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# CAPITAL AVAILABILITY, SMALL BUSINESS FORMATION AND PERFORMANCE IN BARBADOS, JAMAICA AND TRINIDAD: AN EMPIRICAL FORAY

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*Abstract*

*The central theme of this essay is finance, or, how capital availability affects formation, performance and development of small business in the Caricom states of Jamaica, Barbados and Trinidad and Tobago. This study is based on a survey of the small business subsector focussing on statistical relationships between availability of equity and debt capital (as well as the adequacy of human capital), and business formation and performance. I posit that small enterprise performance depends on (1) characteristics of the entrepreneur, (2) the degree of access to capital; (3) age of the enterprise; (4) exogenous demand conditions of the industry which includes the enterprise; and (5), the role of government assistance in enterprise performance.*

## INTRODUCTION

There is no generally accepted operational definition of the concept of "small business". In this paper, it is defined as a business which satisfies at least two of the following criteria: (a) employs at most 50 persons; (b) earns on average, a level of profits which does not exceed half a million U.S. dollars per annum; and (c), makes an average level of annual sales of at most one million U.S. dollars. (All monetary values are expressed in U.S. dollars to facilitate inter-State comparison.

Three criteria are used because there is a smaller likelihood that an enterprise would disclose its true level of sales than employ-

ment, and an even smaller likelihood that it would disclose its true level of profits than sales (Harewood 1989). The elision of assets as a criterion is due to difficulties in evaluation.

## THE DATA BASE

Notwithstanding the number of studies of the small business subsector in these countries (Wadinambiaratchi 1981), there is still a dearth of published and unpublished information for this kind of study. A paucity of data is available and much of what does exist is fragmented and anecdotal. I therefore took a sample survey of the subsector in the tri-State area. A survey questionnaire was designed to elicit financial and kindred information from small business entrepreneurs. This information was obtained by trained enumerators.[2]

In Jamaica and Trinidad, subsamples were drawn from lists of small enterprises compiled by Trevor Hamilton and Associates (Hamilton 1989) and the Central Statistical Office (CSO), respectively. (Small enterprises in Tobago were not included in the population from which the Trinidad subsamples were drawn). Attempts were made to secure a list of small enterprises in Barbados, but of no avail. Nonetheless, since a subsample had to be drawn from each State (of the tri-State area), part of the Barbados subsample was drawn from the telephone directory, and part from small enterprises suggested by the Barbados Institute of Management and Productivity (BIMAP). However, owing to constraints of a relatively small budget, and the necessity of acquiring information by personal interview, a comparatively small sample of 132 observations was taken, made up of subsamples of 50, 56 and 26 observations from Jamaica, Trinidad and Barbados, respectively. Observations were selected randomly from each list, but the subsamples (and, by extension the sample) were not random because in no case did a list exhaust the population (of small enterprises).

This analysis addresses in the first place, the adequacy of preparation of small business entrepreneurs for management of



enterprise. Adequate entrepreneurial preparation endows the enterprise with an internal capacity for sound management which, in part, enhances its access to sources of financial capital.

## HUMAN CAPITAL: ENTREPRENEURIAL TRAINING AND EXPERIENCE

In the light of this, it would be instructive to examine certain qualitative characteristics of entrepreneurs, such as their knowledge and experience, both of which would render their enterprises relatively more acceptable to institutional sources of credit. Hence, it would be most informative to learn of alternative means affecting development of human capital, to wit, those personal resources acquired (and developed) by the entrepreneurs. Or, more specifically, it would be informative to discern alternative measures taken by entrepreneurs in preparation for management of enterprise. Indeed, the entrepreneur is of critical importance to the enterprise, in the sense that it is he who undertakes enterprise, the latter of which revolves around them, so that his strengths and weaknesses (and ability or inability to raise financial capital) become those of the enterprises.

Training and experience in entrepreneurial skills may be obtained by various means. For example, some entrepreneurs may acquire skills through an experiential learning process (in previous employment) in a managerial capacity. My data base gives four modes by which entrepreneurial training and experience may be acquired, namely: (a) formal education achievement; (2) vocational or other courses in business management; (3) working in a managerial capacity prior to (present) ownership; and (4), ownership and management of his present enterprise for at least a decade.

My data on education achievement provide no information on specific subjects or courses taken by the entrepreneur, but they do indicate his /her level of formal schooling and general educational background. Thus, according to Table I, 32 per cent of the subsample from Trinidad completed at least two years of univer-

When focus is given to formal training that more clearly bears on entrepreneurial preparation - say, attending courses in business management - it is notable that of the three subsamples, entrepreneurs from Jamaica (54%) do better than their counterparts from Barbados (48%) and Trinidad (23%). The relatively large proportion from Jamaica may be a reflection of the ministrations of various government agencies for development of entrepreneurial skills (Harris and Laurent 1989). Such measures may, in part, compensate for the relative deficiency of university education observed in entrepreneurs in this country.

