

The tax regime for *micro-enterprises in Cuba*

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The government of Cuba established a tax regime for micro-enterprises 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 advance 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. This 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 a rate of 0% until a level of taxable income is reached where taxes payable according to 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 standpoint of its impact 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 income. 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 practising in clandestine form as part of their personal and family survival strategies. This permitted the 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, has indeed extracted revenues from the sector. However, the design of the 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 analyse 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, a number of observations are made on how it could be modified in order to achieve more fully the objectives of fairness, efficiency and viability.

Section II gives 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 the rationale for its design are presented in section IV, together with the main quantitative analysis of the regime and its functioning, while in section V the implications of the tax regime in terms of equity, efficiency and viability are analysed at the levels of the individual micro-enterprise, the micro-enterprise sector, and the broader economy and society. Section VI then presents a number of specific recommendations for the improvement of the regime from the standpoint of the three key criteria, and finally, in the last section, the basic argument is summed up and the main conclusions are reiterated.

II

The micro-enterprise sector

Despite the nationalization of small and medium-scale enterprises in the Revolutionary Offensive of March 1968, a small self-employment sector continued to exist, mainly in the areas of personal services, transport, artisanal activities, and various types of manufacturing. In 1988, the number of officially registered non-agricultural micro-enterprises was placed at 28,600, with 12,800 employees, accounting for 1.8% of total employment (CEE, 1988). The underground economy also included many micro-enterprise activities, and it continued to operate on a large scale throughout the 1968-1993 period, although its size is virtually impossible to ascertain. In the 1989-1993 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, since the latter were increasingly insufficient to acquire the daily necessities which were no longer available through the rationing system (Ritter, 1998a, pp. 74-76).

The liberalization of self-employment on 8 September 1993 permitted many micro-enterprises to surface from the underground economy, and permitted new ones to be legally established. Decree-Law 141 and the accompanying resolution legalized 117 types of activities in six general areas, including transportation, house repair, agriculture-related areas, family and personal services, housing services and other activities. By early 1997, a total of 157 types of activities had been legal-

ized, 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 centres. A variety of other restrictions on micro-enterprise activity were imposed as well, as discussed below.

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. An estimate by the United Nations Economic Commission for Latin America and the Caribbean (ECLAC, Subregional Headquarters in Mexico, 1997) placed the total volume of private sector employment at 400,000 or 9.4% of the total in 1996, but the number may have been even 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 re-

ceiving remittances from relatives or having access to dollars in other ways, 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 have created employment and helped families earn the incomes necessary for their survival. Although some self-employment activities have generated high incomes, the vast majority provide important but modest income supplements. These self-employment activities constitute a massive school for entrepreneurship. They also provide basic services and goods to satisfy 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 made by one dollar-sector restaurant amount to \$US 520,¹ or almost 50 times the average monthly salary in the State sector (214 pesos in 1997), at the exchange rate applicable to Cuban citizens, namely \$US 1.00 = 20 pesos.

¹ US\$ 300 for the basic monthly payment, plus US\$ 100 for an alcohol licence, plus US\$ 60 for each of the minimum two family employees required by law.

TABLE 1

Cuba: Registered micro-enterprises
(Number)

	December 1994	December 1995	March 1996	January 1998
Approved and registered	169 098	208 786	206 824	159 506
Applications for registration	248 552	390 759	439 268	(268 295)
Applications rejected	10 675	11 519	12 665	(108 789)
Applications withdrawn	65 586	148 491	195 023	
Applications being processed	4 193	21 963	8 789	

Source: Ministerio de Trabajo y Seguridad Social de Cuba, and ECLAC, Subregional Headquarters in Mexico (1997).

TABLE 2

Cuba: Taxes on “gastronomic services”
(Monthly lump-sum payments)

	Local economy (pesos)	Tourism sector (dollars)
Sale of food and beverages (“al detalle”)	100.00	—
Sale of home-made food	200.00	100.00
Private restaurants (“paladares”)	400.00	300.00
Sale of alcoholic beverages in private restaurants	100.00	100.00
Tax for the minimum of two family-member employees required in private restaurants	120.00	120.00

Source: Ministerio de Trabajo y Seguridad Social/Ministerio de Finanzas y Precios, 1995.

