(e) The labour market approach

In this approach, one compares the participation rate (defined as the ratio of labour force to population) of one country to another. If the estimated ‘participation rate’ is lower than expected, the discrepancy could be an indication of the labour force employed but in the hidden part of the country’s economy. This method of estimating the size of the hidden economy has been applied in Italy by Contini (1981). He has taken the normal participation rate to be 42 per cent based on two ad hoc surveys on the non-working population. According to the researcher, the official rate of labour force participation in Italy has declined drastically since the late 1950’s while unofficial estimates of the rates have been higher. This difference suggests that a major portion of employees find their employment in unrecorded activities.

Isachesan, Klovland and Strom (1982) too have reported the results of a similar labour market survey carried out in Norway in 1980. The researchers found that some 37.5 per cent of their sample admitted to having either worked in the hidden economy or paid for hidden economy services over the previous 12 months.

There are at least three major shortcomings with this approach. First, the reliability of the approach clearly depends upon the accuracy of the surveys of the non-working population in establishing a ‘true’ participation rate (Ahmad and Stern, 1989). Secondly, the conversion to a monetary figure is dependent upon assumptions about labour productivity in both the official and unofficial sectors of the economy. Thirdly, this approach accounts for income from labour only and not from capital.
Surveys of the informal labour market, despite their shortcomings, are likely to be a rich and necessary data source for providing information on the characteristics of the irregular labour force. For instance, Del Boca and Forte (1982) provided evidence of a considerable hidden building industry in Italy. In the years 1971 to 1979, according to official statistics, the number of new houses completed was estimated at 1.5 million. In contrast, the number of new household connections for electricity consumption in the same period exceeded 3.1 million. The discrepancy reflects the building activity that is simply not being recorded by the public authorities. The relevance of this approach to Malaysia is limited because of the unavailability of reliable employment data.

2.4 Comparison Between Approaches to Estimate Tax Evasion

Having discussed several ways to measure tax evasion using direct approaches and to measure the hidden economy using indirect methods, some comparison is called for.

- The physical input approach shares a close resemblance to the monetary approach in that both of these direct approaches seek to identify some stable ‘norm’ linking the use of physical inputs (or monetary stocks) to national output. However, the latter approach is more popular because reliable data is readily available from government authorities.

It is important to note that to the extent national income accounts rely on unadjusted tax-based data as inputs, the existence of unreported income will reveal a negative bias to estimates of general economic activity. Consequently, to the extent that the
relative rate of tax evasion increase: over time, recorded rates of economic growth will be biased downwards.

- The sampling approach and survey of taxpayers are both direct approaches but the former relies on official records, the latter on self-report.

An outline of evasion behaviour and measurement strategies is given in the following sub-section.

2.4.1 Evasion Behaviour and Measurement Strategies

With respect to income taxes, evasion behaviour usually takes the form of deliberately under-reporting income or claiming unwarranted deductions (Wallschutsky, 1984; Loftus, 1985). Since the specific behaviours comprising income tax evasion cannot be directly observed in natural settings, researchers needed to use other forms of measurement strategies to identify its occurrences. These include:

(i) empirical studies,

(ii) experimental simulation,

(iii) self-report measures.

The problem of extracting reliable empirical data on income tax evasion has led researchers to ‘invent’ their own data via experimental simulation of the income tax assessment and evasion process (see Jackson and Jones, 1985; Weigel, 1991). Alternatively, survey (self-report) approaches have been employed (See Spicer and Lundstedt, 1976; Grasmick and Scott 1982).
The strength of experimental simulation studies lies in their ability to control and manipulate the variables of interest, but the main weakness is that the hypothetical choices may not reflect accurately the choices that would be made in actual situations. Simulation work too suffers from a lack of realism as subjects in a simulation exercise are encouraged to maximise net income after providing them with the probability of detection and the penalty rate. However, not all experiments encourage the subjects to maximise net income. For example, Baldry (1987) designed an experiment which replicated the income tax assessment process. The subjects were given the same types of incentive (and disincentive) to evade tax as they were in the actual assessment procedure. They were asked to play the game and told that there would be monetary rewards. Therefore, the experimental strategy used was able to control and manipulate the variables (income, tax rates and tax evasion) that determined the relationship between increased tax burden and compliance level.

