. This increases the relative burden on the formal economy further depressing activity in that sector and creating even stronger incentives for the underground economy. Governments find themselves trapped in a vicious cycle. The smaller the tax base becomes, the higher the tax rates required to raise a given amount of revenue. But the higher the tax rates, the stronger the incentive for avoidance.

Nor is relief to be found on the revenue side. The low levels of activity in the measured sector stimulate strong pressure for increased government expenditure and transfer payments. There is also an incentive for those engaged in underground activity not to fully disclose their income in order to maximise their entitlements to transfer payments. This does not necessarily involve outright fraud but perhaps merely the avoidance of monetary exchange. Since the implicit taxation rates on certain transfer payments can approach or
even exceed 100% (Gruen[1982] p215) the incentive for underground activity on the part of welfare recipients can be much stronger than non-recipients.

4.3 The distribution of income

Like other statistics, our information on the distribution of income is based largely on the measured economy. Opportunities for involvement in the hidden economy are certainly not evenly distributed throughout the economy. The extremes of the distribution, the poor and the rich, have both better opportunities and a greater incentive for involvement in the hidden economy than the bulk of the population. Thus it is likely that the distribution of income is even more skewed than is revealed by official statistics, with greater equality at the bottom end and more inequality at the top. Within otherwise similar groups there is likely to be considerable variation. For an individual with skills, self-confidence and the right opportunities, a spell of unemployment may involve little monetary penalty. For very many others the hidden economy offers no viable alternative to conventional employment and no relief at all from unemployment. It is impossible to say on balance whether the development of the hidden economy is an equalising force; we can be sure that it complicates the real distribution of income and welfare.
4.4 Industrial relations

Several recent studies have highlighted the importance of perks and fiddles in many occupations and industries. The existence of this aspect of the hidden economy has been used to explain the low rates of unionization in certain low paid occupations such as catering and retailing and the seemingly irrational resistance to change in certain industries. The Outer Policy Circle Unit[1978] quotes the example of the opposition of dustmen in Britain to the introduction of plastic bags for garbage collection. This prevented their traditional opportunities for totting (scavenging).

4.5 Incivism

One of the most serious consequences of the hidden economy may be the hardest to quantify – namely the erosion of public confidence in the administrative and taxation system and the ability to undertake government efficiently and fairly. Recent revelations regarding the extent tax evasion and avoidance in Australia appear to have considerably undermined public confidence in the taxation system. The taxation system necessarily relies to a large extent on voluntary

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4. See for example Henry[1978], Mars and Nicod[1981]. Other references are given in Outer Policy Circle Unit[1978].
compliance for efficient operation. Widespread public acceptance of a taxation system is probably a necessary condition for efficiency and equity. Surely such public approval and cooperation is much harder to acquire than to dissipate.

4.6 Conclusion

Although there is ample ground for healthy scepticism regarding the more extreme estimates of the size of the hidden economy, even a moderately growing hidden sector threatens significant consequences. Furthermore some of the most serious consequences may stem from the perception of the hidden economy rather than its actuality. For example the breakdown of public confidence in government and the tax system is fueled by the belief in the hidden economy rather than its actuality. This in fact might be the most damaging consequence of the hidden economy.

Another serious consequence of growing hidden economy is its effect and the accuracy and interpretation of economic statistics. The possibility that recent economic performance is better than recorded but not as good as it might have been if policy-makers had not been mislead by inaccurate statistics warrants serious attention. It is a simple and beguiling explanation - but it should not be disregarded for that reason alone.
5 Issues

By way of conclusion I offer the following checklist of some of the important issues raised by the existence and growth of the hidden economy:

1. The definition of the hidden economy. The appropriateness of current economic accounting conventions and techniques. The scope and accuracy of conventional GNP as a summary measure of economic activity.

2. The size and relative growth rate of the hidden economy. The development of more precise upper and lower bounds.

3. The impact of the growth of the hidden economy on GDP, inflation, unemployment and productivity. The design of economic policy models which take account of the deficiencies of conventional economic statistics as indicators of aggregate economic activity.

4. The impact of the hidden economy on the distribution of income. Access to and use of the hidden economy by different groups.
5. The design of an efficient and equitable tax system which takes account of the hidden economy.

6. Policies for the income maintenance system which recognize and account for the hidden economy. This entails not merely the avoidance of fraud but also encouragement for the positive aspects of informal activity.

7. The nature and extent of perks and fiddles and their implications.

8. The implications for the hidden economy and economic measurement in general of technological improvements in the capacity for monitoring economic activity.


In terms of the distinction which I made in Section 1, the underground economy has featured more prominently in subsequent sections than the informal economy. Item 9 returns attention to the informal economy which assumes some importance in view of the announced government policy of providing financial assistance to the informal economy. In his recent speech to the ILO, the Prime Minister committed his government to support for "alternative employment" to reduce "the
demand for jobs". There has been little if any research in Australia on the viability of different types of alternative employment, the degree of reliance of existing informal activities (such as communes) on the income maintenance system, and the most appropriate forms of government support. In particular there seems to be a widespread belief that these ventures are necessarily rural rather than urban based; yet the relative performance of rural and urban based communities have not been studied. It would seem desirable that some of these issues are addressed before large amounts of funds are committed.
6. References

ABS Australian National Accounts: Concepts, Sources and Methods

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