In addition, it should be noted that 41 per cent of the sample attended courses in business management, of whom 51 per cent are from Jamaica, while 48 per cent and 23 per cent, respectively, are from Barbados and Trinidad. Similarly, in regard to experience gained from management of this or other enterprise for at least a decade, I find that 36 per cent of the sample had acquired such experience, of whom 53 per cent are from Trinidad (46 per cent of the Trinidad subsample); 18 per cent from Barbados (35 per cent of the Barbados subsample); and 29 per cent from Jamaica (28 per cent of the Jamaica subsample). Lastly, 25 percent of the sample had owned or managed an enterprise prior to present ownership, of whom, Trinidad and Jamaica each account for 36 per cent, while 27 per cent are domiciled in Barbados.

Although entrepreneurs from the Jamaica subsample loomed relatively large among those (in the sample) who had acquired entrepreneurial skills and experience either through special courses in management, or, in previous ownership or management of enterprise, no systematic empirical relationship is observed between skilled (and experienced) entrepreneurs and the countrywise distribution of the sample. That is, an approximately equal proportion of each subsample acquired entrepreneurial skills and experience by means enumerated hitherto. In short, this relationship is independent. I now examine the proportions of skilled and experienced entrepreneurs in the agricultural, industrial and commercial sectors.



Table III gives a sectoral presentation of the percentage of trained and experienced entrepreneurs. The commercial sector accounts for 59 per cent of the sample, of whom 30 per cent completed at least two years of university (see Table III). This sector accounts for 66 per cent of those who completed at least this level of education. Thus, the agricultural and industrial sectors together account for 34 per cent, which is significantly different statistically from the commercial sector (6% and 28% from the agricultural and industrial sectors, respectively).

TABLE III: PERCENTAGE OF ENTREPRENEURS WHO RECEIVED ADDITIONAL TRAINING AND EXPERIENCE BY SECTORS[a]

| Training/Experience | Sector[b] | | |
|---|---|---|---|
| | Agriculture (25) | Commercial (28) | Industrial (29) |
| (1) Completed two or more years of university | 16% | 35% | 28% |
| (2) Completed courses in business Management (or the equivalent) | 28 | 37 | 59 |
| (3) Owned present enterprise for ten or more years | 36 | 37 | 35 |
| (4) Owned/Managed a business prior to present enterprise | 8 | 28 | 31 |

NOTES: [a]Columns do not add-up to 100% because multiple responses are permitted

[b]The numbers in parentheses give the sectoral distribution of enterprises.

Furthermore, 55 per cent of entrepreneurs who attended courses in business management are from that sector, followed by 32 per cent and 13 per cent from the industrial and agricultural sectors, respectively. And in addition, 60 per cent of those who owned and managed their enterprise for at least a decade, are in the commercial sector; whereas only 21 per cent and 19 per cent, respectively, are in the industrial and agricultural sectors. Moreover, the commercial sector accounts for 67 per cent of entrepreneurs who have had managerial experience prior to present ownership; whereas, the industrial and agricultural sectors account for only 17 per cent and 6 per cent, respectively.

Thus entrepreneurs in the commercial sector may be said to be relatively better-placed for management of enterprise. Sectorally, they constitute some 61 per cent of those with some form of entrepreneurial training and experience, followed by 26 per cent and 13 per cent, respectively, from the industrial and agricultural sectors.

In the foregoing, I posited a positive causal relationship between years of schooling and enterprise performance. Additional entrepreneurial training and experience, such as more years of schooling, enhance enterprise performance, in the sense that significant endowment of entrepreneurial skills improves the managerial and technical capacity of the enterprise, and hence augments its performance. Thus, I postulate that entrepreneurial skills and experience have a positive affect on enterprise performance, and by extension, enhance its access to financial capital which, *ex hypothesis*, has a positive affect on enterprise performance.

Entrepreneurs with and without university education worked quite assiduously. For example, the average number of hours worked (per week) by those with at least two years education is 47.5, 54.4 and 54.5, respectively, in agriculture, industry and commerce, which is not significantly different from average number of hours worked by those with no university education. And according to the distribution of average hours worked by country,



Barbados is the only country where I find a significant statistical difference between autodidacts and those with university education (Henry 1989).

Industry is the fledgling of the three sectors, hence the relatively small percentage of enterprises constituting this sector. Besides, this small proportion is symptomatic of the relatively large amount of start-up capital required for business formation[5] in this sector. (Fusfeld and Bates 1984). On the other hand, relatively little start-up capital is required to found an enterprise in the commercial sector.[6] Consequently, wholesale and retail enterprises, both of which are included in this sector, account for the following : 68 percent of entrepreneurs with at least two years of university education; 64 percent of those who attended courses in business management; 60 percent of those with a present ownership (of enterprise) for at least a decade; and 61 percent of those who had prior managerial experience. Table IV shows percentage of skilled and experienced entrepreneurs by type of enterprise.

Further analysis of sectoral distributions of skilled and experienced entrepreneurs reveals a significant (at the level of 5%) empirical relationship between the latter and the distribution of entrepreneurs across sectors. In short, there is a significant difference sectorally between proportions of skilled and experienced entrepreneurs.

By hypothesis, therefore, a marked differential access to financial capital should be observed across sectors. The next step, therefore, is an investigation of the measure of this access to equity and debt capital.