Data derived from self-reports in which taxpayers are asked to recall their own activities, or other activities from which evasion can be inferred, are notoriously difficult to interpret. For instance, the estimated evasion of income based on this technique depends upon whether individuals involved in the concealment of income are willing to reveal all personal sensitive details. Besides, there also exists scope for individuals to give false information when they complete the survey questionnaire. However, such a view can be mitigated if the questionnaire used in the survey focuses on other legitimate activities, so that the evidence of evasion can be inferred. Further, self-report techniques used as a research tool are relatively easy and inexpensive to
collect. For these reasons, this study chose to use a self-report survey which is discussed in Chapter 4.

2.5 Sources of Data for Estimating the Size of the Hidden Economy

Any move to measure the extent of such activity which is intended to remain covert is fraught with numerous problems. Estimates of the size and growth of the hidden economy are likely to be subject to considerable variation and there is no real means of assessing their accuracy. Consequently, it would be wise not to base economic policy or even estimates of tax evasion solely on the outcomes that arise from these estimations.

According to Feige (1990), any research strategy to approaches of measurement must be sufficiently broad to encompass available evidence from different sources and obtained by different procedures. Three important information sources which individually have an important role in the analysis, are as follows:

- Anecdotal information
- Macro economic data
- Micro economic data

2.5.1 Anecdotal Information

The first source of information is the broad area of anecdotal information which is not readily measured by quantitative means, perhaps due to the purely suggestive nature of the information derived. Such ‘clues’ are, nevertheless greatly relevant as a qualitative signpost to both the frequency and the nature of the event under
investigation. Undoubtedly, anecdotal ‘clues’ could not in any way be used for testing hypotheses but would provide a necessary starting point to commence an inquiry or a scientific study. A practical way of gathering anecdotal information is as a result of ‘participant information’ permitting researchers to make sufficient acquaintance with people engaged in hidden economic activities so as to be trusted and accepted as routine participants. Much of the survey data gathered on the workings of the hidden economy in Malaysia was obtained using this method (See Chapter 5, section 5.3). The anecdotal information will provide some ideas on where to start a ‘search’ as tax officers use such information to at least identify possible areas for investigations.

2.5.2 Macro Economic Data

The second source of information depends upon macro economic variables. Macro approaches utilise published data compiled for purposes unrelated to the study of the hidden economy. As these are unobtrusive measures, they are not susceptible to wilful distortion on the part of a respondent (Feige, 1990). An important strength of the macro approach is its ability to provide temporal measures of both the size and growth of ‘hidden’ or ‘unobserved’ activities. Furthermore, macro economic studies depending on monetary aggregates involve minimal cost. Such studies are usually less expensive to undertake.

A final point is that a structured model based on a set of specific assumptions may allow inferences to be drawn about the hidden economy on the basis of macro data. However, since the conclusions cannot be tested, the results are only as good as the assumptions, which themselves cannot be directly verified. Macro economic data
would nevertheless be useful for contributing supportive indications of strategy results. A quantitative approach, relying on macro data (monetary variables), has been used to estimate the size of the hidden economy in Malaysia (See Chapter 6).

2.5.3 Micro Economic Data

The third source of information involves application of micro economic data. Such data could be collected from income tax returns, labour force records and individual survey studies.

A major strength of the micro research approach is its ability to provide disaggregated information on particular characteristics of firms and individuals engaged in hidden activities. However, micro economic data collected from sources such as individual survey studies are not always reliable especially when the information sought is sensitive or likely to be incriminating (Weigal et al., 1987). The micro economic approach was not used to estimate the extent of tax evasion in this study. A survey that was undertaken instead examined taxpayers’ understanding and knowledge of income tax laws and of their responsibilities in filing and settling their taxes within the stipulated periods. The findings of this survey are outlined in Chapter 411.

2.6 Specific Studies on Hidden Economy/Tax Evasion

Studies on estimating the hidden economy/tax evasion in developing countries have been mainly devoted to India and, to a lesser extent, a few Latin American and African countries. More recently, a study of the hidden economy in Thailand was carried out by Thai Farmers Bank. It indicated that the hidden economy in Thailand is
at US$91-125 billion, which represents some 57 per cent of Gross Domestic Product (International Business Asia, 1996)\textsuperscript{12}. In the case of People’s Republic of China, Zafanolli (1985) did not estimate the underground economy in China per se, rather the researcher outlined the major sectors in which underground economic activities have been observed to be most prevalent. Similar reasoning underlies Question 1 of the survey on insights of the hidden economy in Malaysia discussed in Chapter 5 (section 5.3.1).

Section 2.6.1 discusses the measures employed to estimate the hidden economy in Malaysia, India and Tanzania and the measurement of tax evasion in Argentina and Columbia. The discussion is confined to these countries because most of the work done contains useful information which can be applied to the estimation of the size of the hidden economy as well as tax evasion in Malaysia (See Chapters 6 and 7).

