The Tax Regime for Micro-Enterprise in Cuba

Archibald R. M. Ritter  
Department of Economics and School of International Affairs,  
Carleton University, Ottawa, Canada.

J.A. Turvey  
R. LeBlanc and Associates

February 1, 2000.
Summary

The Government of Cuba established a tax regime for micro-enterprise as soon as it legalized the sector in 1993. It was designed to function in a difficult context in which a tax-paying culture did not exist, in which widespread non-compliance was feared, and in which some micro-entrepreneurs’ incomes were high. The tax regime included up-front monthly lump-sum payments, a 10% maximum amount of total revenues which could be deducted as costs in calculating taxable income, and an escalating tax schedule.

The tax regime has a number of weaknesses which make it inequitable, inefficient, and ineffective in revenue generation. The analysis of this essay indicates that the actual incidence of the tax is higher than the official tax scale when actual production costs exceed the maximum allowable 10%, even exceeding 100% in some circumstances. The up-front lump-sum tax payments result in marginal tax rates of 100% for initial levels of revenue, followed by rate of 0% until that level of taxable income is reached where taxes payable with the tax scale are equal to the initial lump-sum payment.

The tax regime discriminates against micro-enterprises which have costs of purchased inputs in excess of 10% of gross revenues. It is regressive in that the tax rates are higher for lower-income micro-enterprises up to a fairly significant level of true net income. The micro-enterprise sector also faces a more onerous tax regime than the foreign and joint venture sector of the economy. From the stand-point of its impacts on the efficiency of resource use, the tax regime restricts the entry of new firms into the sector and forces some out of business or underground, thereby reducing production, raising prices, reducing employment and reducing the generation of incomes. Finally, to the extent that firms “go underground,” refrain from starting up, go out of business, or evade taxes, the government loses revenue.

A number of modifications in the tax regime are suggested in order to overcome its weaknesses. These changes could help the sector to make a more valuable contribution to Cuba in terms of employment and income generation, increased production at lower real costs and prices, and increased tax collection.
I. Introduction

In September 1993, in the depths of the economic crisis produced mainly by the termination of the special relationship with the former Soviet Union, Cuba liberalized self-employment—legalizing many of the economic activities which Cubans were already practicing in clandestinity as part of their personal and family survival strategies. This permitted a surfacing of many activities previously conducted in the underground economy and an explosion of entrepreneurial creativity. The need for a tax regime to tap the incomes generated in the self-employment sector was immediately obvious and a tax system was adopted in September 1993 and fully implemented in 1996.

The tax regime, as designed and implemented, indeed has extracted revenues from the sector. However, the design of the tax regime has a number of weaknesses which reduce its fairness, damage the efficiency of resource allocation, and limit its viability. The objective of this study is to analyze the impacts of the tax regime for the micro enterprise sector in terms of (i) the equity of income distribution—both within the sector and in society generally; (ii) the efficiency of resource use within the sector and in the broader national economy and society; and (iii) the viability, effectiveness and sustainability of the collection of revenues for the government. Following an analysis and evaluation of the micro-enterprise tax regime are a number of observations on how it could be modified in order to achieve more fully the objectives of fairness, efficiency and viability.
The essay begins with a review of the emergence of the micro-enterprise sector, its structure and character. In Section III, the regulatory and policy environment within which it operates is sketched briefly. The nature of the micro-enterprise tax regime and rationale for its design is presented in Section IV. The main quantitative analysis of the tax regime and its functioning is also presented in this section. In Section V, the equity, efficiency and viability implications of the tax regime are analyzed at the levels of the individual micro-enterprise, the micro-enterprise sector, and the broader economy and society. The following section then presents a number of specific recommendations for the improvement of tax regime from the standpoint of the three key criteria. Finally, in the last section, the basic argument is summarized, and key conclusions are reiterated.

II. The Micro-Enterprise Sector

Despite the nationalizations of small and medium scale enterprise in the Revolutionary Offensive of March 1968, a small self-employment sector continued to exist mainly in areas of personal services, transport, artisan work, and various types of fabrication. The number of officially registered non-agricultural micro-enterprises was placed at 28,600 in 1988 with 12,800 employees, accounting for 1.1% of total employment (Comité 1988.) The underground economy also included many micro-enterprise activities, and it continued to operate on a large scale throughout the 1968 to 1993 period. However, its size is virtually impossible to ascertain. In the 1989 to 1993 period, the volume of clandestine self-employment increased rapidly as people’s family survival strategies required that they earn real incomes beyond those provided by employment in the state sector as the latter were increasingly insufficient to acquire the daily necessities which were no longer available through the
rationing system (Ritter, 1998, 74-76.)

The liberalization of self-employment on September 8, 1993, permitted many micro-enterprises to surface from the underground economy, and permitted new ones to become legally established. Decree Law 141 and the accompanying resolution legalized 117 types of activities in six general areas, including transportation, house repair, agricultural related areas, family and personal services, housing services and other activities. By early 1997, a total of 157 types of activities had been legalized including “gastronomic services” which encompassed street vending and private restaurants or “paladares.” The legislation of 1993 limited self-employment to retirees, housewives, and laid-off workers, but excluded professionals and enterprise managers. In time, professionals who were declared redundant in their professional activities were permitted to enter one of the self-employment categories but not as self-employed professionals. In order to enter self-employment, regularly-employed workers in the state sector also required the permission of their work centers. A variety of other restrictions on micro-enterprise activity were imposed as well, as discussed below.

Table 1 Here

The number of registered and legal micro-enterprises rose rapidly, reaching 169,098 by December 1994 and peaking at 208,786 in December 1995 (Table 1.) The real level of employment was higher than the number of micro-enterprises as family members were frequently employed, and others often provided some of the inputs needed by registered micro-enterprises. One estimate by the UN Economic Commission for Latin America (1997) placed the total volume of private sector employment at 400,000 or 9.4% of total in 1996, but the number may have been higher.