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 operation. The regulatory environment includes the following general features as summarized in Decreto-Ley 174 (*Gaceta Oficial*, 1997):

- 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;
- prohibition of self-employment in all professional areas;
- restrictions on access to markets, with prohibition of sales to all State entities, except where specifically permitted;
- prohibition of publicity;
- no access to credit, foreign exchange at the official parity rate, or directly-imported inputs;
- prohibition of hiring labour outside the family;
- prohibition of associations of own-account workers;
- additional specific limitations on private restaurants, including a 12 seat maximum;
- inputs can be purchased only in dollar stores and agricultural markets, where prices are several times higher than input prices in the State sector, and limitations on the products available;
- additional specific limitations on the sale of food products in the streets, such as prohibition of the use of benches, seats or tables;
- prohibition of the use of any location for a micro-enterprise activity except one’s own 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 nature of fines and punishments also appears to permit discretionary punishment for in-

fractions, with the intensity of the punishments being at the discretion of the relevant inspectors (*Gaceta Oficial*, 1997). 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 this is perhaps not unduly onerous for the most lucrative types of self-employment. This compares with traffic offenses, which vary from about 2 pesos for an illegal left turn to 10 pesos for a dangerous offence such as running a red light. The suspension of the licence of an offending micro-enterprise for a minimum of two years which is a possibility 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 amounts to the confiscation of the accumulated capital of the micro-entrepreneur, modest though it might be. Multiple or repeated 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 offender’s wage, salary, pension or any other income, then his 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 only minimal chances of a successful appeal.

These regulations have a variety of economic consequences. First, they constrain the normal growth and expansion of individual micro-enterprises, condemning them to a small size. The result of this is that the incomes of the entrepreneurs are indeed limited considerably, thus preventing them 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, encourages various infractions of the rules in daily operations, despite the efforts 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 competition from State enterprises, which often have structures of input costs which are only a small fraction of those faced by the micro-enterprises (Ritter, 1998a).

The general political environment within which the micro-enterprise sector has operated has been uncertain since its legalization in 1993. The original legislation in-

cluded a clause which could be used at any time to eliminate parts of the sector (Cuba, Gobierno, 1993). In a speech in 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” (Castro, 1997). This statement was widely interpreted to mean that the continued existence of the micro-enterprise sector was being questioned.

The micro-enterprise sector is also criticized by the State-controlled press. Articles critical of the sector have appeared every so often (Lee, 1996; Del Barrio, 1998; Mayoral, 1995 and 1997; Ricardo, 1998). The press usually emphasizes the illegalities perpetrated by the sector, the alleged high incomes received, the evasion of taxes, and the clear need for stronger enforcement, greater vigilance and tighter controls.

IV

The tax regime for micro-enterprises

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 Administración Tributaria (ONAT), together with a self-administered correction for the annual tax payments carried out by each micro-enterprise. A key feature of the system is the 10% maximum allowable deduction from taxable income for the purchase of inputs.

The first element in the tax regime is the monthly fixed lump-sum payment, which was first imposed in 1993, when Cuba embarked on the first phase of micro-enterprise liberalization. The Ministries of Finance and Prices and of Labour and Social Security set 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 they consider that the incomes of the micro-enterprises are “excessive,” although what “excessive” means is not defined (Cuba, Gobierno, 1993). Here again, the ambiguous character of the law increases

the uncertainty for micro-enterprises. The law permits only increases, not decreases in the tax rates. This also adds to uncertainty and makes the system inflexible for micro-entrepreneurs, 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, immediately ceasing the monthly payments.

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 and those in the peso economy, the former being taxed at a rate which is 20 times that of the latter (at the exchange rate applicable to Cuban citizens).

The second feature of the tax regime is that at the end of each year, micro-enterprises must pay a tax on their revenues on the basis of an escalating tax schedule. They can, however, deduct the total of the monthly fixed lump-sum payments from the amount of tax owed according to this 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 deduc-

- tion for inputs purchased, 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 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 tax 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 (table 3) includes one scale for income and taxes in national currency and another 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 progressiveness of the tax scale for dollar incomes is not too far out of line with international standards. 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 to 50% for the tax bracket for incomes exceeding 60,000 pesos. The peso tax scale does appear to be excessive, as the 50% marginal tax rate comes into effect at an annual income of 60,000 pesos, which is only about \$US 3,000.

