Examining Informal Economic Activity i Selected Caribbean Countries Using Monetary Statistics*

by

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* This refers to work in progress and the author requests that the paper not be quoted in its present form.

INTRODUCTION

Over the last decade, interest in the behaviour of the informal economy in the Caribbean has increased significantly. This interest has not been limited to academic research and publications, but has involved the public media and, in some countries, public policy-makers.

In our view, this interest has been generated by an identifiable confusion between published official statistics and observation of the facts of economic life. The pioneering work on Jamaica's informal economy by Witter (1977)[1] begins by asking :

> "At least 25% of the Jamaican work force are unemployed; how do they survive? ...Considering that all these people tend to have large numbers of dependents - children, parents, unemployed relatives - we must ask the question: how do they survive? "

He answers the question posed by suggesting that the myriad of informal economic activities (which he terms " the hustle economy ") represents a most important means of economic

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1 See Witter (1977) pp. 1.

survival for many Jamaican working people. Since Witter, a number of researchers have examined various aspects of the informal economy in Caribbean countries[2] .

In only very few instances, however, have Caribbean public policy-makers publicly acknowledged the significance of the region's informal economy. One possible explanation may be the dearth of information on its size, composition, and its position in the macro-economy. In the late 1970s, the Jamaican authorities recognised the major contribution of illegal bus or "robot" operators to easing public transportation problems and transformed these operations into an officially regulated mini-bus system. Earlier this year, in Guyana, the authorities legalised the informal or " parallel " market in foreign currencies; hitherto illegal currency dealers, once they are registered and pay the required fees, are now legally permitted to operate in the new "cambio" market.

Any informal economy hypothesis begins with a critical assessment of the veracity of the official statistics

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2 See Anderson and Gordon (1987), Danns (1987), Le Franc et al. (1985), Reddock (1980), and Witter and Kirton (1990).

published by government agencies. This hypothesis argues that a significant part of a country's economic activity is escaping the official data collection system which has been established to record and monitor this activity. In addition to being unrecorded, this activity is usually unregulated and untaxed.

It is to be noted that official statistics usually form the basis of public policy preparation and implementation. Where there is a large informal economy which is unrecorded, the official information system becomes biased and this can generate erroneous economic policies. By its very nature, informal economic activity does not lend itself to official regulation; a growing informal economy, therefore, reduces the capacity of the authorities to regulate and control resource allocation and use. On the fiscal side, tax revenue is an important source of government revenue in most Caribbean countries. A growing informal economy which is untaxed mainly because its economic activity is characterised by non-compliance with the tax laws, reduces potential government revenue.

THE INFORMAL ECONOMY: DEFINITIONAL ISSUES

Background

There are a wide range of terms which have been used to describe various aspects of the informal economy of a country; these are basically rooted in the different theoretical and methodological perspectives of the analysts.

For example, those analysts concerned about the informal economy from a national accounts perspective use terms like "unrecorded", "unobserved", "shadow" or "subterranean" to describe the phenomenon. Others wishing to focus on the separateness of the activity use the terms "parallel", "second", and "dual"; in addition, there are researchers whose interests emphasize the legal and quasi-legal aspects and they use terms like "illicit", "illegal", "clan-destine", and "grey".

Given the diversity of disciplinary interest in, and the diffuse nature of the subject area, a fundamental difficulty exists with respect to specifying precisely what phenemenon is being studied. For example, do informal economic activities comprise an economy? Are these activities restricted to the sphere of trading? Do they involve only small transactors? Are they profitable? Is the technology predominantly backward?

The concepts of "formal" and "informal" economic activities emerged during the collapse of feudalism in Europe, and were associated mainly with small-scale pre-capitalist manufacturing and distribution activities. In the 1970's, however, the concepts were introduced by Hart [3]. into the development literature; his focus was urban, small scale and often illegitimate self-employment in city slums, which activities he identified as being important sources of income generation.

The International Labour Organisation (ILO) attempted to operationalise the concept of " informality " in its 1972 Employment Report on Kenya [4]. In this Report, the ILO categorised informal economic activities using the following criteria : easy access, use of locally produced resources, family owned, small-scale operations, labour-intensive, skills developed outside of the formal education system, and operating in unregulated, competitive markets. The ILO also identified economic activities in the informal economy as

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3 See Hart (1973).

4 See ILO (1972).

efficient and profitable, and recommended policies geared towards developing its role in employment creation and income generation.