Indeed, if one includes informal non-registered part-time self-employment, the number of self-
employed could reach 30% or more of the labour force. This is because virtually all families in Cuba, except those receiving remittances from relatives or other access to dollars such as foreign travel, must supplement their state sector wage incomes, which are insufficient for necessary purchases from the higher-priced agricultural markets and dollar stores, with additional incomes from a secondary activity.

Registered self-employment and all the other unregistered self-employment activities have made a valuable contribution to the Cuban economy and people. They create employment. They have helped families earn the incomes necessary for their survival. Although some self-employment activities have generated higher incomes, the vast majority provide significant but modest income supplements. The self-employment activities constitute a massive school for entrepreneurship. They also provide basic services and goods for the satisfaction of essential needs of virtually all Cubans.

The sector also generates large volumes of revenues for the state through the taxation system and the imposition of fines, which are onerous and apparently frequent. The monthly tax payments of one dollar sector restaurant are $US 520.00 ($300.00 for the basic monthly payment plus $100.00 for an alcohol licence, plus $60.00 for each of the minimum required two family employees) or almost 50 times the average monthly salary in the state sector (which was 214 pesos in 1997) at the exchange rate relevant for Cuban citizens namely $US 1.00 = 20 pesos.

Table 2 Here

III The Policy Environment

The tax regime for micro-enterprise is but one element of the general policy environment within which micro-enterprises operate.
The first element in the policy framework is the broad range of detailed regulations which affect their size and operations. The regulatory environment includes the following general features as summarized in Decreto-Ley 174 (1997.)

- A prohibition of “intermediaries” of any sort: producers must sell their own output, sellers must produce what they sell with no specialized retailers, no wholesalers, and no producers selling their output to others for sale;
- A prohibition of self-employment in all professional areas;
- Restrictions on access to markets, with prohibitions on sales to all state entities except where specifically permitted;
- A prohibition on public marketing;
- No access to credit, foreign exchange at the official parity rate, or directly-imported inputs;
- Prohibition on the hiring of labour outside of the family;
- Prohibition of associations of own-account workers;
- Additional specific limitations on private restaurants: a 12 seat maximum; confinement of input purchases to the dollar stores and agricultural markets where prices are large multiples of input prices in the state sector; limitations on products available;
- Additional specific limitations on the vending of food products in the streets, e.g. prohibition of the use of benches, seats or tables;
- Prohibition of using any location for a micro-enterprise activity aside from one’s home or in some cases, a rented market stall.

There are also a variety of regulations on health, sanitary and safety conditions for “gastronomic services” and private transportation. Some regulations in these areas are of course necessary. However, the definition of the relevant standards appears to be open-ended so that whatever an inspector feels is appropriate could be the operational standard. The character of fines and punishments also appears to permit discretionary punishment for infractions with the intensity of the punishments being at the discretion of the relevant inspectors (Decreto-Ley 174.) For the 28 micro-enterprise infractions of an economic operational character, the fines can be significant — up to 1,500 pesos, or about seven times the national average monthly income, although perhaps not unduly onerous for the most lucrative types of self-employment. This compares with traffic offenses which are in the area of 2
pesos for an illegal left turn to 10 pesos for a dangerous offense such as running a red light. The suspension of the licence of an offending micro-enterprise for a minimum of two years in many cases is a heavy punishment as it destroys the livelihood of the offending individual and the relevant family. Some private restaurant owners argue that the licence suspension is in fact permanent. The possible seizure of equipment, instruments, machinery or materials involves the confiscation of the accumulated capital of the micro-entrepreneur, modest though it might be. Multiple or repeat infractions receive harsher punishments. If the fine is not paid within 30 days, it is doubled. If it is not paid in 60 days, the relevant authorities are empowered to seize the wage, salary, pension or any other income, then the bank account, and then any movable property.

The regulations are enforced by a corps of inspectors including those who enforce the economic regulations and others who enforce the health, safety, environmental and labour regulations. The inspectors can levy fines, seize equipment and cancel licences immediately and put any micro-enterprise out of business at any time, apparently with minimal chances of successful appeal.

There are a variety of economic consequences of these regulations. First, they constrain the normal growth and expansion of individual micro-enterprises, condemning them to a small size. The results of this are that indeed the incomes of the entrepreneurs are limited considerably. The micro-enterprises are thus prevented from providing serious competition to the state sector enterprises in some areas such as food services, transport and taxis. Second, the micro-enterprises operate inefficiently as a result of the economic regulations. The prohibition of "intermediaries," for example compels artisans or fabricators of various products not only to retail their products on a day to day basis, but also to find time to produce the products they sell - and no other products. The prohibition of
specialized retailers thus wastes the time of the artisans and reduces the quantity and quality of their production. Or more likely, it encourages various infractions of the rules in daily operations, despite the activities of the inspectors to enforce the regulations. The overall result of the regulations is therefore to waste the energies of many of the entrepreneurs, to lower their productivity, and to reduce the quality and quantity of their production. The general impact for Cuba is thus to waste its human energies as well as its capital and material resources.

Another area where public policy appears to be aimed at the containment of parts of the micro-enterprise sector is the specifically-targeted competition from state enterprises which often face structures of input costs which are but a small fraction of those facing the micro-enterprises (Ritter, 1998.)

The general political environment within which the micro-enterprise sector has operated has been uncertain since its legalization in 1993. The original legislation included a clause which could be used at any time to eliminate parts of the sector (Decreto-Ley Número 141.) In a speech of April 1997, Castro criticized the reforms of 1993-94, on the grounds that they generated incomes “ten times, twenty times, or thirty times those earned by a worker” and stated that they were implemented:

“... never imagining that we would have to learn to live with them for a period of time that is difficult to predict, and that depends on many factors” (1997)

This statement was widely interpreted to mean that the continued existence of the micro-enterprise sector was in question.