A third feature of the tax system is that a maximum deduction of 10% from gross income is permitted for the purchase of inputs when determining 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% (ONAT, 1997, p. 6). In this article, this is termed 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 in its actual net revenues can be much higher than the rates shown in table 3, which show the true rates only for a micro-enterprise with actual costs of purchased inputs amounting to 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: messengers, bicycle guards, 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 estimate their input costs as being above 60% (Ritter, 1998b).

TABLE 3

Cuba: Scales of taxes applicable to personal income

Scale for income in pesos				Scale for income in dollars		
	Tax bracket	Tax rate (%)	Amount of tax	Tax bracket	Tax rate (%)	Amount of tax
(a)	0 – 3,000	5		0 – 2,400	10	
(b)	3,000 – 6,000	10		2,400 – 6,000	12	
(c)	6,000 – 12,000	15		6,000 – 9,600	15	
(d)	12,000 – 18,000	20		9,600 – 13,200	20	
(e)	18,000 – 24,000	25		13,200 – 18,000	25	
(f)	24,000 – 36,000	30		18,000 – 24,000	30	
(g)	36,000 – 48,000	35		24,000 – 36,000	35	
(h)	48,000 – 60,000	40		36,000 – 48,000	40	
(i)	60 000 or more	50		48,000 – 60,000	45	
				60 000 or more	50	

Source: ONAT (1997, p. 1); Ministerio de Finanzas y Precios (1996).

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 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 prices in the State sector were fixed at low levels) and the limited number of micro-enterprises which initially existed. 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 for State employees.

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 or a generalized habit of paying taxes, because the tax rates and payments had previously been hidden. Moreover, prior to the legalization of micro-enterprises, many such firms had operated on a clandestine basis, 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 have been 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 such purchases.

A popular view among own-account entrepreneurs is that the tax system is designed to punish them for ideological reasons and ultimately put them out of business.

This is indeed a possibility, and there are statements by 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, however: in reality, it was probably designed to 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 which are encountered when analysing the micro-enterprise tax regime: first, the advance lump-sum tax, and second, the requirement in the income tax act that net income for tax purposes must always be fixed at 90% of gross income. To analyse the implications of these factors for the micro-enterprise tax regime, a step-by-step approach is used here. First, a brief mathematical description is given of 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 percentage of total revenue). The implications of the advance tax payments combined with the tax scale are then analysed, using a graphical presentation.

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

Definitions:

c :	Percentage of gross income used for purchasing inputs
GY :	Gross income
$GYk(1-0.1)$:	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
$Vk = Mk/TNYk$:	Tax rate as % of true net income in tax bracket

True net income is defined as gross income less the cost of purchased inputs, i.e., net value added:

$$TNYk = GYk * (1-c) \quad [1]$$

Taxable income is defined by the tax legislation as gross income less 10% for purchased inputs (regardless of the true value of those purchases): i.e., net value added for tax purposes is always considered to be 90% of gross income:

$$NYk = GYk * (1-0.1) = GYk * 0.9 \quad [2]$$

The amount of the tax payable is therefore the tax rate for the relevant tax bracket times the taxable income for that bracket:

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

From [2], we have:

$$GYk = NYk/0.9 \quad [4]$$

and, substituting [4] in [1],

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

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

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

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

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]:

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

Again, substituting [6] in [8],

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

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

Using the relationship of equation [9], the official $ONAT$ tax scale given in table 3 is adjusted so as to represent the true tax rates on true net income. This gives table 4, section A of which shows 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 , this gives different tax rates and brackets. In table 4, the revised scales and tax rates are presented for values of c of 10%, 40%, and 60%.

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 (i), at a level of taxable income of 60,000 pesos or 26,667 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 tax payments can be examined using the three cases presented in sections B, C and D of table 4, with purchased inputs accounting for 10%, 40%, and 60% respectively of gross income. These three cases are illustrated in figures 1, 2 and 3. The third case is explained in detail below, with only a quick reference to the other two.