The Informal Economy : An Economic Perspective

The range of widely differing definitions and concepts, no doubt, contributes to a broad understanding of various aspects of the informal economy. However, their multiplicity obscures the critical issues arising from an awareness that important segments of the national economy are escaping official accounting and record-keeping and as such, are not being incorporated into economic policy making.

It is possible to develop a definition of the informal economy using a simple taxonomic framework [5]. ; this is presented in Table 1. We begin with the theoretical construct of total domestic economic income or output which is defined to include income or output generated from all economic activities taking place within the geographic confines of a given country,

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5 See Feige (1989) pp. 16-21.

whether these activities occur in the market or non-market, subsistence sub-economies. The boundary (AB) which identifies the market and non-market sub-economies is not the subject of debate here; however, unlike some analysts, we do not equate the subsistence sector(s) with the informal economy.

An economic activity is defined to mean the production, sale or consumption of commodities and services. The legal status of an economic activity is an important aspect of our definition. Illegal activities occur in both the market and subsistence sectors of an economy; an activity is defined as informal here if it violates a country's laws and therefore, all illegal activities are defined as being within the informal economy; all economic activities above CD in the upper area, and below CD in the lower area (Table 1) are included in our definition of the informal economy. But, we argue that the informal economy encompasses activities which are not illegal; activities which contravene generally accepted standards and/or codes of business behaviour are included in our definition of the informal economy. Here, one of the characteristic features is the appropriation of private or public property rights in resources by the informal

Table 1: Taxonomic framework for informal economy

Theoretical construct	Market Classification	Legal status	Reporting status	National Accts classification	Definition
		Illegal activity	*Unrecorded income*	Monetary unobserved sector	Informal
		C.....D	E.....F	G.....H	J.....K
Total economic income or output	Market *income*	Legal activity	Recorded income	Gross Domestic Product	Formal
	A.....B	A.....B	A.....B		
	Non-market income	Legal activity	Estimated income		
		Legal	E.....F	G.....H	L.....M
		C.....D			
		Illegal activity	Unrecorded income	Non-monetary unobserved sector	Informal

Source : Adapted from Feige (1989).

producer for private production and gain. For example, the use of public facilities like bus-shelters or sidewalks as vending areas, the sale of information or the sale of easier access to services, all depend on the seller appropriating the rights to some resource for private profit.

Another important aspect of any definition of the informal economy relates to what is recorded by the official data collecting agencies. Income or output of illegal activities (market and subsistence) is not recorded in the National Accounts data of most Caribbean countries; additionally, except for minimal amounts which are imputed,the non-market, subsistence production is also unrecorded. Total unrecorded income includes a certain portion of legal market income which escapes detection either as a result of the inadequacies of the data collecting institutions or because of deliberate action on the part of economic units, or a combination of both. This is shown in Table 1 as the upper CD-EF area; total unrecorded market economy income (area above EF) is that part of the National Accounts statistics classified as the monetary, unobserved sector (area above GH). A sizeable amount of subsistence income is also not recorded; this includes

legal subsistence income (as indicated by the lower CD-EF area in Table 1). In the National Accounts classification, total unrecorded income in the non-monetary sectors is the non-monetary, unobserved sector (shown as the area below GH in Table 1).

Our definition of the informal economy is represented by the sum of the areas above JK and below LM. To summarise, the informal economy refers to the sum of those activities which violate a country's laws, official regulations, or generally accepted standards and/or codes of business behaviour. A number of points concerning the definition should be noted.

Firstly, there is nothing inherent in an activity which makes it informal; the more critical issue is whether socio-legal conventions are breached. An activity can be informal or formal depending on the particular circumstances: for example, as already indicated, prior to mid-1990, foreign currency trading outside of the banking system in Guyana was illegal, and subsequently, this activity has been transformed into an officially regulated "cambio" system. This is an example of an informal activity becoming `formalized'. Conversely, activities in the formal economy can become informal as is evident in the Caribbean especially in times of commodity shortages where variants of commodity `blackmarkets' develop.

Secondly, there is a misconception that the informal economy comprises only small-scale activities and enterprises.There exists large and small-scale activites in the informal economy as we have defined it ; for example, drug production and distribution, certain types of higglering, and a range of other large scale activities are included in the informal economy.