The micro-enterprise sector is also criticized by the state-controlled press. Articles critical of the sector have appeared with regularity (e.g. S. Lee, 1996; Del Barrio, 1998; Mayoral, 1995 and
Such press coverage usually emphasizes the illegalities perpetrated by the sector, the alleged high incomes in the sector, the evasion of taxes, and the ostensible need for stronger enforcement, greater vigilance and tighter controls.

IV The Micro-Enterprise Tax Regime

1. Structure of the Tax Regime

The micro-enterprise tax regime consists of compulsory lump-sum fees paid each month to the tax authority, the Oficina Nacional de Administracion Tributaria (ONAT) together with a self-administered correction for the annual tax payment carried out by each micro-enterprise. A key feature of the system is the 10% maximum allowable deduction from taxable income for purchased inputs.

The first element in the tax regime is the monthly “cuota fija mensual” or **monthly fixed lump-sum payment**. This payment was imposed initially in 1993 when Cuba entered the first phase of micro-enterprise liberalization. The Ministries of Finance and Prices and of Labour and Social Security set the minimum rates, but the Administrative Councils of the Municipal governments are empowered to establish rates above these minimum levels, with the approval of the relevant Ministries. The rates can be changed every six months, in January and July. The legislation permits the Councils to raise the rates if it considers that the incomes of the micro-enterprises are “excessive,” although this is not defined (Decreto-Ley No 141.) But again, the ambiguous character of the law increases the uncertainty for the micro-enterprises. The law permits increases only and not decreases in the tax rates. This also adds to uncertainty and makes the system inflexible for the micro-entrepreneur who must pay the full fixed
lump-sum in both fat and lean months and years. However, the micro-entrepreneur may leave the activity at the beginning of any month and can cease the monthly payments immediately.

The rates were set at relatively low levels in September 1993, but have been increasing steadily since then. Especially noteworthy is the distinction between those micro-enterprises which operate in the dollar economy vis-a-vis those in the peso economy, the former being taxed at a rate which is 20 times that of the latter (at the exchange rate relevant for Cuban citizens.)

At the end of each year, micro-enterprises must pay a tax on their revenues on the basis of an escalating tax schedule, the second feature of the tax regime. However, they can deduct the total of the monthly lump-sum cuota fija payments from the amount of tax owed according to the schedule.

The procedure is as follows:

(i) The micro-enterprises add up their gross revenues.
(ii) They subtract 10% of the gross revenues (20% in the case of private transport) as an allowable deduction for purchased inputs, in order to arrive at net taxable income.
(iii) They calculate the tax owing according to the scale in Table 3. The payments are cumulative with each component of income falling within each bracket being taxed at the rate for that bracket.
(iv) They deduct the sum of the monthly lump-sum payments from the tax which is owed according to the tax scale or schedule.
(v) If the amount owed according to the tax scale calculations exceeds the amount already paid through the monthly lump-sum payments, they must pay taxes equal to the difference.
(vi) If the amount owed is less than the amount already paid, they do not receive a rebate for the excess tax already paid.

The official tax scale is presented in Table 3. One of the scales is for income and taxes in the national currency while the other is for income and taxes in US dollars or "convertible pesos." The tax scale applies to income net of the 10% of gross revenues which is the maximum allowable for purchased inputs. The progressivity of the tax scale for dollar incomes is not too far out of line in the
context of an international comparative perspective. It also seems reasonable from a Cuban perspective. On the other hand, for peso incomes, the scale increases from 5% for the first 3,000 pesos and reaches 50% for the tax bracket for income exceeding 60,000 pesos. The peso tax scale does appear to be steep, as the 50% marginal tax rate comes into effect at an annual income of 60,000 pesos which is about $US 3,000.00.

Table 3 Here

A third feature of the tax system is that a maximum deduction of 10% from gross income is permitted for purchased inputs in the determination of taxable income. In other words, net income for tax purposes or “taxable income” is always considered to be 90% of gross income regardless of the real value of purchased inputs. The only exception is in transportation where the maximum deduction for purchased inputs is 20%. (Oficina Nacional de Administración Tributaria, 1997, 6.) This is referred to here as the “10% Maximum Cost Deductibility Rule.” This feature of the tax system is problematic in that those micro-enterprises which face high costs for purchased inputs are in effect being taxed on these purchases. This means that the true tax rate on value added by the firm on its actual net revenues can be much higher than those illustrated in Table 3, which show the true rates only for a micro-enterprise with actual costs of purchased inputs of 10% of gross revenues.

What proportion of micro-enterprises have net revenue equal to or more than 90% of gross revenue? Perhaps a significant proportion. Many micro-enterprises involve labour-intensive activities with minimal equipment or purchased material inputs. The following micro-enterprises may be of this type: messenger, bicycle guard, child care, building attendant, manicurist, masseuse, shoe repair, domestic service, sports or language instruction, and some repair services. On the other hand, other
activities (such as food vending, shoemakers, artisans, flower cultivators and sellers, used book or record sellers,) involve the purchase and processing of substantial amounts of material inputs. Some private restaurant operators estimated their input costs as being above 60% (Interviews, November 1998.)

2. The Rationale for the Current Tax Regime

There are three factors which explain the adoption of this tax regime. First, when self-employment was legalized in September 1993, prices, revenues and net profits were often exceedingly high. This was the result of (i) the excess purchasing power in the hands of citizens (because the government was financing a large deficit - about 28% of GDP in 1993 - through the creation of money, while the prices in the state sector were fixed at low levels,) and (ii) the limited number of micro-enterprises initially. The imposition of the tax regime and the escalation of tax rates were therefore designed to remove a substantial proportion of this income for equity reasons. It may be noted again, however, that a majority of the micro-enterprises are involved in the provision of simple goods and services for low-income Cubans in the peso economy, and generate only modest incomes, albeit probably higher than the average in the state sector.