## SOURCES OF EQUITY CAPITAL

Although a number of policy-makers consider debt capital the chief financial instrument for founding an enterprise, in point of fact, a significant proportion of these small business entrepreneurs depend on equity capital for investment. Thus, according to Table V, 65 percent of this sample used $1,102,193 (all monetary

TABLE IV: PERCENTAGE OF ENTREPRENEURS WHO RECEIVED ADDITIONAL TRAINING AND EXPERIENCE BY ENTERPRISE[a]

| Training/Experience | Type of Enterprise[b] Wholesale Trade (35) | Retail Trade (50) | Construction (29) | Manufacture (36) |
|---|---|---|---|---|
| (1) Completed two or more year of university | 26% | 30% | 11% | 25% |
| (2) Completed courses in business management (or the equivalent) | 40 | 40 | 56 | 36 |
| (3) Owned present enterprise for ten or more years | 43 | 40 | 22 | 28 |
| (4) Owned/managed a business prior to present enterprise | 23 | 24 | 22 | 31 |

NOTES: [a]One category of enterprise – transportation, finance and real estate – is omitted because it includes only two enterprises.

[b]The numbers in parentheses represent the distribution of entrepreneurs by type of enterprise.

values are stated in constant dollars)[7] equity capital to found enterprises, and of this proportion, 52 per cent secured 25 per cent ($273,523) of this capital either from personal savings or that of relatives and friends. In addition, 41 per cent of those who used equity finance are from Jamaica, where 17 percent ($184,088) of total (with respect to our sample) equity capital[8] was used, and of the remaining 59 per cent, 44 percent and 15 per cent are from



Trinidad and Barbados, respectively, where 51 percent (Trinidad) and 32 percent (Barbados) of total equity capital were used. Median values are used in Tables V, VII and Table IX owing to relatively large dispersions and positive skew of the distributions. To the extent, therefore, that the median is more representative of the "typical enterprise" in this instance it can be tentatively inferred that Jamaica has been the least hospitable state to small enterprise development.

TABLE V: MEDIAN EQUITY CAPITAL USED AND PERCENTAGE OF ENTREPRENEURS WHO USED EQUITY CAPITAL FROM VARIOUS SOURCES BY COUNTRY

| Source of Equity Capital | Country Jamaica (36)[b] | Barbados (13)[b] | Trinidad (38)[b] |
|---|---|---|---|
| (1) Owner's savings relatives/friend | 80% ($1,182) | 15% ($999) | 37% ($4,581) |
| (2) Commercial bank | 13.9% ($6,818) | 39% ($43,749) | 45% ($9,817) |
| (3) Government programme | 0% – | 31% ($33,625) | 31% ($26,187) |
| (4) Assistance from non-governmental organizations e.g. the church. | 6% ($1,818) | 15% ($19,375) | 5% ($22,906) |

NOTE: [b]Denotes the number of enterprise.

Accordingly, social capital[9] (Loury 1985 and Fratoe 1988), or, resources of the social group (given in rows 1 and 4 of Table V), is a significant source of start-up funds for formation of small enterprises in the tri-State area. Indeed, this social group is the locus of entrepreneurial effort. Furthermore, these entrepreneurs depend

not only on their resources and those of relatives and friends, but also on resources of the wider community (including the church and other non-government organizations). Commercial credit institutions play a relatively significant role, for they provided 31 per cent of the entrepreneurs with 47 per cent of equity capital used ($513,649) in the tri-State area, and of that 31 per cent (of the entrepreneurs), 63 per cent are from Trinidad. The latter were recipients of 58 per cent of equity capital contributed by commercial banks in the tri-State area. Moreover, these banks were the source of 53 per cent of the total equity capital used by entrepreneurs in the Trinidad subsample. With respect to Jamaica, however, banks have played a relatively minor role. For equity capital contributed by commercial banks in Jamaica constituted only 6 per cent and 18 per cent, respectively, of total equity capital used in the tri-State area, and in Jamaica.

In the tri-State area, social capital is procured in several ways. One component of this capital, personal savings, is accumulated through frugal living, by which the entrepreneur and his family forgo immediate gratifications. This same measure of frugality may be exercised by relatives and friends. Adequate savings (for enterprise formation) may be effected by this financial behaviour over a relatively long time period. Second, accumulation of this capital is also fostered by rotating credit associations (Light 1972, Adrich 1981 and Caplouritz 1973), which are a means of effecting both large personal savings and enhanced financial support from the wider community. For example, in the tri-State area, informal associations variously known as *susu, sans, box or partners*, facilitate growth of personal savings of the entrepreneur, his relative and friends, and thus serve as a source of capital for establishment of (small) enterprise (Chen 1988 and Light 1972).

Table VI shows social capital as the main source of finance for 55 per cent of entrepreneurs in the commercial sector who used equity finance. Social capital constituted 33 per cent ($361,720) of total equity; the owner, his relatives and friends contributing 25 per cent while other sources (see row 4) contributed 8 per cent. Commercial credit institutions contributed 47 percent ($513,649) of total equity, and this was used by 36 per cent of the entrepreneurs. The agricultural, commercial and industrial sectors used 8 per cent,



TABLE VI: MEDIAN EQUITY CAPITAL USED, AND PERCENTAGE OF ENTREPRENEURS WHO USED EQUITY CAPITAL OBTAINED FROM VARIOUS SOURCES BY SECTOR AT START-UP

| Sources of Equity Capital | Sector | | |
|---|---|---|---|
| | Agricultural (14)* | Commercial (56)* | Industrial (17)* |
| (1) Owner's savings/ relatives/friends | 64% ($364) | 64% ($3,141) | 59% ($1,318) |
| (2) Commercial bank | 7% ($3,927) | 38% ($9,817) | 29% ($6,818) |
| (3) Government programme | 21% ($15,000) | 5% ($39,267) | 12% ($33,625) |
| (4) Assistance from sources (e.g. the church) other than government. | 7% ($1,455) | 9% ($18,750) | 0 ( - ) |

NOTE: *Denotes the number of enterprises in the sector.