Thirdly, the same economic unit can participate in both the informal economy and the formal economy at different points in time or even simultaneously: this is dependent on the nature of the activity. For example, many private enterprises operating in the legal, market economy purchase foreign currency in the `black market´ during periods of foreign exchange shortage in the official market. The state in the Caribbean also participates in the informal economy as evidenced, for example, by purchases of `blackmarket´ foreign currency by state enterprises and tax levies on illegal business activities.

Fourthly, informal economic activities take place both within the national economy and internationally. Higglering in the Caribbean encompasses the movement of commodities across

national boundaries of both CARICOM and non-CARICOM states. Caribbean higglers (or Informal Commercial Importers-ICI's as they are termed in Jamaica) also operate outside of the region; many of these traders purchase commodities in the U.S.A. for re-sale in the region.

Finally, by referring to informal economic activities as comprising an economy, we recognise that there exists some underlying common characteristics shared by these activities; it is suggested that the informal economy functions in a similar way to the formal economy in terms of consumption, production, and distribution. Informal economic activities are linked to each other both directly and through the mediation of the formal econmomy. In short, for Caribbean economies in general, the informal economy is an integral part of the national economy; for some, it may be the larger and more dynamic part.

ESTIMATING THE SIZE OF THE INFORMAL ECONOMY IN SELECTED CARIBBEAN COUNTRIES

Different methods : a summary

Over the last decade, there have been many different methods used to estimate the size of the informal economy. Attempting to estimtate the size of the informal economy is difficult

since one of the primary reasons for participation in informal economic activities relates to escaping detection and regulation. The measurement methods can be broadly categorised, firstly, as qualitative and quantitative. The qualitative approach utilises general observation, interviews with a cross section of individuals, and 'institutional' information; this approach, although not facilitating quantitative analysis, can provide a useful introduction to the modus operandi of the informal economy.

The quantitative methods are broadly classifiable into micro- and macro-approaches. The micro-aprroach utilises mainly individual surveys, tax surveys, tax auditing and other compliance methods. The survey methods require well-designed surveys and samples, and they are usually based on voluntary replies from respondents. In individual surveys, persons are interviewed to establish whether they have participated as consumers and/or producers in the informal economy over a specified period of time. Using this approach, it is possible to derive a crude estimate of the informal economy if the following conditions exist: i) a representative sample is selected and ii) the questioning technique eliminates or significantly reduces the possibility of biased responses.

The tax authorities in many Western European countries generate information on concealed income via the use of tax audits in which randomly selected persons are required to indicate their `true´ income under threat of severe penalty. Although the information generated does not allow for an estimation of the size of the informal economy, it gives some indication of the magnitude of unreported income. Apart from tax auditing, some countries use other compliance methods which may crudely identify segments of the informal economy. For example in U.S.A, information is collected on the size of the illegal immigrant work force, and estimates are generated on the amounts/market prices of illegal drugs which are produced, imported, and consumed.

Micro-approaches are helpeful in that they provide dissagregated data which assists in the identification of motives for involvement in the informal economy; they are also provide policy makers with information which can assist in the closing of `loopholes´ and redesigning of more workable policies. However, among the disadvantages of this approach are :

i) survey costs tend to be high.

ii) data provided is static, providing point rather than trend estimates.

iii) there is a strong possibility that respondents will conceal information, thus affecting both the quality and quantity of data generated.

Macro-approaches to measuring the informal economy are more popular than the micro-methods. One reason may relate to the use of published, macro-economic data which is much less costly to obtain than survey-generated data. Another advantage in using macro-economic data sources is that since this data collected routinely and for purposes totally unrelated to the measurement of the informal economy, it is less likely to be biased. Monetary economic approaches are among the most widely used in estimating the size of the informal economy; some of these methods are applied to selected Caribbean economies and the results presented in the section which follows.

Estimating the informal economy in selected Caribbean countries using monetary statistics

Currency holdings method

It has been argued [6] that estimates using currency data provide acceptable evidence concerning the existence and growth of the informal economy. High levels of per capita currency holdings and a high proportion of large denominations in the currency being held by the public are identified as two indicators of an informal economy. The 'large bills' theory postulates that increases in the public's use of high denomination currency notes relative to those of smaller denominations provide an index of trends in the informal economy. The implicit assumption here is that informal economic transactions are conducted using cash and there is widespread use of high-denomination notes not only for convenience, but also to minimise the 'audit trail' possibility.