Second, the micro-enterprise tax regime was established at a time when there was not yet a well-established administration for this type of taxation. Nor had there been an established and transparent tax system and popular habit of paying taxes, because the tax rates and payments had been hidden previously. Moreover, prior to the legalization of much micro-enterprise, many such firms had operated in clandestinity, avoiding tax payments and other types of regulations. The tax system which
was implemented seems to have been designed to enforce a high level of compliance in a context in which non-compliance (in the underground economy) previously had been the norm and in which there had been no established practice of paying taxes openly..

Third, there was a significant amount of theft of products from the state sector of the economy, especially in the 1990s. A proportion of these found their way to the micro-enterprise sector as production inputs. One of the novel elements of the tax system - the 10% limit on the deduction from taxable income for purchased inputs - appears to be designed to handle this situation. If it were impossible to know for sure the true value of purchased inputs, it would be risky to permit micro-enterprises to calculate their own input costs for determining taxable income. It was administratively easier to simply declare a maximum of 10% of gross income for purchased inputs for all micro-enterprises regardless of their true level of purchased inputs.

A popular view among the cuenta propistas is that the tax system is designed to punish them for ideological reasons and ultimately to put them out of business. This is a possibility and there are statements of the leadership which seem to support this view. The heavy reliance on regulations and the severe punishment for “infractions” also suggests that this is the case. It is not likely that the current micro-enterprise tax regime was designed to kill the micro-enterprise sector. Instead, it was designed to actually collect taxes in a difficult environment in which open and transparent tax-paying was not the established practice.

3. A Quantitative Analysis of the Micro-enterprise Tax Regime

There are two complications in analyzing the micro-enterprise tax regime: first, the up-front
lump-sum tax, and second, the requirement in the income tax act that net income for tax purposes always must be fixed at 90% of gross income. To analyze the implications of these factors for the micro-enterprise tax regime, a step-by-step approach is used. First, a brief section is presented deriving mathematically the relationship between (i) the “true” tax rate and (ii) the value added by the micro-enterprise (or conversely the value of purchased inputs as a per cent of total revenue.) The implications of the up-front tax payments combined with the tax scale are then analyzed using a graphical presentation.

The relationship between the “true tax rate” which is imposed on the micro-enterprise and the value of purchased inputs by the micro-enterprise (or its net value added) is analyzed, beginning with a mathematical derivation of that relationship, as follows:

Definitions:
- \( c \): Per Cent of Gross Income used for Input Purchase
- \( GY \): Gross Income
- \( GYk(1-c) \): Officially determined Tax Brackets:
- \( GYk(1-c) \): True Value Added or Net Income for Tax Bracket
- \( NYk \): Taxable Income for Tax Bracket
- \( TNYk \): True Net Income for Tax Bracket
- \( Tk \): Tax Rate for specific Tax Bracket
- \( Mk \): Amount of Tax Payment in Tax Bracket
- \( NAYk \): Net After-Tax Income in Tax Bracket
- \( V_k = Mk/TNYk \): Tax Rate as % of True Net Income in Tax Bracket

True Net Income is defined as Gross Income less the costs of purchased inputs, i.e. net value added:

\[
TNYk = GYk(1-c)
\]  

[1]

Taxable income is defined by the tax legislation as gross income less 10% for purchased inputs (regardless of the true value of purchased inputs) i.e. net value added for tax purposes is always considered to be 90% of gross income:
NYk = GYk * (1-.1) = GYk * .9 \[2\]

The amount of the tax payment is then the tax rate for the relevant tax bracket times the taxable income for that bracket:

\[ Mk = (Tk/100) * NYk \] \[3\]

From [2],

\[ Gyk = NYk/0.9 \] \[4\]

and, substituting [4] in [1],

\[ TNY = (NY/0.9) * (1-c) \] \[5\]

or, \[ TNYk = (NYk/0.9) * (1-c) \] \[6\]

Thus, given a value for "c" there is a corresponding value of TNYk for every value of NYk:

\[ Vk = Mk/TNYk \] \[7\]

i.e. the actual tax rate is the tax payment divided by the true net income for each tax bracket.

Then, substituting [3] in [7]:

\[ Vk = \{(Tk/100) * NYk\} / TNYk \] \[8\]

Again, substituting [6] in [8],

\[ Vk = \{(Tk/100) * NYk\} / \{(NYk/0.9) * (1-c)\} \]

or, \[ Vk = \frac{(Tk/100) * 0.9}{(1-c)} \] \[9\]

Using the relationship of Equation 9, the official ONAT tax scale of Table 3 is adjusted so as to represent the true tax rates on true net income. Table 4A is then constructed, showing the revised tax brackets in terms of true net income and the tax rates as proportions of true net income. Then, when different values are assigned to "c" different tax rates and brackets are the result. In Table 4, the revised
scales and tax rates are presented for values of "c" of 10%, 40%, and 60%.

**Table 4 Here**

The rapid escalation of the true marginal tax rate is apparent in Table 4. For the case of True Net Value Added of 40% (i.e. c = 0.6) the highest tax bracket reaches 112.5%. This occurs at tax bracket (h), at a level of taxable income of 48,000 pesos or 21,333 pesos in terms of true net income.

If the “10% rule” were abolished so that every micro-enterprise could deduct its real costs of purchased inputs from taxable income, then the official tax scale would represent the true burden of the tax system on the micro-entrepreneur. As it stands, however, the official scale understates the true tax burden for all those micro-enterprises with purchased inputs exceeding 10% of gross revenues.

The lump-sum *cuota fija* tax payments can be examined using the three cases presented in Table 4, with purchased inputs accounting for 10%, 40%, and 60% respectively of gross income. These three cases are illustrated in Charts 1, 2, and 3. The third case is explained in detail below, with only a quick reference to the other two.