2.6.1 Hidden Economy in Malaysia

Research into the hidden economies of developing countries are rudimentary compared to its counterparts in industrialised countries. Following a monetary approach established by Kloveland (1! 80), Kanbur’s (1994) research estimated the size of the hidden economy in Malaysia for the years 1980 to 1985. They used a monetary approach because monetary statistics were readily available. The researcher assumed that cash is the \textit{modus operandi} of the hidden economy. The monetary approach used involved demand for currency functions which combined the stock adjustment model with the expected income hypothesis. The income hypothesis stipulates that the level of consumption is determined by the ‘expected’ or ‘permanent’ income.
As mentioned earlier, the monetary approach used in this research was based on the work of Klovdal (1980) but refined using Gutmann’s (1977) and Tanzi’s (1983a) methodology. The model utilized the Nerlovian stock adjustment process which has become a popular behavioural hypothesis for the explanation of the behaviour patterns of economic units. The basic model of the demand for currency equation relates the stock of currency demanded by the public to the price level, the volume of transactions in the regular economy, rate of interest and some tax rate as a proxy variable for the hidden economic activity.

The overall estimated size of the hidden economy was unusually small. For instance, the percentage of hidden economy to GDP varied from a high of 1.20 per cent in 1980 to a low of 0.23 per cent in 1984 (Table 2.2). Comparable estimates of the size of the hidden economy, except for Thailand in the ASEAN region are not available. As was mentioned in Section 2.6, in Thailand the percentage of hidden economy to GDP was estimated at 57 per cent.

The results, in the case of Malaysia, indicated that during the period 1980 to 1985, the overall size of the hidden economy has varied considerably, throwing doubt on the assumption that hidden economy transactions are made exclusively in cash.

There is obviously a need to estimate the degree of hidden economy in Malaysia more accurately. This estimate may possibly be used to adjust the national accounts accordingly.
Table 2.2

Estimates of Hidden Income in Malaysia

<table>
<thead>
<tr>
<th>Year</th>
<th>Hidden Income Millions (RM)</th>
<th>Percentage of Hidden Income to GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>635.66</td>
<td>1.20</td>
</tr>
<tr>
<td>1981</td>
<td>550.40</td>
<td>0.94</td>
</tr>
<tr>
<td>1982</td>
<td>36.91</td>
<td>0.06</td>
</tr>
<tr>
<td>1983</td>
<td>374.77</td>
<td>0.53</td>
</tr>
<tr>
<td>1984</td>
<td>183.55</td>
<td>0.23</td>
</tr>
<tr>
<td>1985</td>
<td>392.59</td>
<td>0.50</td>
</tr>
</tbody>
</table>


The estimated size of the Malaysian hidden economy depended on the following assumptions:

- transactions in the hidden economy are paid in cash.
- the income velocity of money is the same in the hidden economy as in the recorded economy.
- there was a stable demand for currency in the specified period.

2.6.2 Hidden Economy in India

As mentioned earlier, a considerable amount of work has been done to estimate the hidden economy in India. Notable among researchers in the case of India are: Kaldor (1956), Gupta and Gupta (1982), Gupta and Mehta (1982), Prasad (1984), Sandesara (1982a, 1982b, 1983, 1985), and NIPFP Report (1986).
Chugh and Uppal (1986) reviewed the entire range of approaches which have been used to estimate the hidden economy in India. They grouped these methods into three broad categories namely:

- the fiscal approach which has been used by Kaldor (1956) and the NIPFP Report (1986).
- the transactions approach of Feige (1979) which has been used by Gupta and Gupta (1982) and Prasad (1984).
- the monetary approach of Gutmann (1977) which has been used by Sandesara (1982a, 1982b, 1983, 1985).

Table 2.3 highlights selected approaches used to estimate the size of the hidden economy for India.

<table>
<thead>
<tr>
<th>Author</th>
<th>Year of Research</th>
<th>Methods</th>
<th>Principal Approaches</th>
<th>Size (Percentage of GNP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prasad (1983)</td>
<td>1979/80</td>
<td>Monetary</td>
<td>Transactions method</td>
<td>14.0</td>
</tr>
<tr>
<td>Sandesara (1985)</td>
<td>1979/80</td>
<td>Monetary</td>
<td>Currency-demand deposit ratio</td>
<td>Nil</td>
</tr>
</tbody>
</table>

Note: * Discrepancy is between estimates of taxes due and actual taxes collected
The estimates of the size of the hidden economy, highlighted in Table 2.3, vary greatly depending on the methodology used. Sandle’sara’s (1985) use of the currency-deposit ratio method yielded negative estimates of the hidden economy over the period 1952-53 to 1979-80. The negative estimates do not make sense and indicate problems with the specification of the model in the context of the Indian conditions where the existence of the hidden economy is widely acknowledged and supported by other methods of estimation.