73 per cent and 20 per cent, respectively, of total equity. Of total equity used by each sector, social capital constituted 27 per cent, 34 per cent and 33 per cent, respectively, for agriculture, commerce and industry. Government programmes accounted for 68 per cent, 12 per cent and 30 per cent, respectively, of equity used by agricultural, commercial and industrial sectors; and of total equity finance used sectorally, government programmes contributed 20 per cent ($219,717). Furthermore, in Table VII, I find that of those who used equity capital, this source (personal savings of the entrepreneur, his/her relatives and friends) was used primarily by entrepreneurs owning wholesale (27 per cent), retail (40 per cent)

and manufacturing (27 per cent) enterprises. Those in wholesale trades account for 20 per cent ($55,412) of the real dollar value of this form of social capital, while those owning retail and manufacturing enterprises account for 58 per cent ($158,343) and 21 per cent ($56,495), respectively. In Jamaica, wholesale, retail, and manufacturing enterprises account for 4 per cent ($6,413), 55 per cent $80,889 and 25 per cent ($37,041), respectively, of the real value of this form of social capital. These findings confirm my expectations. For given the relatively small amount of start-up capital required for founding a retail enterprise, I find a large number of

TABLE VII: MEDIAN EQUITY CAPITAL USED, AND PERCENTAGE OF ENTREPRENEURS WHO USED EQUITY CAPITAL OBTAINED FROM OWN SAVINGS, RELATIVES AND FRIENDS BY COUNTRY AND TYPE OF ENTERPRISE AND START-UP

| | Country[a] | | |
|---|---|---|---|
| Type of Enterprise | Jamaica | Barbados[b] | Trinidad |
| (1) Wholesale Trade | 28% ($364) | [c] | 21% ($1,701) |
| (2) Retail Trade | 38% ($1,182) | 0% | 50% ($1,5052) |
| (3) Construction | 10% ($1,455) | 0% | [c] |
| (4) Manufacture (e.g. the church) other than government | 24% ($1,455) | 0% | 29% ($4,217) |

NOTES: [a]Median values are given parentheses.

[b]There are only two enterprises from Barbados this subset.

[c]One of two enterprises.



entrepreneurs with considerable dependence on this form of social capital establishing retail enterprises. Moreover, deficiencies of social capital in the tri-State area may be taken as some indication that the local community and institutions (non-government organizations) probably furnish less support to small enterprises owned by less privileged indigenes.

On further analysis of Tables VI and VII, I find no significant empirical relation between sectoral or countrywise distribution of small enterprises and sources of equity finance. Nor, indeed, do I find any significant empirical relation between types of enterprise and countrywise distribution of entrepreneurs who either used personal savings or that of relatives and friends as start-up capital. This finding makes it readily apparent that there is no sector or type of enterprise on which entrepreneurs are exceptionally dependent on personal savings, or that of relatives and friends, for equity capital. These entrepreneurs are therefore relatively more disadvantaged with respect to the supply of equity capital they secure from this component of social capital. Success seems to be related to the amount of initial capital. Enterprises with more capital at start-up tend to be more successful. "Presumably, the greater capital gives the new firms a longer period in which to work out problems and survive" (Fusfeld and Bates 1984). And subsequent to formation of enterprise, in the absence of equity sources other than social capital, the rates of growth and development of these enterprises are constrained to the growth of internally generated equity.

In addition, the data do not show any significant dependence on Government as a source of equity capital. Moreover, these entrepreneurs do not seem to supplement the initial seed money with additional equity capital and other largesse from self-help support networks, as much as, say, the Chinese have done historically when establishing a business venture (Light 1972). The data indicate difficulties in acquiring such additional assistance. I will therefore focus on the role of debt capital in enterprise formation.

## SOURCES OF DEBT CAPITAL

An intriguing fact disclosed by this study is that none of the entrepreneurs had established an enterprise with little or no financial capital. In short, finance capital is an indispensable requirement for founding a small business. According to Table VIII, 42 per cent of the sample received debt capital from relatives and friends, of which, 57 per cent are from Jamaica (64% of the Jamaica subsample,) and 34 per cent from Trinidad (also 34% of the Trinidad subsample). Jamaica, Barbados and Trinidad each used 9 per cent, 19 per cent and 72 per cent, respectively, of total debt capital.[10] Commerical banks accounted for 79 per cent of total debt capital, and of this 79 per cent, 79 per cent was used by 52 per cent of entrepreneurs in Trinidad who used debt capital. Furthermore, of the 79 per cent accounted for by commercial banks, 5 per cent and 16 per cent, respectively, were used by entrepreneurs in Jamaica and Barbados. Government programmes contributed only 10 per cent of total debt capital, of which, entrepreneurs in Jamaica, Barbados and Trinidad used 11 per cent, 48 per cent and 41 per cent, respectively. The Jamaica government programme made the smallest contribution (11% of the total contributed by government programmes in the tri-State area), and that was used by 9 per cent of entrepreneurs in the Jamaica subsample. Social capital accounted for 18 per cent of total debt capital, 51 per cent of which was used by entrepreneurs from Trinidad. Finally, Trinidad accounted for 72 per cent of total debt capital, whereas, 9 per cent and 19 per cent, respectively, are accounted for by Jamaica and Barbados.