In figure 3, with gross income on the horizontal axis and the percentage 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 purchase of inputs. The true value added, then, is the 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 payable 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 (66,667 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 lump-sum taxes in advance. We will 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 lump sum plus 100 pesos "alcohol tax" plus 120 pesos for a minimum of two registered workers, or 620 pesos per month) (see table 2). The area representing the lump-sum tax in figure 3 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 lump-sum taxes already paid can be deducted from the tax payable according to the tax scale. This means that no additional taxes need to be paid until the total tax pay-

TABLE 4

**Cuba: Calculation of tax rates for effective net incomes
with different levels of purchased inputs (or net value added)**

A. When c represents purchased inputs as % of gross income			
	Tax brackets as effective net income (<i>pesos</i>)		Tax rate for effective net income (%)
	From	To	
(a)		$3,000 \times (1-c)^{(-1)} 0.9$	$0.05 \times (1-c)^{(-1)} 0.9$
(b)	$3,000 \times (1-c)^{(-1)} 0.9$	$6,000 \times (1-c)^{(-1)} 0.9$	$0.10 \times (1-c)^{(-1)} 0.9$
(c)	$6,000 \times (1-c)^{(-1)} 0.9$	$12,000 \times (1-c)^{(-1)} 0.9$	$0.15 \times (1-c)^{(-1)} 0.9$
(d)	$12,000 \times (1-c)^{(-1)} 0.9$	$18,000 \times (1-c)^{(-1)} 0.9$	$0.20 \times (1-c)^{(-1)} 0.9$
(e)	$18,000 \times (1-c)^{(-1)} 0.9$	$24,000 \times (1-c)^{(-1)} 0.9$	$0.25 \times (1-c)^{(-1)} 0.9$
(f)	$24,000 \times (1-c)^{(-1)} 0.9$	$36,000 \times (1-c)^{(-1)} 0.9$	$0.30 \times (1-c)^{(-1)} 0.9$
(g)	$36,000 \times (1-c)^{(-1)} 0.9$	$48,000 \times (1-c)^{(-1)} 0.9$	$0.35 \times (1-c)^{(-1)} 0.9$
(h)	$48,000 \times (1-c)^{(-1)} 0.9$	$60,000 \times (1-c)^{(-1)} 0.9$	$0.40 \times (1-c)^{(-1)} 0.9$
(i)	$60,000 \times (1-c)^{(-1)} 0.9$		$0.50 \times (1-c)^{(-1)} 0.9$

B. When $c = 10\%$			
	Tax brackets as effective net income (<i>pesos</i>)		Tax rate (%)
	From	To	
(a)	0	3,000	5
(b)	3,000	6,000	10
(c)	6,000	12,000	15
(d)	12,000	18,000	20
(e)	18,000	24,000	25
(f)	24,000	36,000	30
(g)	36,000	48,000	35
(h)	48,000	60,000	40
(i)	60,000		50

C. When $c = 40\%$			
	Tax brackets as effective net income (<i>pesos</i>)		Tax rate (%)
	From	To	
(a)	0	2,000	7.5
(b)	2,000	4,000	15.0
(c)	4,000	8,000	22.5
(d)	8,000	12,000	30.0
(e)	12,000	16,000	37.5
(f)	16,000	24,000	45.0
(g)	24,000	32,000	52.5
(h)	32,000	40,000	60.0
(i)	40,000		75.0

D. When $c = 60\%$			
	Tax brackets as effective net income (<i>pesos</i>)		Tax rate (%)
	From	To	
(a)	0	1,333	11.3
(b)	1,333	2,667	22.5
(c)	2,667	5,333	33.8
(d)	5,333	8,000	45.0
(e)	8,000	10,667	56.3
(f)	10,667	16,000	67.5
(g)	16,000	21,333	78.8
(h)	21,333	26,667	90.0
(i)	26,667		112.5

Source: Section A is based on equation [9] and table 3. The calculations in sections B, C and D are based on section A.