**Charts 1, 2, and 3 Here**

In Chart 3, with gross income on the horizontal axis and the per cent of gross revenues on the vertical axis, the horizontal line at the 60% level indicates that 60% of gross income is always expended on the purchased inputs. The true value added is then that 40% of gross revenues lying above the 60% line. The escalating marginal tax rates for the sequential tax brackets are represented by the step-like tax rate function. The area between this function and the 60% line represents the tax owed by the micro-enterprise, while the area above the tax rate function but below the 100% line represents the after-tax net revenues retained by the micro-enterprise. It can be seen that the tax rate function
escalates rapidly and exceeds 100% at the last tax bracket (66,666.67 pesos per year and above.) The tax rate function escalates quickly due to the fact that the tax is levied on 90% of the gross revenues, but the micro-enterprise only receives 40% of the gross revenues as net income.

The additional complication arises because the micro-enterprises must pay the *cuota fija* or lump-sum taxes in advance. Consider here the example of a private restaurant in the peso economy. For this case, and on an annual basis, the amount of the lump sum tax could be 620 pesos per month, or 7440 pesos per year (400 pesos *cuota fija* plus 100 pesos "alcohol tax" plus 120 pesos for a minimum of two registered workers, or 620 pesos per month.) (See Table 2.) This lump-sum tax is represented by the area "LST" which shows that a gross income of 18,600 pesos is required to generate enough net revenues (40% of the gross income) to pay the tax. However, the tax owed, as calculated by the tax scale, can be deducted from the lump-sum taxes already paid. This means that no additional taxes need to be paid until the total tax payable according to the scale reaches the lump-sum tax payment. In this case, the level of gross income at which the taxes owed equal the lump-sum payments is 39,743 pesos at point "e."

The co-existence of the lump-sum tax which can be deducted from the tax owed according to the tax scale produces a curious pattern of marginal tax rates. Instead of the rates pictured by the step-like tax function, the effective marginal tax rate (MTR) function follows line "abcdef." For the first 18,600 pesos of gross income, the MTR on net income is 100%. (This is an MTR in the sense that within this range of its gross income, the micro-enterprise must pay 100% of its net income as taxes, on a month by month basis.) However, the MTR then falls to 0.0% from "c" to "d" for that gross income for which no additional tax needs to be paid because it has already been paid via the lump-sum tax.
Only after an income level of 39,743 pesos is surpassed at point “e” does the tax scale again become effective.

This pattern of marginal tax rates cannot fail to have a variety of impacts on micro-enterprise behaviour. When the lump-sum tax is included in the picture as in Chart 3, it can be seen that the net after-tax revenues in this case could include only the area above line “bcdef” and below the 100% line. The possibilities for this micro-enterprise for earning sufficient net revenues to survive appear to be limited.

The calculations for the case illustrated in Chart 3 are shown in Appendix Table 1. In this table, column 1 shows the tax brackets defined as they are in terms of Gross Income less the allowable 10% deduction for purchased inputs. Column 2 then shows the true Gross Income relevant for the tax brackets. In column 4, the True Net Income for each tax bracket is presented, taking into consideration the assumed 60% cost on purchased inputs. With the tax rates of column 5, the tax payments are calculated in column 6, noting that the Gross Income (less 10% for purchased inputs) is what is actually taxed. The tax payments of column 6 are then presented as proportions on True Net Income (from column 4) to yield the actual or True Tax Rate, shown in column 10. In column 7, Net After-Tax Income is calculated as True Net Income less the tax payment (column 6.) Then the Net After-Tax Income is calculated in column 8 as a percentage first of Gross Income (from column 2,) and second in column 9 as a percentage of True Net Income. (The complications of the lump-sum payments are not included in the table.)

The escalation of the marginal tax rates as proportions of the true net income in this case are dramatic. With true net income equal to only 40% of gross income, the tax scale reaches high levels.
quickly. By the eighth tax bracket, 96% of every peso earned goes to input-suppliers and the tax authority. And in the last tax bracket, the tax payment reaches 112.5% on True Net Income, and Net After-Tax Income is negative.

The case of actual input purchases of 10% is illustrated in Chart 1. This case presents no complications as the True Net Income is equal to the taxable income permitted by the official tax scale of the tax legislation, that is, allowing for a 10% reduction from gross income for purchased inputs. For this case, the tax rates applied by the tax scale are in fact the same as the tax rates for True Net Income. An intermediate case, in which input purchases constitute 40% of gross income, is presented in Chart 2.

Without presenting other possible cases, it can be concluded that the higher is the level of purchased inputs by the micro-enterprise (or in other words, the lower the true net value added by the firm,) the more onerous is the true tax burden. The tax rates do not appear out of line for those enterprises with purchased inputs around 10% (true net income or value added as a proportion of gross income of 90%) and especially for those with even lower relative values of purchased inputs. However, as the level of Value Added or true net income as a proportion of gross income declines, the average tax rates begin to increase rapidly and ultimately become impossible.

When the lump-sum tax is included in the analysis, the average tax rate (ATR) is high at first, reflecting the up-front character of the payment. (The ATR function is measured from the cost line upwards.) As can be seen in each of Charts 1, 2, and 3, the average tax rate declines up to the point where the official tax rate becomes effective at point “e” in each of the Charts. The ATR schedule is especially important as a measure of the burden of the tax as it expresses what percentage of gross
income is paid as taxes (from the cost line upwards.) Thus the declining ATR and MTR indicate regressivity in the incidence of the tax system, i.e. the tax is higher on low income earners and declines as income rises up to point “e” in the charts.

A final feature of the lump-sum tax not illustrated in the charts is that as the up-front lump-sum tax payment increases in magnitude, the point at which the official tax scale becomes effective shifts towards the right in Charts 2 and 3. This means that as the lump-sum payments increase, the tax system becomes more regressive.

structure is regressive in its earlier range, with higher tax rates imposed on lower income earners.