The divergence in the size of the estimates indicated in Table 2.3, suggests a major doubt on the reliability of the procedures used. Obviously, the estimates are a function of the level and quantity of available information and the author’s understanding of the activities.

2.6.3 Hidden Economy in Tanzania

In the case of Tanzania, two different approaches were used by Kitine (1993) to estimate the underground economy, a term which in this study is used interchangeably with the term hidden economy. The two approaches employed are the use of:

- monetary variables to estimate the hidden economy for the period 1978 to 1991, and

- survey data to estimate the hidden economy for 1991.

(a) Monetary approach

In estimating the hidden economy of Tanzania, Kitine (1993) considered the application of four variants of the monetary approach. These variants are:
(i) ‘Currency-demand deposit ratio’ method that was originally employed by Cagan (1958) and later refined by Gutmann (1977).


(iii) ‘Currency-money ratio’ method developed by Tanzi (1982, 1983a). This variant is also a modified version of Cagan (1958).


Although Kitine (1993) employed three monetary variants, only the first variant stated above, the ‘currency-deposit ratio’ method of Gutmann (1977), produced meaningful results. The size of the hidden economy, using Gutmann’s method, ranged from 2.96 per cent to 29.74 per cent for each of the years 1978 to 1991. The other variants were not found to be useful for this study. For instance, the second variant, the ‘transactions’ method, could not be employed because adequate components of monetary data were not available. The third variant, ‘currency-money ratio’, that was employed using Tanzanian data yielded negative estimates for the size of the hidden economy. Finally, the ‘error component’ method produced insignificant results.

The limitations of the different variants in the monetary approach are discussed in Chapter 6.

(b) Survey approach

The second approach involved the use of survey data to estimate the hidden economy of Tanzania by applying the randomised response technique that was first developed
by Warner (1965). According to Kine (1993), this technique involved the use of a randomised device to protect the identity, privacy and confidentiality of the respondents. His approach involved taking random samples from the population of taxpayers and estimating the proportion of the respondents’ income which is not reported to the tax authorities. The main reason for the use of the randomised response technique was to overcome the tendency on the part of the respondents to deny being engaged in the hidden economy.

Another technique, a modified version of the vector response that was developed by Bourke and Dalenius (1976), was also used by Kitine (1993). Both techniques were employed to illustrate different ways of affecting the randomised response method. The results from the use of the randomised response method produced an estimate of the hidden economy for 1991 of about 30 per cent of the GDP.

There were at least two major difficulties with the survey approach using the randomised response technique. First, only a small percentage of the population in Tanzania is subject to income tax. This means the sample probably reflects less of the income reporting behaviour of the population than would be the case for a well developed economy. Secondly, a reasonable proportion of the GDP of Tanzania is made up of the subsistence sector which includes informal economic activities. It is, therefore, unreasonable to expect an accurate stratified random sample.

As mentioned earlier, Kitine (1993) applied three monetary variants to estimate the hidden economy in Tanzania, but only the ‘currency-demand deposit ratio’ method of
Gutmann produced meaningful results. The researcher also introduced a new survey approach of estimating the hidden economy, the randomised response method. The estimates derived, for the year 1991, from the use of this method are qualitatively comparable to the currency-demand deposit ratio method.

2.6.4 Tax Evasion of Selected Countries in Latin America

Herschel (1978) made reference to two types of studies meant to measure tax evasion in developing countries. The studies were broadly classified as follows:

(i) global measures of evasion; and
(ii) special surveys.

Heschel’s technique was really a combination of various approaches that were discussed earlier. The purpose of the study was to evaluate and describe procedures that were employed in Argentina to measure tax evasion, using global measures (also referred to as the macroeconomic approach). In the case of Colombia, special surveys were employed to measure tax evasion.