FIGURE 1
Effective tax rates with lump-sum payment
(of 620 pesos per month or 7,440 per year) with true net
value added at 90% of gross revenues
(c=0.1)

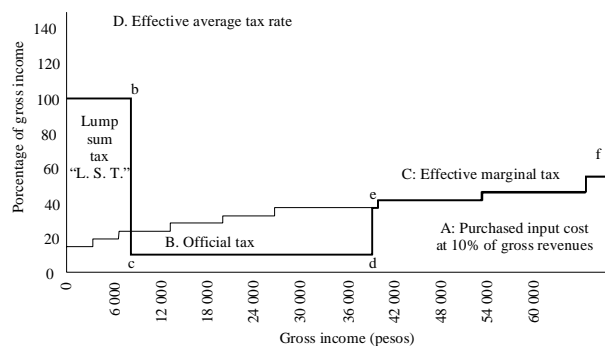


FIGURE 2
Effective tax rates with lump-sum payment
(of 620 pesos per month or 7,440 per year) and true net
value added at 60% of gross revenues
(c=0.4)

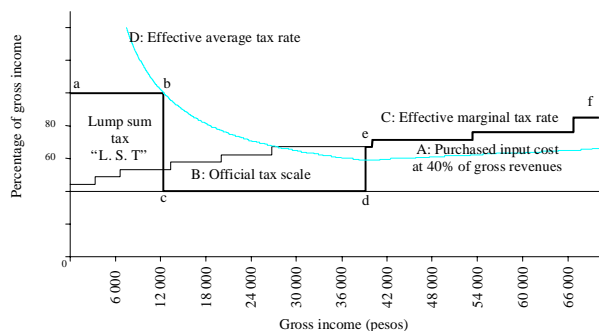
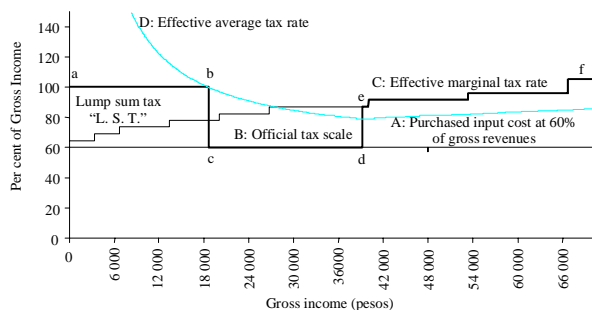


FIGURE 3
Effective tax rates with lump-sum payment
(of 620 pesos per month or 7,440 per year) and true net
value added at 40% of gross revenues
(c=0.6)



able according to the scale reaches the lump-sum tax payment. In this case, the level of gross income at which the taxes payable equal the lump-sum payments is 39,743 pesos, at point *e*.

The coexistence of the deductible lump-sum tax with the tax payable according to the tax scale produces a curious pattern of marginal tax rates. Instead of the rates depicted by the step-like tax function, the effective marginal tax rate (MTR) function follows the 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 portion of gross income on 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 passed, 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 shown in figure 3, it can be seen that the net after-tax revenues in this case include only the area above line *bcdef* and below the 100% line. The possibilities for this micro-enterprise to earn sufficient net revenues to survive appear to be limited.

The calculations for the case illustrated in figure 3 are shown in table 5. In this table, column 1 shows the tax brackets defined in terms of gross income, less the allowable 10% deduction for purchased inputs. Column 2 then shows the true gross income applicable to the tax brackets. In column 4, the true net income for each tax bracket is presented, taking into consideration an assumed 60% cost for 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 of true net income (from column 4) to give 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 payments made (column 6). The net after-tax income is then calculated in column 8 as a percentage of gross income (from column 2), and next, in column 9, as a percentage of true net income (the complications of the lump-sum payments are not included in this table).