For Jamaica, at the end of 1989, currency holdings per capita stood at J$571 with just over 70 cent held in $100 bills; the

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6 See Cramer (1983), Ross (1978), and Freud (1979).

figure has increased significantly over the last decade moving from J$121 in 1980. However, although per capita currency holdings in nominal terms have grown over the last three decades, the available data (See Table 2) indicate that the currency/GDP (C/GDP) and currency/GNP (C/GNP) ratios have remained stable.

The currency/demand deposit (C/D) ratios show marked increases, since 1960. Currency held by the public comprise that which is used for both formal and informal economic transactions; it is possible that high inflation rates and growing monetization of the economy may explain part of the upward trend in the C/D ratios for Jamaica. Contrarily, the introduction and increasing usage of credit cards over the last five years may be one factor which caused currency use in the formal economy to have been reduced; another factor which may reflect falling formal economy currency use could be that an increasing number of workers are receiving their payments by cheques as opposed to currency. An additional reason why domestic currency use in the formal and informal economic activities may show a declining trend relates to the observed growth of currency substitution, especially in the tourist sector. Although the trends in the C/D ratios may be

reflective of a growing informal economy, the evidence remains somewhat inconclusive at this stage; as such, further research work is necessary in order to generate more conclusive results.

The rising proportion of large denomination bills has been identified as another explanation regarding the growth of an informal economy. For Jamaica, the trend has been towards increasing use of large denomination notes, with J$20 bills as the largest denomination then issued accounting for an annual average of over 60 per cent of total bills in circulation during most of the 1980s. Following the introduction of the J$100 bill in 1988, this denomination has now replaced the J$20 as the most widely used currency note accounting for just over 70 per cent of notes in circulation in 1989.

In the case of Guyana, the per capita currency holdings have showed marked increases since 1980, and now stand at G$903 with about 40 per cent in G$100 bills, and 58 per cent in G$20 bills Trends in the C/GDP and C/GNP ratios (See Table 4) strongly support this trend. The declining trends in the C/M1 and C/M2 ratios may be explained by increasing nominal and

possibly real rates of return on savings and time deposits relative to currency holdings. Although high rates of inflation may explain the C/D ratio trends, these relatively high ratios could indicate a growing informal economy.

For Trinidad and Tobago, the per capita holdings of currency have actually declined from TT$711 in 1983 to TT$572 (1982) as shown in Table 6. There has been, however, an increasing use of large denomination notes with TT$100 replacing TT$20 as the largest denomination in circulation during the late 1970s and accounting for an annual average of over 60 per cent of total since then. While C/GDP and C/GNP ratios have remained stable over the last three decades, C/D ratios have been increasing but remain at levels which are much lower than those for both Jamaica and Guyana. Over the period 1980-89, C/M1 has increased slightly, while C/M2 has actually declined.

Currency-ratio methods

The currency-ratio method is based on examining movements in the ratio of currency to demand deposits--the currency or C/D ratio. This method was originally suggested by Cagan[7] to identify movements in the currency ratio and estimate unreported income in U.S.A. during World War II. Individuals operating in the informal economy are assumed to have an

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7 See Cagan (1958).

incentive to undertake their monetary transactions in cash so as to avoid an `audit trail´. Although at the individual level, cash transactions do not leave any trace, in aggregate terms some trace is observable; the demand for currency increases relative to the periods when there is no informal economy. The residual or `gap´ betwween the "normal" and actual currency demand provides an indication of the size of the informal economy.

Cagan´s method was applied by Gutman (1977) to estimate the size of the informal economy in USA. Three theoretical and two empirical assumptions underlie this method. The theoretical assumptions are :

i) all informal economic transactions involve currency exclusively;

ii) the income velocity of currency circulation in the informal economy is identical to the comparable statistic in the formal economy;

iii) the formal economy currency ratio is constant over time.

The empirical assumptions are : i) the currency ratio during the bench-mark period (1937-41) would have remained unchanged in the absence of a growing informal economy; ii) in the bench-mark period, no informal economy existed in USA. Thus, by multiplying the C/D

ratio of the bench-mark period in which no informal economy is assumed to exist, times demand deposits in any given year one obtains formal economy currency holdings for that year. The estimated size of the informal economy is obtained by the product of informal economy currency (i.e. actual less that being held in the formal economy) and the income velocity of circulation of formal economy currency (M1).