V Implications for Equity, Efficiency and the Viability

The micro-enterprise tax regime has a variety of impacts in terms of fairness, the efficiency of the economic system and the viability of the tax collection system itself. These impacts are explored here at the levels of the micro-enterprise, the micro-enterprise sector, and Cuba's society and economy more broadly.

1. The Micro-Enterprise Level

First, the lump-sum payments involve a marginal tax rate of 100% of true net earnings until they are paid off at which level of income the marginal tax rate falls to 0% (point "c" in Charts 3, 4, and 5.) This 0% rate prevails until gross income reaches the level at which the tax payments owing under the official tax scale - but deductible from the lump-sum payments - is just equal to the total lump-sum payments. At this point ("e" in the Charts) the official tax scale becomes effective again
When faced with this pattern of marginal tax rates, the micro-enterprise will likely try to avoid paying the higher tax rates. It will try to locate itself often at point "d" in Charts 1, 2, and 3, the highest revenues with a marginal tax rate of 0%, and it will try to earn gross income just below “d.” This will be especially relevant for those micro-enterprises facing high levels of purchased inputs (the Chart 3 case,) where the marginal tax rate jumps from 0% to 67.5% at point "e." It can do this by restricting its output to this level and/or under-declaring income. If the firm restricts its output, society loses the goods and services foregone, the micro-enterprise sector loses income, and the government loses tax revenues. On the other hand, the micro-enterprise can also try to under-declare its income. In this case, the government loses tax revenues.

With the high barrier to entry created by the 100% initial marginal tax rate, some micro-enterprises may refrain from registering and may decide to operate in clandestinity. There can be no doubt that this has occurred in Cuba. Numerous tradesmen undertake house repairs; private car owners provide occasional taxi services, despite the risks involved; some households provide unofficial rental accommodation; and many people provide personal services unofficially. In this case, the government loses tax revenues. Indeed it may lose its tax base if the numbers of micro-enterprises diminish.

The tax administration is not unaware of the lost revenues and uses inspectors and the Comités por la Defensa de la Revolución (CDRs) to try to prevent enterprises from operating in the underground economy. However, clandestine micro-enterprise is widespread and the members of the CDRs (which include most people) are also involved in the underground economy so that controlling it is difficult.
Despite the ostensible progressivity of the official tax scale or schedule, the tax structure is in fact regressive for the lower and middle income micro-enterprises. Because the lump-sum tax creates a 100% marginal tax rate for the first amount of income earned followed by a 0% marginal rate, relatively lower net incomes in this range are taxed more heavily than higher incomes. The average tax rate declines as income increases up to that level where the official tax scale becomes effective (point "e" in the charts.) This result is inequitable in that lower incomes are taxed more heavily than higher incomes in this range.

2. The Micro-Enterprise Sectoral Level

The tax regime is inequitable in terms of its impacts among micro-enterprises. Because of the “10% Maximum Cost Deductibility Rule,” firms with higher levels of purchased inputs pay higher marginal and average tax rates in terms of their net income than other firms with the same net incomes but lower levels of purchased inputs. A second element of unfairness is that the tax structure discriminates against new entrants to any part of the sector, because the marginal tax rate is initially 100% due to the lump-sum monthly cuota fija. New entrants must earn revenues immediately which would permit them to pay these taxes. Established micro-enterprises are more likely to have reached income levels which permit them to experience the range of gross income where the marginal tax rate is 0%. Thus they have an advantage which shields them in part from new competition by helping to keep out the new firms.

From the standpoint of the micro-enterprise sector, the tax regime also results in a variety of inefficiencies. By creating a high barrier to entry because of the 100% marginal tax rate, the number of
new firms entering the sector is reduced. High levels of uncertainty and risk for new entrants also serve as a barrier keeping out potential new participants. Therefore, there may be less legal competition, higher prices, and lower volumes of production than if these barriers to entry were lower. On the other hand, for some other types of micro-enterprise where entrance into the clandestine economy is easier, the result may be increased competition from tax-evading lower-cost suppliers of certain goods and services.

The “10% Rule” also has negative effects in terms of efficiency. Because of the high true taxation levels for those micro-enterprises which have higher levels of purchased inputs, the volume of production of goods and services from these firms is probably unduly low. The prices of their outputs also are probably unduly high, reflecting the high tax burden but not necessarily reflecting the real efficiency and true costs of production of such firms.

There is an additional negative effect of the “10% Rule.” As an economy evolves, there normally is an increasing articulation of production among enterprises as they become more specialized and as intra-enterprise trade expands. With the “10% Rule,” there is a disincentive for a micro-enterprise to make purchases from other enterprises, as the tax treatment of such purchases is so harsh. The result is that enterprises try to avoid purchases of inputs from other firms. On an economy-wide basis, this would be to block the evolution of specialization among firms and inter-enterprise exchange.

3. The Societal Perspective

Taxation of the micro-enterprise sector is necessary from the standpoint of equity. The sector, like all others, must pay its share of the costs for public goods and services. It is difficult to know what a
fair level of taxation for the sector is in the period when it was getting established. This is because for at least a transitional period, the incomes earned in the sector were high for a number of reasons mentioned in Section IV.2. The high taxation rates in real terms - in relation to true net incomes in the sector - reflected the desire to tap these high incomes for both revenue-raising and social justice reasons.

However, from a social perspective, it is inequitable to tax those with lower incomes more heavily than those with higher incomes, but this is what the lump-sum cuota fija perpetrates in the lower ranges of micro-enterprise incomes - those ranges where perhaps a large proportion of the firms are operating. It is also inequitable to tax micro-entrepreneurs or anyone else with the same net incomes at different rates, but this is what the 10% rule achieves.