In this case, the escalation of the marginal tax rates as proportions of the true net income is dramatic. With true net income equal to only 40% of gross income, the tax scale reaches high levels quickly. By the eighth tax

TABLE 5

Cuba: Calculation for determining real tax rates for an effective net income of 40% of gross income^a
(*c* = 60%)

1	2	3	4	5	6	7	8	9	10
Tax bracket	Gross income	Taxable income	Effective net income	Tax rate	Amount of tax	Net income after tax	Net income after tax, as % of gross income	Net income after tax, as % of effective net income	Effective rate, %
GYk (<i>I-I</i>)	Gyk	Nyk	TNYk = GYk (<i>I-c</i>)	Tk	Mk = TkxNYk	NAYk = TNYk-Mk	NAYk/GYk	NAYk/TNYk	Mk/TNYk
(a) 0 – 3,000	0 – 3,333	3,000	1,333.3	.05	.05x3,000=150	1,183.3	0.355	0.887	11.3
(b) 3,000 – 6,000	3,333 – 6,667	3,000	1,333.3	.10	.10x3,000=300	1,033.3	0.31	0.775	22.5
(c) 6,000 – 12,000	6,667 – 13,333	6,000	2,666.7	.15	900	1,766.7	0.265	0.663	33.8
(d) 12,000 – 18,000	13,333 – 20,000	6,000	2,666.7	.20	1,200	1,466.7	0.22	0.55	45.0
(e) 18,000 – 24,000	20,000 – 26,667	6,000	2,666.7	.25	1,500	1,166.7	0.175	0.44	56.3
(f) 24,000 – 36,000	26,667 – 40,000	12,000	5,333.3	.30	3,600	1,733.3	0.13	0.325	67.5
(g) 36,000 – 48,000	40,000 – 53,333	12,000	5,333.3	.35	4,200	1,133.3	0.085	0.21	78.8
(h) 48,000 – 60,000	53,333 – 66,667	12,000	5,333.3	.40	4,800	533.3	0.04	0.10	90.0
(i) 60,000 – 100,000	66,667 – 111,111	40,000	17,777.8	.50	20,000	-2,222.2	-0.05	-0.125	112.5

Source: Calculations by the author.

^a Assuming that *c* = 0.6, i.e., that purchased inputs equal 60% of gross income. For definitions of the terms used, see page 145.

bracket, 96% of every peso earned goes to input-suppliers and the tax authority, and in the last tax bracket the tax payable reaches 112.5% of true net income, so that net after-tax income is negative.

The case of actual input purchases of 10% is illustrated in figure 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% deduction 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 equal 40% of gross income, is presented in figure 2.

Without presenting other possible cases, it can be concluded that the higher 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 abnormal 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 be-

gin 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 advance nature of the payment (the ATR function is measured from the cost line upwards). As can be seen in each of figures 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 figures. The ATR schedule is especially important as a measure of the tax burden, as it shows what percentage of gross income is paid as taxes (from the cost line upwards). Thus the declining ATR and MTR indicate that the incidence of the tax system is regressive: i.e., the tax is higher for low income earners and declines as income rises up to *e* in the figures.

A final feature of the lump-sum tax, not illustrated in the figures, is that as the advance lump-sum tax payment increases in magnitude, the point at which the official tax scale becomes effective shifts towards the right in figures 2 and 3. This means that as the lump-sum payments increase, the tax system, which is regressive from the beginning, becomes even more so, with higher tax rates imposed on lower income earners.

V

Implications for equity, efficiency and 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 up to the level of income that covers them, at which point the marginal tax rate falls to 0% (point *c* in figures 1, 2 and 3). This 0% rate prevails until gross income reaches the level at which the tax payable under the official tax scale –but deductible in an amount equal to the lump-sum payments– is just equal to the total of the latter. At this point (*e* in the figures) the official tax scale becomes effective again.

When faced with this pattern of marginal tax rates, the micro-enterprise will very likely try to avoid paying the higher tax rates. It will try to locate itself as close as possible to point *d* in figures 1, 2, and 3 (the highest levels of income with a marginal tax rate of 0%) by earning gross income just below that point. This will be especially relevant for those micro-enterprises facing high levels of purchased inputs (the case analysed in figure 3), 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 forgone, the micro-enterprise sector loses income, and the government loses tax revenue. If, on the other hand, the micro-enterprise tries to under-declare its income, the government likewise loses tax revenue.