Gutman's method is a simple variant of the general currency-ratio model. The general currency ratio method can be specified as follows :

$$C = C^f + C^i \quad \ldots\ldots\ldots\ldots (1)$$

$$D = D^f + D^i \quad \ldots\ldots\ldots\ldots (2)$$

$$k^f = C^f/D^f \quad \ldots\ldots\ldots\ldots (3)$$

$$k^i = C^i/D^i \quad \ldots\ldots\ldots\ldots (4)$$

$$v^f = Y^f/(C^f + D^f) \quad \ldots\ldots\ldots (5)$$

$$v^i = Y^i/(C^i + D^i) \quad \ldots\ldots\ldots (6)$$

$$z = v^f/v^i \quad \ldots\ldots\ldots\ldots (7)$$

where C = currency, D = demand deposits, Y = GNP, superscript `f' = formal, superscript `i' = informal, k = currency ratio, v = income velocity.

Equations (1) and (2) show that actual stocks of currency and demand deposits are divided into their formal and informal economy components. Equations (3) and (4) indicate the currency ratios, while equations (5) and (6) define alternative income velocities. Solving for Y^i, equation (6) is evaluated, and provides the general solution :

$$Y^i = 1/z \cdot Y^f \cdot (k^i + 1)(C - k^fD) /(k^f + 1)(k^iD - C) \quad ...(8)$$

Gutman's theoretical assumptions listed above imply :

i) $D^i \dashrightarrow 0$; $k^i \dashrightarrow$ infinity.

ii) $z = 1$

iii) k^f is constant over time.

Applying these assumptions to Equation (8), we get

$$Y^i = Y^f \cdot (C - k^fD)/(k^f + 1)D \quad .....(9)$$

Estimates of the informal economy applying the simple currency ratio method to Jamaica, Guyana, and Trinidad and Tobago are presented in Tables 8, 9 and 10 respectively. For Jamaica, the data indicates a growing informal economy during the 1980's, estimated at over 30 percent of the formal economy in 1989. The estimates for Guyana show that there has been a fairly significant rise in the informal

economy between 1980 and 1986, with a declining trend since then. The estimates for Trinidad and Tobago indicate an increase in the size of the informal economy during the 1980's.

Although the simple currency ratio method may be appealing, a number of assumptions appear to be have been made more for technical convenience than for consistency with established economic theory. Firstly, the model assumes that currency is the sole medium of exchange in the informal economy; while this may be a convenient assumption, it is hardly an acceptable one with the exclusion of transactions involving the use of cheques or barter arrangements.

Secondly, there is the assumption of a base period during which the informal economy is assumed to be non-existent; since the method relies heavily on differences between the C/D ratios in the base and current years, the estimates are particularly sensitive to the choice of base years, the estimates are particularly sensitive to the choice of base years. It is difficult to establish, for any country, when an informal economy began to operate.

The third assumption is that income velocity of currency circulation is the same in both the formal and informal economies. This has been questioned by various analysts who point to strong arguments supporting both lower and higher velocities in the informal economy.

The fourth assumption is probably the most critical; this is that the "normal" C/D ratio is fixed, and all changes in this ratio are attributable to the informal economy. This residual approach is acceptable only if the C/D ratio is not susceptible to other influences. However, as has been indicated in a number of studies, there are many variables which influence the relationship between currency and other monetary aggregates.

A variant of the simple currency ratio was introduced into the literature by Feige [8], as a means of attempting to overcome some of the problems inherent in the simple currency ratio method. It is argued in this alternative approach that there need not be exclusive use of cash by economic units in the informal economy; both households and firms need not be averse to using cheques for informal economic transactions if the benefits in so doing outweigh

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8 See Feige (1980).

the costs of leaving a " paper trail ". It is assumed that currency payments accounted for less than one hundred per cent of the transactions in the informal economy; Fiege assumed a C/D ratio of two. In addition, the assumption is that since activities in the informal economy tend to be service-oriented, income velocity may be higher in the informal as opposed to the formal economy; the specific assumption was that income velocity of money in the informal economy was 10 percent higher than in the formal economy. Two modifications of Gutman's assumptions are made :

$$k^i = 2 \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad (10)$$

$$z = 1/1.10 \quad \ldots\ldots\ldots\ldots\ldots \quad (11)$$

The estimates of the informal economies in selected Caribbean economies using the modified currency-ratio method are presented in Tables 11, 12 and 13. Those for Guyana appear somewhat bizarre and warrant much more careful scrutiny. Since this is only very preliminary work, refinements of existing methods and applications of alternative approaches to measuring the informal economy of various Caribbean countries are to be undertaken.