TABLE VIII: MEDIAN DEBT CAPITAL USED, AND PERCENTAGE OF ENTREPRENEURS WHO USED DEBT CAPITAL OBTAINED FROM VARIOUS SOURCES BY COUNTRY[a]

| Sources of Debt Capital | Country[a] | | |
|---|---|---|---|
| | Jamaica (50)[b] | Barbados (26)[b] | Trinidad (56)[b] |
| (1) Owner's saving relatives/friends | 64% ($1,182) | 19% ($1,625) | 34% ($7,853) |
| (2) Commercial bank | 20% ($9,987) | 46% ($29,874) | 52% ($84,989) |
| (3) Government programme. | 8% ($3,273) | 19% ($25,361) | 11% ($22,906) |
| (4) Assistance from sources (e.g. the church) other than government | 8% ($1,090) | 15% ($890) | 4% ($22,906) |

NOTES: [a]Median dollar values are given in parentheses.
[b]Size of the subsample.

Sectorally, commerce accounted for 79 per cent of total debt capital. Ten per cent of total debt capital was contributed by relatives and friends, of which 70 per cent was used by 37 per cent of entrepreneurs in the commercial sector. Futhermore, of the 79 per cent contributed by commercial banks, 86 per cent was used by 47 per cent of entrepreneurs in the commercial sector, and 1 per cent was used by 8 per cent of entrepreneurs in agriculture (Table IX). Moreover, of the 10 per cent of the total (debt capital) contributed by government programmes, 47 per cent was used by 14 per cent of entrepreneurs in industry. Sectorally, the smallest contribution to total debt capital by government programmes was 24 per cent to agriculture, which was used by 28 per cent of entrepreneurs in this sector. Agriculture accounted for only 4 per cent of total debt capital, while the industrial sector accounted for 17 per cent.

Only 11 per cent of the sample received assistance from government programmes designed to augment the supply of debt capital to small business. Many small entrepreneurs view government assistance programmes as bureacratic, costly and time-consuming, and besides, they do not consider these programmes effective in satisfying the requirements of small enterprise (Harris and Laurent [1989]). This would suggest the need for a redesigning

of these programmes which were initially established to provide pecuniary and non-pecuniary assistance to small business, *a fortiori*, because they affect a significant proportion of these entrepreneurs, all of whom have borrowing needs. Unfortunately, however, my data do not directly measure the potential for greater borrowing.

TABLE IX: MEDIAN DEBT CAPITAL USED, AND PERCENTAGE OF ENTREPRENEURS WHO USED DEBT CAPITAL OBTAINED FROM VARIOUS SOURCES BY SECTOR

| Sources of Debt Capital | Sector | | |
|---|---|---|---|
| | Agriculture (25)[a] | Commercial (78)[a] | Industrial (29)[a] |
| (1) Owner's savings/ relatives/friends | 56% ($364) | 37% ($4,612) | 47% ($2,316) |
| (2) Commercial bank | 8% ($9,216) | 47% ($22,717) | 41% ($10,713) |
| (3) Government programme | 28% ($8,414) | 5% ($10,703) | 14% ($14,203) |
| (4) Assistance from sources (e.g. the church) other than government | 7% ($1,818) | 9% ($8,874) | 0 (-) |

NOTE: [a]Denotes number of enterprises.

Further analysis of the data reveals a systematic empirical relation between sources of debt capital and the distribution of small business both across countries and sectors. This relation obtains both with regard to debt capital at the inception of the enterprise, and after it has become established.



## THE DEBT RATIO OF THE ENTERPRISE

The data base includes information on the debt ratio of the enterprise at its start-up date and in 1988. The debt ratio is defined as the product of the ratio of total debt of the enterprise to its total capitalization and 100. The ratios for new and established enterprises are given in Tables X-XIV. In addition, I present results of estimation of a simple causal model of the debt ratio for established enterprises. But first, I will examine the debt ratio for newly formed enterprises.

## DEBT RATIO AT START-UP

Debt was 65 per cent, 62 per cent and 77 per cent of total capitalization in Jamaica, Trinidad and Barbados, respectively. And across sectors, this ratio was 64 per cent, 68 per cent and 69 per cent respectively; for agriculture, commerce and industry. In regard to distribution by type of enterprise, manufacturing shows the largest ratio of 79 per cent, but this ratio is not significantly different from those for wholesale and retail enterprises (only one small business was reported in the subset of enterprises encompassed by finance, transportation and real estate). See Tables X-XI.