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 on a clandestine basis. 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 rented accommodation, and many people provide personal services unofficially. In this case, the government loses tax revenue, and indeed it may lose its tax base if the number of micro-enterprises diminishes.

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 often also involved in the underground economy, so that controlling it is difficult.

Despite the ostensible progressiveness 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 the level where the official tax scale becomes effective (point *e* in the figures). 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 also 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 fixed monthly lump-sum tax. New entrants must earn revenues immediately which would permit them to pay these taxes, whereas established micro-enterprises are more likely to have reached income levels which permit them to attain 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 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 suppliers of certain goods and services operating at lower costs.

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 is normally increasing articulation of production among enterprises as they become more specialized and as inter-enterprise trade expands. With the “10% rule”, however, 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 block the evolution of specialization among firms and inter-enterprise exchange.

3. The implications for society

Taxation of the micro-enterprise sector is necessary from the standpoint of equity. This sector, like all others, must pay its share of the cost of providing public goods and

services. It was difficult to know what a fair level of taxation for the sector was, at a time when it was only just getting established. This is because, at least for 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.

From a social perspective, however, it is inequitable to tax those with lower incomes more heavily than those with higher incomes, yet this is precisely what the lump-sum tax does 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 most 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 6, from which it is clear that while foreign enterprises in joint venture arrangements receive fairly normal tax treatment from a comparative international perspective, their treatment is much more favourable than that given to domestically-owned and oriented micro-enterprises.

The tax regime for micro-enterprises runs counter to the rationality of resource allocation and consequently 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

TABLE 6

Cuba: Comparison of tax regime for Cuban micro-enterprises with that applicable to foreign firms operating under joint ventures

	Micro-enterprise sector	Joint ventures
Effective tax rates	Can exceed 100% of net income	30% of net income (50% for mining and petroleum sectors)
Effective tax base	90% of gross income	Net income after deduction of costs
Possibility of deducting investments	Not deductible from taxable income	Fully deductible from taxable income
Lump-sum taxes	Compulsory advance lump-sum tax payments	None
Return of excess tax paid	No returns	Not applicable
“Tax holidays”	No	Yes
Repatriation of profits	No	Yes

Source: Analysis by the author.

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 fact that some micro-enterprises go underground or that many self-employed micro-entrepreneurs avoid registering and paying 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 (even allowing for the impact of taxes on the prices charged by legal micro-enterprises).

By blocking the entry of new micro-enterprises and promoting the exit of existing ones, the tax regime also reduces productive employment and the generation of income (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 at 27.3% in the same year (ECLAC, Subregional Headquarters in Mexico, 1997, p. 378). This latter figure emphasizes the loss to the nation due to 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 each US dollar of imported inputs (plus taxes of 140% normally). For enterprises in the State sector, on the other hand, one US dollar of imported inputs costs only 1 peso, when the importation has been approved by the planning authorities. This means that State enterprises can obtain access to imports much more cheaply than micro-enterprises. The result of this is that often 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, hamburgers, chicken, trays, paper cups, and many specialized building materials. The current tax regime, in discriminating against micro-enterprises, thus discriminates against domestic value added and in favour of the more import-intensive State firms.

4. Implications for tax system viability

The micro-enterprise tax regime has some important implications for the functioning and viability of the general tax system, since it leads to reduced revenues in comparison with a more normal type of tax regime:

- i) Because the true tax rates are so high for micro-enterprises with higher levels of purchased inputs, some firms are put out of business, leading to loss of revenue.
- ii) When faced with high real tax rates, some micro-enterprises cease legal operation and enter the underground economy.
- iii) Because the true level of the marginal tax rate is so high when it becomes applicable to those micro-enterprises with higher levels of purchased inputs, they have an incentive to under-declare their gross income, leading to revenue losses for the government.
- iv) Because of the 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 perception that the micro-enterprise tax regime is unfair and excessively onerous has resulted in high levels of non-compliance. Indeed, some micro-enterprises can only survive through 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, if adopted, could reduce or eliminate some of the more harmful effects of the micro-enterprise tax regime. Some of them are quite simple 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 are more dependent on larger proportions of purchased inputs.