CONCLUDING REMARKS

For both economic theory and policy, it is important to establish the size and identify trends in the informal economy. This paper represents a preliminary attempt, using very simple methods, to estimate the size of the informal economy in selected Caribbean countries. Although fraught with weaknesses, the attempt seems justified as the first stage in our research emphasis which is being directed towards towards establishing quantitative measures of, and providing policy suggestions towards dealing with the informal economy.

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Table 2

Jamaica: Selected Currency Ratios

Year	C/Pop*	C/GDP	C/GNP	C/D	C/M1	C/M2
1960	13	0.05	0.05	0.43	0.30	0.19
1965	16	0.05	0.05	0.60	0.38	0.17
1970	25	0.04	0.04	0.58	0.37	0.12
1975	62	0.05	0.05	0.66	0.40	0.13
1980	121	0.05	0.06	0.66	0.40	0.17
1985	227	0.05	0.05	0.76	0.43	0.12
1989	571	0.06	0.07	1.00	0.54	0.14

* C/Pop in J$

Table 3

Jamaica: Denomination of Currency

Notes in Circulation (% breakdown)

Year	$100	$50	$20	$10	$5
1960					
1965					
1970				48.6	14.5
1975				66.5	13.7
1980			61.4	27.7	2.1
1985			77.0	16.1	1.8
1988	67.1	7.7	16.5	4.3	1.3
1989	70.8	6.3	14.2	4.0	1.6

Table 4

Guyana: Selected Currency Ratios

Year	C/Pop*	C/GDP	C/GNP	C/D	C/M1	C/M2
1960		0.09	0.10	1.49	0.60	0.39
1965		0.06	0.07	1.01	0.50	0.22
1970		0.09	0.10	2.19	0.69	0.28
1975		0.09	0.09	1.03	0.51	0.23
1980	222	0.11	0.12	1.09	0.52	0.19
1985	533	0.21	0.26	1.41	0.57	0.19
1989	903	0.22	0.33	1.09	0.48	0.17

* C/Pop in $G

Table 5

Guyana: Denomination of Currency

Notes in Circulation (% breakdown)

Year	$100	$200	$10	$5
1960	-	-	-	-
1965	-	53.0	23.3	15.4
1970	-	65.8	15.8	10.9
1975	-	78.7	10.4	6.6
1980	-	86.0	6.8	4.0
1985	-	91.2	4.9	2.1
1988	13.7	82.2	8.9	1.1
1989	39.5	58.0	0.9	0.8

Table 6

Trinidad and Tobago: Selected Currency Ratios

Year	C/Pop*	C/GDP	C/GNP	C/D	C/M1	C/M2
1960	39	0.04	0.04	0.45	0.31	0.15
1965	37	0.03	0.03	0.43	0.30	0.13
1970	58	0.03	0.04	0.64	0.39	0.12
1975	137	0.03	0.03	0.54	0.35	0.10
1980	432	0.03	0.03	0.46	0.32	0.10
1985	581	0.04	0.04	0.48	0.33	0.08
1989	572	0.04	0.04	0.68	0.40	0.08

* C/Pop in $TT

Table 7

Trinidad and Tobago: Denomination of Currency

Notes in Circulation (% breakdown)

Year	$100	$50	$20	$10	$5
1960					
1965			62.8	15.3	13.2
1970			69.2	13.2	10.2
1975			80.9	8.3	6.0
1980	69.6	0.1	20.2	4.3	3.0
1985	77.9	0.1	14.3	3.2	2.3
1987	78.3	0.1	13.9	3.1	2.2

Table 8

Jamaica: Computed Informal Economy

GDP Estimates Using Simple Currency Ratio

Method (in J$ millions)

	Simple Currency Ratio	
Year	1959 base	1962 base
1975	407.5	288.2
1977	242.6	118.4
1980	748.5	533.8
1982	1298.0	1019.3
1984	2040.0	1596.7
1985	2570.5	2034.9
1986	3175.0	2526.5
1987	4159.3	3374.7
1988	4524.5	3631.4
1989	8786.6	7578.1
	(in per cent, as ratio of recorded GDP)	
1975	15.3	10.8
1977	8.2	4.1
1980	15.7	11.2
1982	22.1	17.4
1984	21.8	17.1
1985	23.0	18.2
1986	23.5	18.7
1987	26.0	21.1
1988	24.5	19.7
1989	39.4	34.0