## DEBT RATIO FOR ESTABLISHED ENTERPRISES (1988)

Established enterprises have an average debt ratio of 23 per cent (see Tables XII and XIII below). Average ratios for Jamaica, Trinidad and Barbados are 17 per cent, 21 per cent and 44 per cent, respectively. These ratios were also examined sectorally and by type of enterprise. Sectorally, agriculture shows a large debt ratio relative to other sectors. Indeed, enterprises in agriculture may be more encumbered with debt because they are frequently exposed to the ravages of uncontrollable factors, such as the weather, disease and macroeconomic vicissitudes (Downes 1988, Barrow and Greene 1979, Chen and Cole 1988 and Wadinambiartchi 1981).

Consequently, frequent losses may occur, hence, the relatively higher debt ratio. There is a significant statistical difference

TABLE X: AVERAGE DEBT RATIO FOR SMALL ENTERPRISES BY COUNTRY AND SECTOR AT START-UP (IN PER CENT)

| Sector | Country | | |
|---|---|---|---|
| | Trinidad (15)[a] | Jamaica (13)[a] | Barbados (11)[a] |
| Agriculture | 39% | 65% | [b] |
| Commercial | 57% | 67% | 86% |
| Industrial | 72% | 65% | 63% |

NOTES: [a]Denotes number of enterprises.
[b]Only one agricultural enterprise in the Barbados subsample.

TABLE XI: AVERAGE DEBT RATIO FOR SMALL ENTERPRISES BY COUNTRY AND TYPE OF ENTERPRISE AT START-UP (IN PER CENT)

| Type of Enterprise | Country | | |
|---|---|---|---|
| | Trinidad % | Jamaica % | Barbados % |
| Wholesale trade | 50 | 76 | - |
| Retail trade | 57 | 65 | 63 |
| Construction | 46 | 65 | 99 |
| Manufacturing | 100 | 80 | 73 |

TABLE XII: AVERAGE DEBT RATIO FOR ESTABLISHED (1988 ENTERPRISES BY COUNTRY AND SECTOR (IN PER CENT)

| Sector | Country | | |
|---|---|---|---|
| | Trinidad | Jamaica | Barbados |
| Agricultural | 35.3% | 13.3% | 66.6% |
| Commercial | 4.1[c] | 17.5 | 49.6 |
| Industrial | 18 | 18.3 | 33.3 |

NOTE: [c]Median debt ratio.

TABLE XIII: AVERAGE DEBT RATIO FOR ESTABLISHED (1988) ENTERPRISES BY COUNTRY AND TYPE OF ENTERPRISE (IN PER CENT)

| Type of Enterprise | Country | | |
|---|---|---|---|
| | Trinidad % | Jamaica % | Barbados % |
| Wholesale Trade | 23.7 | 8.9 | 44.6 |
| Retail Trade | 16.3 | 20.4 | 41.0 |
| Construction | 35.8 | 14.9 | 88.7 |
| Manufacturing | 20.1 | 18.9 | 37.5 |

TABLE XIV : THE AVERAGE DEBT RATIO BY SIZE OF ENTERPRISES (EMPLOYMENT) ACROSS SECTORS

| Level of Employment (# of workers) | Sector (in per cent) | | |
|---|---|---|---|
| | Agriculture | Industry | Commerce |
| | % | % | % |
| 0-15 | 28 | 18 | 20 |
| 6-10 | 48 | 25 | 28 |
| 11-20 | 16 | 28 | 14 |
| 21 plus | - | 18 | 44 |

between the ratio for agriculture and other sectors. Table XIV gives debt ratios sectorally by size of enterprise measured by employment. A systematic empirical relation is observed (at the level of 5 per cent) between the average debt ratio and size of enterprise. In addition, using a rank order correlation measure (Spearman's rho), I compared rankings sectorally of the debt ratio and size of enterprise, measured by sales. Correlations of .91, .62 and .97 were computed for agriculture, industry and commerce, respectively, indicating a positive association between the average debt ratio and this index of size. I therefore hypothesize a causal relationship between the debt ratio and size of enterprise.

In concluding our analysis of the debt ratio for the established enterprise, I tested hypotheses of determinants of the ratio in a simple causal model. A priori, I posit, *ceteris paribus*, that the debt ratio of the established enterprise depends on the following: (1) characteristics of the enterprise, given by its absolute size ($X_1$), and growth in size between 1985 and 1988 ($X_2$); (2) aspects of its start-up capital, given by the amount of noninstitutional equity capital in constant (1980) dollars ($X_3$), and the initial debt ratio ($X_4$). The dummy variables $D_1$, $D_2$ and $D_3$ denote, respectively, assistance or non-assistance from a government programme; organization of enterprise i.e. corporate, partnership or single proprietorship, which are given values of 3,2 and 1, respectively; and State in the tri-State area.