Recommendation 2:

Eliminate the advance lump-sum tax payments

The elimination of the fixed monthly payments would have a variety of positive results. It would remove a barrier to the entry of new enterprises, thereby increasing the number of firms, intensifying competition, increasing output and reducing prices in the sector. This would also, in time, lead to an increase rather than a decrease in tax revenues, which would grow as more micro-enterprises entered the sector and as more micro-enterprises surfaced from the underground economy because of the elimination of the high cost, risk and uncertainty created by the lump-sum taxes. Moreover, elimination of these tax payments would also eliminate some of the more obviously unfair aspects of the tax regime. No longer would the incidence of the tax in the lower and middle income ranges be regressive, and the non-refundability of tax over-payments would no longer exist. Correction of these two inequities would help to establish the credibility of the tax regime, facilitate tax compliance and reduce tax evasion.

Recommendation 3:

Build up 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. Any policies which would help to build up the credibility of the tax system would therefore be desirable. Some such changes could include reasonable financial penalties for tax evasion and the refunding to micro-entrepreneurs of overpayments of tax. The return to legality of some economic activities which had previously gone underground or remained in that situation would also help make the system fairer by reducing the number of unregistered micro-enterprises able to completely evade taxes.

Recommendation 4:

Lower the barriers to entry into the micro-enterprise sector

A further set of changes concerns the large number of rules and regulations mentioned in section III. These were designed to contain the sector, to limit incomes in the sector, and perhaps to provide protection to some State 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 still 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 micro-enterprises and permitting most applicants for entry into the sector to effectively enter it. It would involve changes in the structure of incentives, which currently encourage micro-enterprises to remain in the underground economy or go out of business.

If the entry barriers are lowered and the incentive structure is changed 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, while the average income level of the micro-entrepreneurs will approach the national average. Employment in the sector should increase, while it should go down in the underground economy. Finally, the tax revenues actually collected by the tax system should increase.

VII

Summary and conclusions

Cuba's tax regime for micro-enterprises has a number of shortcomings which make it inequitable, which damage the efficiency of resource allocation in the economy, and which reduce the system's effectiveness in collecting revenue.

The problems with the tax regime stem mainly from the "10% rule" and the character and size of the lump-sum tax payments which must be made each month regardless of actual income. The analysis made in this article shows 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 advance lump-sum tax payments result in what are in effect marginal tax rates of 100% for initial levels of revenue, after which the marginal tax rate falls to 0% until the level of taxable income is reached where taxes payable under 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, so that the tax in this range is regressive. The tax rates in the official tax scale are also excessive for the vast majority of 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 compared with established firms because the former must pay the advance lump-sum taxes before they have even started to earn revenues. Much of the micro-enterprise sector also faces a more onerous tax regime than foreign firms in joint venture arrangements.

From the standpoint of its impact 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 firms out of business, thereby reducing production, raising prices to Cuban citizens, reducing employment in the sector and probably reduc-

ing the generation of income. It discriminates against domestic value-added in the micro-enterprise sector which uses inputs almost entirely of domestic origin, in contrast with the lower-taxed State sector which is highly dependent on imported inputs and permits profit repatriation.

Although the tax regime is designed to collect revenue from 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 purchases of 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. Thus, the nature of the tax regime has bred a culture of tax evasion rather than of compliance.

Some suggestions for improving the micro-enterprise tax system are presented in this article. First, a normal tax base should be established by eliminating the "10% rule" and basing taxable income on gross revenues less actual costs of production. Second, the advance lump-sum tax payment should be cancelled. Third, compliance with the tax regime in the long term should be fostered by making the regime as fair and reasonable as possible. Fourth, artificial policy-generated entry barriers against new micro-enterprises should be dropped. A more effective tax administration would also be necessary to prevent abuse of an arrangement permitting the deduction of costs from taxable income and the elimination of the advance lump-sum tax payments.

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 also equitable among micro-enterprises themselves. A well-designed micro-enterprise tax regime could help permit the sector to play a more valuable role in the Cuban economy in terms of employment, income generation, and the production of needed goods and services at lower relative prices. It could also generate more revenue than the current system, which tends to drive micro-enterprises into clandestine status and tax evasion.

(Original: English)

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