(a) Tax Evasion in Argentina

Concerning global studies, Herschel (1978) made reference to the following two studies employed in Argentina, namely:

- the gap approach which related taxable income to national accounts and was intended to estimate total evasion, and
- an examination of evasion discovered through a special amnesty.
The Gap Approach

National income data on the net domestic income of entrepreneurs, the self employed, professionals, owners and renters was compared with declared personal income from income tax declarations. Adjustments were then made for investment allowances, direct taxes paid and personal exemptions which were included in income of National Accounts, but were deductible for tax purposes. Further estimates were derived for declared and non-declared gross income by income classes. When the income data was available, it was possible to estimate potential, actual and evaded income tax liabilities. These estimates were also available by income classes.

The calculations discussed above are only rough estimates. However, the findings contribute important data to the procedural policy of tax authorities. For instance, they allow for concentration on those specific income classes which are more inclined to evasion, notably taxpayers who pay high amounts compared with those who pay, originally at least, only small sums of tax, and the self employed in contrast to workers and employees.

With regards to corporate tax, Herschel (1978) concluded that evasion was not very significant, a fact which is explained by the greater control used in the case of corporate entities.

Amnesty Approach

This approach was based on an amnesty which gave tax evaders the opportunity to rectify their situation with the tax authorities. For this purpose, tax evaders had to provide a declared statement of their net wealth as of 31 December 1961. The
discrepancy between this new declared statement and the usual balance presented for income tax, was considered as capitalisation of income. To this capitalised amount, an estimate was added for consumption expenditures. An important feature of this amnesty was the fact that not only were all penalties waived, but also the rates of the special tax falling on the increment of wealth plus consumption were substantially lower than the normal rates of the income tax. Furthermore, no tax had to be paid at all if the increment of wealth reported was invested in bonds of a new public loan issued at that time. Comparing the income originally indicated for income tax with the income determined for the special tax, it was then possible to calculate evasion coefficients according to income size and source of income.

The shortcomings of the amnesty approach were discussed earlier in Section 2.3.1 (d). Special surveys employed to measure tax evasion in Columbia are discussed below.

(b) Survey of Tax Evasion in Columbia

This study was made in Columbia for the Musgrave Reform Commission. In view of the fact that evasion was assumed to be very high among small businesses, especially in commerce and the professions, a survey to get a quantitative estimate of evasion was initiated.

The survey analysed 2,000 cases corresponding to 27 different activities, mainly in the professional and business fields. The sample was chosen from the yellow pages of the telephone book. For each individual or company in the sample, figures for gross income, net income, taxable income and net wealth were obtained. An initial effort was made to determine the extent of non-reporting and individuals who failed to
register a return were classified as possible evaders. Net income determined by the income tax return of those taxpayers belonging to each respective activity who did file returns was then compared with estimates for an employment and unemployment survey made by the University of Los Andes.

The results of the survey indicated that under-reporting of income in professional activities such as dentists and lawyers was very significant. As for commercial activities such as retailing and wholesaling, substantial under-reporting was also reported but precise figures were not made available.

The limitations of the survey approach were discussed in Section 2.3.1 (c).

2.7 Summary of Literature Review

Several approaches to estimating tax evasion have been discussed and are they not without their shortcomings. Hence, it would be wise not to base economic policy, or even estimates of tax evasion, entirely on the findings that emanate from these estimations. Nevertheless, it has been reported that the International Monetary Fund technical assistance committees have periodically computed the potential yield of selected taxes using some variant of the national accounts method (Tanzi and Shome, 1993). Unfortunately, the findings are not made available for public knowledge due to the confidential nature of the reports. Such reports, if made available, would assist in ascertaining the nature and extent of tax evasion. An alternative solution is the use of results of empirical studies. Unfortunately, any progress on empirical work has proven difficult, if not impossible. Researchers are not able to gain access to the data
about the extent of tax evasion at the micro level. Other researchers such as Smith (1986) have resorted to using survey techniques while Frey and Weck-Hanneman (1984) have used soft-modelling approaches. While their work is inspiring, one must remain sceptical about how far one can generalise from the results of such studies. The answer probably lies in the need for a careful, sophisticated econometric analysis of a collection of individual tax returns and a TCMP-like data set, as and when they are made available to researchers. Until then, researchers should be sensitive to the limitations in the methodologies used and select the methodology that is most appropriate for their research goals.

Although all the approaches use to estimate the size of tax evasion have measurement problems, monetary approaches appear to be more reliable. Proponents of the monetary statistics approach assert that the use of monetary data provides a better source for gauging hidden activity (Porter and Bayer, 1989). This is because accurate data on the amounts of currency in circulation are readily available from the central bank. Illegal economic activity normally relies on the use of cash transactions so as to avoid leaving an audit trail. Consequently, by measuring the discrepancy between the volume of cash actually in use and the volume that one would expect to be in use on the basis of income reported to tax authorities, one can make some estimation of the size of the hidden economy (a proxy for tax evasion).