Perhaps one of the more disturbing inequities of the micro-enterprise tax regime is that it is more onerous than the tax regime facing foreign companies operating in joint venture arrangements with Cuban state firms. The contrasting tax regimes are summarized in Table 5. It is clear from this Table that while foreign enterprises in joint venture arrangements receive a fairly standard tax treatment from a comparative international perspective, their treatment is much more favourable than domestically-owned and oriented micro-enterprise.

Table 5 Here

The tax regime for micro-enterprises damages the rationality of resource allocation and in consequence, lowers living standards. First, the onerous levels of taxation inherent in the tax regime lead enterprises to go out of business, or in some cases to restrict their own production in order to avoid higher tax brackets. Both of these results reduce the volume of goods and services produced in the
sector and raise prices. Second, the micro-enterprise tax regime restricts entry into the sector thereby restricting competition, reducing output, and raising prices. Third, the movement of micro-enterprises into clandestinity or the refusal for many self-employed to register and pay taxes also results in inefficiencies of resource use. Such enterprises must operate on a very small scale and continuously "under cover." This probably lowers the quality of their products and increases their prices in comparison with those firms operating legally (and allowing for the impact of taxes on the prices of the legal micro-enterprises.)

By blocking the entrance of new micro-enterprises and promoting their exit, the tax regime also reduces productive employment and the generation of incomes. (Open unemployment was stated to be 6.8% in 1996 while the open-unemployment equivalent of "underemployment" was estimated by the United Nations Economic Commission for Latin America and the Caribbean (1997, p.378) at 27.3% in the same year. This latter figure emphasizes the loss to the nation arising from labour underutilization.)

One surprising result of the micro-enterprise tax regime is the discrimination inherent in it against domestically-oriented economic activity or domestic "value added." Micro-enterprises have little or no access to imported inputs except those acquired from recycled materials, or purchases from the dollar stores or special state sellers of inputs. The effective exchange rate for them in 1998 was approximately 20 pesos for $US 1.00 worth of imported inputs (plus taxes of 140% normally.) For enterprises in the state sector, on the other hand, $US 1.00 worth of imported inputs cost only 1 peso, when the importation was approved by the planning authorities. This means that state enterprises can obtain access to imports more cheaply than micro-enterprises. The result of this is that often the micro-enterprises use domestically available inputs to a higher degree than the state enterprises. An example
of this occurs with the private restaurants where close to 100% of all of the inputs are of Cuban origin, in contrast to the state fast-food chains such as "Burgui" (a Burger King look-alike) which import almost everything: tables, potatoes, hamburger, chicken, trays, paper cups, and many of the specialized building materials. The current tax regime, in discriminating against micro-enterprise thus discriminates against domestic value added and in favour of the more import-intensive state firms.

3. Implications for Tax System Viability

There are some important implications of the micro-enterprise tax regime for the functioning and viability of the general tax system.

The tax regime leads to reduced revenues in comparison with a standard type of tax regime. This is due to a number of factors:

1. Because the true tax rates are so high for those micro-enterprises with higher levels of purchased inputs, some firms are put out of business with a loss of revenues.

2. When faced with high real tax rates, some micro-enterprises cease legal operation and enter the underground economy.

3. Because the true level of the marginal tax rate is so high when it becomes effective for those micro-enterprises with higher levels of purchased inputs, they have an incentive to underdeclare their gross incomes, producing revenue losses for the government.

4. When faced with high lump-sum taxes when contemplating the establishment of a new micro-enterprise, or re-registering an established one, some potential micro-entrepreneurs may enter the clandestine economy or refrain from starting or continuing their business.

The perceived unfairness and onerousness of the micro-enterprise tax regime has resulted in high levels of non-compliance. Indeed, the survival of some micro-enterprises depends on non-compliance, especially if they are unable to retreat to the underground economy due to a location or
profile incompatible with clandestine operations. Some micro-enterprises may under-declare their incomes.

The result of the character of the tax system and the non-compliance it engenders, is that the tax system lacks credibility and respect. Rather than leading to the gradual development of a "tax culture" in which people willingly and honestly pay their taxes, the system has provoked the habit of cheating. To some extent this is part of people's survival strategies in the difficult circumstances of the late 1990s. The nature of the tax regime leads some people to think that tax evasion is not unethical even if it is illegal.

In the long term, it may be difficult to change the current "culture of tax evasion" to one of compliance. This could continue to be a problem even after a reasonable micro-enterprise tax regime has been established.

VI Policy Recommendations

There are a number of changes in the tax regime which could reduce or eliminate some of more harmful effects of the micro-enterprise tax regime. A few of these are not complicated and could be implemented quickly. Others are more complicated and would take longer to generate positive results.

Recommendation 1: Establish a Normal Tax Base

The first change might be to establish net income rather than gross income as the tax base. This means abolishing the “10% Rule,” which limits the allowable deduction from taxable income to a maximum of 10% of gross income. This would improve the equity of the system and end the discrimination against those micro-enterprises with purchased inputs exceeding 10% of gross income.
By making the tax regime fairer in this way, non-compliance would be reduced and tax collection facilitated. This change would permit an expansion of output of the micro-enterprises which were more dependent on larger proportions of purchased inputs.

Recommendation 2: Eliminate the Up-Front Lump-Sum Cuota Fija Payments.

The elimination of the monthly cuota fija payments would have a variety of positive results. It would remove a barrier to the entry of new enterprises thereby increasing numbers of firms, intensifying competition, increasing output, and reducing prices in the sector. This would also, in time, lead to an increase not a decrease in tax revenues. These would increase as more micro-enterprises entered the sector and as more micro-enterprises surfaced from the underground economy because the high cost, risk and uncertainty created by the cuota fija would be eliminated. Moreover, elimination of the cuota fija would also eliminate some of the obvious unfairnesses of the tax regime. No longer would the incidence of the tax in the lower and middle income ranges be regressive. The non-refundability of tax over-payments would no longer exist. The corrections of these two inequities would help to establish the credibility in the tax regime, facilitate tax compliance and reduce tax evasion.