Table XV presents the regression results. In general, these results confirm my expectations. The significant variables are: the

TABLE XV: MODEL I: REGRESSION RESULTS OF THE DETERMINANTS OF THE DEBT RATIO OF THE LONG-ESTABLISHED ENTERPRISE

| Variables | Coefficient | T-Statistic |
|---|---|---|
| Constant | 0.118 (0.267) | 0.442 |
| $X_1$ | 0.002 (0.005) | 0.295 |
| $X_2$ | -0.193 (0.169) | -1.141 |
| $X_3$ | -6.722 (4.268) | -1.575[b] |
| $X_4$ | 0.234 (0.277) | 0.846 |
| $D_1$ | -0.188 | -1.656[b] |
| $D_2$ | -0.071 (0.075) | -0.0942 |
| $D_3$ | 0.159 (0.088) | 1.809[a] |

NOTES: $R^2$=0.56 F=3.13 N=25
Log likilihood = 8.008;
Standard error of regression = 0.213
[a]Significant at 5%
[b]Significant at 10%

real value of noninstitutional equity finance at start-up, assistance from a government programme, and organization of enterprise.

## AN EVALUATION OF THE PERFORMANCE OF ESTABLISHED ENTERPRISES (1988)

The data base includes information which may be used to evaluate the performance of an established enterprise, that is, an enterprise at least five years old. Information on enterprise performance was collected for the years 1985 and 1988.

The following measures of performance were used; employment, sales, and the ratio of profit to sales. In the light of reasons suggested hitherto, all three measures were used. Indeed, in evaluation of small enterprises, profitability per se as a measure of performance tends to be rather problematic, if only because many enterprises attempt to minimize taxable profits through large salaries or perquisites to owners, thus, eroding the level of reported profits. This may, in part, explain the preference of owners for anonymity during the survey; albeit, I hasten to add that enterprises of all sizes indulge in such practices.

In 1988, enterprises in agriculture reported 166 employees; $416,050 in sales and $148,192 in gross profits; an implied ratio of gross profits to sales of 35.6 per cent. Gross profits and sales of the industrial and commercial sectors are substantially larger than agriculture, but agriculture shows a considerably larger ratio of profit to sales. The relatively large implied ratio for agriculture may be due to the large number of cases where unpaid family-labour is used instead of hired-labour, thus considerably understating costs. No adjustments could be made here owing to lack of data. A more accurate result must therefore await analysis of a further survey which will take account of such factors. According to Table XVI, the level of performance sectorally varies considerably; and given this variability, I postulate determinants of performance. These hypotheses are tested empirically in three linear probability models, results of which are given below.

TABLE XVI: EMPLOYMENT, GROSS PROFITS AND SALES OF SMALL ENTERPRISES ACROSS SECTORS, (1988)

Panel (A)

| | Agriculture (25)[a] | Industry (29)[a] | Commerce (78)[a] |
|---|---|---|---|
| Number of employees | 166 | 335 | 675 |
| Sales revenue | $416,050 | $2,220,305 | $7,966,587 |
| Gross profits | $148,192 | $291,892 | $1,023,761 |
| Profits as a per cent of sales | 35.6% | 13.1% | 12.9% |

NOTE: [a]indicates number of enterprises in the sector

EMPLOYMENT, GROSS PROFITS AND SALES OF SMALL ENTERPRISES ACROSS COUNTRIES (1988)

Panel (B)

| | Trinidad (56)[c] | Jamaica (50)[c] | Barbados (26)[c] |
|---|---|---|---|
| Number of Employees | 414 | 451 | 311 |
| Sales (constant 1980 US dollars) | $4,400,723.9 | $3,223,643.7 | $2,978,575 |
| Profits (constant 1980 US dollars) | $573.548.4 | $866,970.1 | $206,468.4 |
| Profits as a percentage of sales | 13% | 26.9% | 6.9% |

NOTE: [c]Indicates number of enterprises in the national subsample

## HYPOTHESIZED DETERMINANTS

From these broad categories, more specific hypotheses may be generated, depending, say on the sector. For example; among characteristics of the entrepreneur considered are; his level of education, the nature of his gainful employment prior to founding his enterprise, and the number of hours he works per time period (week or month as the case may be). The real dollar value of the entrepreneur's noninstitutional equity seed capital is considered a most critical factor in regard to his access to capital. Other important factors in this respect are the debt ratio, and organization of enterprise. The role of government is considered significant in regard to the effect of its ministrations on the entrepreneur and his enterprise. These may include, for example, affects of government's management assistance programmes, in the form of pecuniary (grants and loans) and nonpecuniary assistance (advice and training), on enterprise performance.

## ECONOMETRIC RESULTS

Results are given for six econometric models; models IIa, IIb, IIIa, IIIb, IVa and IVb in Tables XVII-XXII. The a's and b's denote sectoral and countrywise estimations, respectively.

My results suggest that (other things being equal) an enhanced enterprise performance would be effected when the following conditions obtain: In the case of Model IIa, a greater depth of entrepreneurial skill and experience, and a corporate organization favourably affect performance. In regard to organization of enterprise, single proprietorships do not perform buoyantly. In short, too many cooks do not spoil the broth, or if you like, two or more heads are indeed better than one. With respect to the agricultural and industrial sectors, the larger the real dollar value of non-institutional seed capital, the higher is the level of enterprise performance; and lastly, additional years of formal education have a significant effect on performance of enterprises in the commercial sector. In the case of Model IIb, the organization of enterprise also has a significant effect on enterprise performance in all countries; whereas, the greater is labour intensity of production in Jamaica and Trinidad, the higher is the level of performance. A lower debt ratio has a significant enhancing effect on enterprise performance in Barbados, while more years of schooling of the Jamaican entrepreneur account for significant improvement in enterprise performance.