Given the ideas and concepts developed in this chapter, the next stage is to review a particular taxation system to see whether those ideas and concepts are applied in
actual practice. The particular taxation system used in this study is the Malaysian taxation system which is reviewed in the next chapter (Chapter 3).
Endnotes

1. It should be noted that gains through bartering are taxable. However, such gains are often not reported to tax authorities.

2. Deductible reliefs and exemptions are subtracted from personal income in the national accounts and the balance of the total is compared with that reported in income tax returns.

3. The gap exists because some individuals and businesses understate income, overstate deductions, credits and exemptions, and make errors on the tax returns they file. It exists also because some do not file the tax returns they are required to file, and because some do not voluntarily pay tax on income they reported. (Inland Revenue Service, Income Tax Compliance, Supporting Appendices to Publication 7285: Washington DC, US Department of the Treasury, 1988)

4. In order to rectify the deficiency resulting from the exclusion of non-filers, the Inland Revenue Service introduced the TCMP Plus approach which modifies the TCMP by supplementing the data with information from law enforcement agencies. For instance, a comparison is made with a sample of the Social Security Identification Numbers and the Income Tax Return to trace non-filers.

5. There is no provision in the Malaysian Income Tax Act specifically mentioning the capital accretion method as a means of determining the taxable income of a taxpayer.
Nevertheless, authority for its use can be found in Section 90(1)b which states as follows:

“where a person has delivered a return under section 77 to the Director General for a year of assessment, the Director General may refuse to accept the return and, according to the best of his judgement determine the amount of the chargeable income of that person for that year and make an assessment accordingly.”

In a case that is under investigation, the DGIR is in effect rejecting a taxpayer's return and the use of the capital accretion method of proving income may be said to be an exercise of the Director General's judgement in determining the taxpayer’s true taxable income.

6. In the US, Revenue authorities made available TCMP data to researchers for the first time in the mid-1970’s (Long and Swingen, 1992, p. 639). This new approach by the Revenue authorities was a result of extensive litigation under the Freedom of Information Act by one of the authors (Long v. Inland Revenue Service, 1975).

7. Correspondence with the author to find out the approach used to estimate the size of the hidden economy in Sri Lanka drew no response.


<table>
<thead>
<tr>
<th>Country</th>
<th>Labour Force as % of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>35.3</td>
</tr>
<tr>
<td>France</td>
<td>42.3</td>
</tr>
<tr>
<td>West Germany</td>
<td>42.7</td>
</tr>
<tr>
<td>USA</td>
<td>44.4</td>
</tr>
</tbody>
</table>
9. This approach of estimating the size of the hidden economy has been largely used by Italian researchers. One possible reason is that the measured labour-force participation rate in Italy is considerably below that observed in other developed countries.

10. The only real possibility of assessing the size of the hidden economy is to get a range of estimates from the different approaches.

11. This survey generally yielded information on various things which did not really have much to do with the hidden economy but are relevant to measuring tax evasion. For example, overstating deductions does not lead to concealment of any national accounts data.

12. According to this study, the growth of the hidden economy is not only a result of high taxes and tariffs but is also due to a widening disparity in income distribution which has encouraged more people to be involved in illegal activities.

13. ASEAN refers to the Association of South East Asian Nations. The seven ASEAN member countries are: Indonesia, the Philippines, Singapore, Brunei, Thailand, Vietnam and Malaysia.
14. This estimation of the hidden economy in Thailand (57 per cent of GDP) appears to be excessive. In a more recent article, Tanzi and Quirke (1996) have estimated that the annual financial gains from concealed activity such as distribution of illegal drugs, as well as theft and embezzlement, insider trading, traffic in nuclear materials, usury and prostitution is up to US$500 billion or merely two per cent of global GDP. Judging from Tanzi and Quirke’s (1996) ‘guesstimate’, the size of the hidden economy for Thailand is 23 times the global average and this large difference shows that the estimates for Thailand are exceedingly on the high side.

15. The vector response technique involves the use of a randomization device to protect the identity, privacy and confidentiality of the respondents. The technique that was employed involved the use of a random sample of 300 income earners who were interviewed in order to solicit truthful responses regarding unreported income.

16. This estimate (30 per cent of GDP) is comparable with the estimates obtained by using the method of Gutmann (26.2 per cent of GDP) for the year 1991.