Recommendation 3: Build the Credibility of the Tax System

At present, the tax regime is perceived to be unfair and unreasonable so that cheating and non-compliance seem to be morally acceptable as well as necessary for survival. Therefore, any other policies which would help to build the credibility of the tax system would therefore be desirable. Some such changes could include reasonable financial penalties for non-compliance and the refunding of tax over-payments to the micro-entrepreneur. The surfacing of some of the economic activities which previously had gone or remained in clandestinity would also help make the system fairer by reducing the
number of unregistered micro-enterprises which were able to evade taxes totally.

Recommendation 4: Lower Barriers to Entry into the Micro-Enterprise Sector

A further set of changes concerns the large number of rules and regulation mentioned in Section III. These are designed to contain the sector, to limit incomes in the sector, and perhaps to provide protection to some state sector enterprises. This policy environment provides an incentive for micro-enterprises to remain underground, with a variety of harmful consequences as discussed earlier. The solution, however, is not to impose more regulations. Instead, it would probably be wiser to lower the barriers to entry into the legal micro-enterprise sector. This would involve dropping many of the restrictions on the micro-enterprises and permitting most applicants for entry to the sector to enter. It would involve changes in the structure of incentives, which at this time encourage micro-enterprises to remain in the underground economy or out of business.

By lowering the barriers to entry and changing the incentive structure so as not to penalize legality, the number of micro-enterprises will increase. With increased competition in the sector, production will increase and prices will decline. The average income level of the micro-entrepreneurs will approach the national average. Employment in the sector should increase but should decrease in the underground economy. Finally, the tax revenues actually collected by the tax system should increase.

VII Summary and Conclusion

Cuba’s tax regime for micro-enterprise has a number of shortcomings which make it inequitable, which damage the efficiency of resource allocation in the economy and which reduce its effectiveness in collecting revenues.
The problems with the tax regime stem mainly from the “10% Rule” and the character and size of the *cuota fija* or lump-sum tax payments which must be made each month regardless of revenues. The analysis of this essay has shown that the actual incidence of the tax is much higher than the official tax scale when actual production costs exceed the 10% maximum cost deductibility rule. Indeed for micro-enterprises with costs of purchased inputs in the 60% range, the true marginal tax rate on true net income (rather than gross income less the maximum allowable 10%) can reach levels in excess of 100%. Moreover, the up-front lump-sum tax payments result in what are in effect marginal tax rates of 100% for initial levels of revenue. Then the marginal tax rate falls to 0% until that level of taxable income is reached where taxes payable with the tax scale are equal to the lump-sum payment. This creates a pattern of declining marginal and average tax rates in the lower and middle income ranges, i.e. the tax in this range is “regressive.” The tax rates in the official tax scale also turn out to be steep for the vast majority of the micro-enterprises which operate in the peso rather than the dollar economy.

From the standpoint of equity, the tax regime discriminates against those micro-enterprises which have costs of purchased inputs in excess of 10% of gross revenues. It is regressive in that the tax rates are higher for lower income micro-enterprises. It discriminates against potential new entrants vis-a-vis established firms because the former must pay the up-front lump-sum taxes before even without earning revenues. Much of the micro-enterprise sector also faces a more onerous tax regime than foreign firms in joint venture arrangements.

From the stand-point of its impacts on the efficiency of resource use in Cuban society, the tax regime has unfortunate results. It restricts the entry of new firms into the sector and puts some out of business thereby reducing production, raising prices to Cuban citizens, reducing employment in the
sector and probably reducing the generation of incomes. It discriminates against domestic value-added
in the micro-enterprise sector which uses inputs almost entirely of domestic origin in contrast to the
lower-taxed state sector which is highly dependent on imported inputs and permits profit repatriation.

While the tax regime collects revenues from the micro-enterprises, there are a number of effects
which actually reduce the volume of taxes collected. First, the lump-sum tax payment arrangement and
the high tax rates for those with purchased inputs exceeding 10% of gross revenues encourage firms to
“go underground” or to refrain from formally registering. The size of the clandestine economy is
immense, and the loss of revenues comparably large. The nature of the tax regime has bred a culture of
tax evasion and not of compliance.

Some suggestions for improving the micro-enterprise tax system are also presented. First, a
normal tax base should be established, i.e. the “10% Rule” should be dropped, and taxable income
should be gross revenues less actual costs of production. Second, the up-front lump-sum tax payment
should be canceled. Third, compliance with the tax regime in the long term needs to be developed by
making it as fair and reasonable as possible. And fourth, artificial policy-generated barriers to entry to
new micro-enterprises should be dropped. A more effective tax administration would also be necessary
to prevent abuses of a “cost deductibility from taxable income” arrangement and in the absence of the
up-front lump-sum tax payment.

Generally, while the micro-enterprise sector must pay its share of taxes, it should also have a
tax regime which is not more onerous than that facing joint ventures and foreign firms, and which is
equitable among micro-enterprises. A well-designed micro-enterprise tax regime could help permit the
sector to make a more valuable role in the Cuban economy in terms of employment and income
generation, and the production of needed goods and services at lower relative prices. It could also generate more revenues than the current system which pushes micro-enterprises into clandestinity and into tax evasion.

**Bibliography**


*Decreto-Ley No.174, 30 de Junio de 1997, De las Contravenciones Personales de las Regulaciones del Trabajo por Cuenta Propia*, *Gaceta Oficial*.


*Ley Numero 77, Ley de Inversion Extranjera 6 de Septiembre de 1995* *Gaceta Oficial, La Habana*


or Asphyxiation,” *Journal of Inter-American Studies and World Affairs*, 40:2, pp. 63-94.