Table 9

Guyana: Computed Informal Economy GDP Estimates
Using Simple Currency Ratio Method (in G$ millions)

	Simple Currency Ratio	
Year	1943 base	1950 base
1975	769.8	767.7
1977	973.3	942.8
1980	1077.6	1040.2
1982	1249.1	1210.0
1984	1589.2	1541.5
1985	1916.9	1860.7
1986	2368.3	2301.8
1987	2354.1	2271.9
1988	2824.6	2723.7
1989	4963.7	4791.7
	(in per cent, as ratio of recorded GDP)	
1975	67.3	64.6
1977	86.5	83.8
1980	71.5	69.0
1982	86.4	83.7
1984	93.5	90.7
1985	97.6	94.7
1986	106.7	103.7
1987	70.1	67.7
1988	68.3	65.8
1989	71.9	69.4

Table 10

Trinidad and Tobago: Computed Informal Economy GDP Estimates Using Simple Currency Ratio Method

(in TT$ millions)

	Simple Currency Ratio	
Year	1957 base	1962 base
1975	705.3	392.8
1977	594.0	171.1
1980	1147.8	309.2
1982	838.2	203.3
1984	2232.1	1036.0
1985	1675.3	647.4
1986	3539.1	2457.6
1987	3307.6	2273.0
1988	5521.7	4337.8
1989	4018.8	2413.9
(in per cent, as ratio of recorded GDP)		
1975	13.3	7.4
1976	7.9	2.3
1980	7.7	2.1
1982	4.4	1.1
1984	11.9	6.0
1985	9.3	3.6
1986	20.0	14.2
1987	20.0	13.7
1988	32.1	25.2
1989	23.4	16.9

Table 11

Jamaica: Computed Informal Economy Estimates

Using Modified Currency Ratio Method (in J$ millions)

	Modified Currency Ratio	
Year	1959 base	1962 base
1975	1000.0	707.3
1977	553.5	270.2
1980	1843.9	1314.9
1982	3434.6	2697.3
1984	5378.0	4209.4
1985	6866.7	5435.9
1986	8538.5	6794.5
1987	11515.6	9343.3
1988	12314.2	9883.5
1989	29016.1	25022.4
(in per cent, as ratio of recorded GDP)		
1975	37.6	26.6
1977	18.8	9.2
1980	38.6	27.6
1982	58.5	46.0
1984	57.5	45.0
1985	61.3	48.5
1986	63.3	50.3
1987	71.9	58.3
1988	66.8	53.6
1989	130.0	112.1

Table 12

Guyana: Computed Informal Economy Estimates Using Modified Currency Ratio Method(in G$ million)

	Modified Currency Ratio:*	
Year	1943 base	1950 base
1975	2720.1	2621.8
1977	4405.3	4267.7
1980	3896.6	3761.1
1982	5638.5	5462.2
1984	8135.8	7891.8
1985	10642.5	10330.2
1986	16151.2	15697.7
1987	8362.8	8068.8
1988	9794.9	9445.1
1989	18045.5	17420.0
	(in per cent, as ratio of GDP)	
1975	229.0	220.7
1977	391.7	379.5
1980	258.4	249.4
1982	389.9	377.7
1984	478.6	464.2
1985	541.9	526.0
1986	727.5	707.1
1987	249.1	240.4
1988	236.7	228.3
1989	261.3	252.2

Table 13

Trinidad and Tobago: Computed Informal Economy Estimates Using Modified Currency Ratio Method (in TT$ millions)

	Modified Currency Ratio	
Year	1957 base	1962 base
1975	1592.9	887.1
1977	1277.1	367.8
1980	2463.2	663.6
1982	1747.8	424.0
1984	4973.7	2531.4
1985	3646.6	1409.2
1986	8567.5	5949.4
1987	7962.0	5471.7
1988	15101.1	11863.5
1989	10010.2	7258.0
	(in per cent, as ratio of recorded GDP)	
1975	30.1	16.7
1977	17.0	4.9
1980	16.5	4.4
1982	9.1	2.2
1984	26.4	13.4
1985	20.2	7.8
1986	50.0	34.5
1987	48.1	33.0
1988	87.7	68.9
1989	58.2	42.2