In Model IIIa, I find that a larger real dollar value of non-institutional seed capital has significantly favourable effects on enterprise performance (measured by level of sales) across sectors. With regard to the agricultural sector, however, a higher level of performance obtains only if the entrepreneur had previously owned and managed an enterprise, as well as successfully completed managerial courses. This shows the importance of human capital to this sector. A corporate organization has a significant effect on performance in the industrial sector. In case of Model IIIb, a larger value of non-institutional seed capital significantly affects enterprise performance in Barbados and Trinidad; while previous ownership of an enterprise has a significantly positive effect on enterprise performance in Jamaica. A corporate organization enhances enterprise performance in Jamaica and Trinidad. (The measure of goodness of fit of the Trinidad and Jamaica equations is relatively small).

Finally, with respect to Model IV, I find that greater growth of exogenous demand for output of the industry encompassing a given enterprise, significantly enhances enterprise performance in the agricultural and commercial sectors. And in the latter, improved enterprise performance is also effected by: (1) additional years of formal schooling of the entrepreneur, (2) a relatively large real value of non-institutional seed capital; (3) a corporate organization; and (4), previous ownership and managerial experience. Model IVb contains one surprising result. In the case of Barbados, the variable years of schooling, not only has the "wrong" sign, but is also significant. This is quite contrary to expectations, more

TABLE XVII: MODEL IIA: SECTORIAL EVALUATIONS OF THE DETERMINANTS OF ENTERPRISE PERFORMANCE MEASURED BY (THE LOG OF) THE LEVEL OF EMPLOYMENT

| Variable[d] | Agriculture | | Industry | | Commerce | |
|---|---|---|---|---|---|---|
| | Coefficient | T-Stat | Coefficient | T-Stat | Coeffecient | T-Stat |
| Constant | -1.202 (1.887) | -.637 | .856 (.547) | 1.563[c] | .449 (.859) | .522 |
| $X_1$ | .024 (.017) | 1.455[c] | .027 (.018) | 1.472[a] | .016 (.011) | 1.483[c] |
| $X_2$ | .044 (.008) | 0.528 | .003 (.008) | .365 | .001 (.006) | .212 |
| $X_3$ | -.035 (.045) | -.777 | -.006 (.004) | -.145 | .039 | 1.416 |
| $X_4$ | .001 (.000005) | 2.497[a] | 2.565E-05 (1.56E-05) | 1.644[c] | 6.503E-06 (7.938E-06 | .819 |
| $X_5$ | -.186 (2.002) | -.093 | .539 (1.273) | .423 | .012 (.486) | - .024 |
| $X_6$ | .129 (2.206) | .059 | -.572 (1.73) | -.331 | -.067 (.032) | - 2.084[a] |

TABLE XVII (Contd)

| | | | | | | |
|---|---|---|---|---|---|---|
| $X_7$ | 2.350 (6.189) | .379 | 1.629 (5.759) | -.283 | -.504 (1.325) | -.381 |
| $D_1$ | .649 (.360) | 1.805[b] | .549 (.126) | 4.359[a] | .291 (.122) | 2.382[a] |
| $D_2$ | .756 (.437) | 1.728[c] | .069 (.614) | .113 | .165 (.284) | .580 |
| | $R^2$ = .42, F = 10 N = 23 | | $R^2$= .66 F =3.84 N = 28 | | $R^2$ = 32 F = 3.21 N = 70 | |

NOTES: [a]Significant at 90%; [b]Significant at 95%; [c]Significant at 90%

[d]MEANING OF SYMBOLS - MODEL II

$X_1$ : entrepreneurial knowledge and experience
$X_2$ : average hours worked per week by entrepreneur
$X_3$ : years or schooling
$X_7$ : real value of noninstitutional seed capital in the year the enterprise started
$X_5$ : Debt ratio in 1988
$X^6$ : Quadratic form of $X_5$
$X_7$ : Labour Coefficient
$D_1$ : Form of organization of the enterprise

TABLE XVIII: MODEL IIB: COUNTRY EVALUATIONS OF THE DETERMINANTS OF ENTERPRISE PERFORMANCE MEASURED BY (THE LOG OF) THE LEVEL OF EMPLOYMENT

| Variable[d] | Agriculture | | Industry | | Commerce | |
|---|---|---|---|---|---|---|
| | Coefficient | T-Stat. | Coefficient | T-Stat. | Coeffecient | T-Stat. |
| Constant | .981<br>(.625) | 1.569[c] | 4.680<br>(2.863) | 1.635[b] | 1.56<br>(2.537) | .615 |
| $X_1$ | .012<br>(.009) | 1.292 | .009<br>(.021) | .414 | .017<br>(.024) | .730 |
| $X_2$ | .013<br>(.007) | 1.729[b] | .007<br>(.006) | 1.412 | -.013<br>(.013) | -.955 |
| $X_3$ | -.033<br>(.026) | .125 | .048<br>(.031) | 1.537c | -.032<br>(.028) | -.384 |
| $X_4$ | 9.118E-06<br>(9.002E-06 | 1.013 | 2.5298E-05<br>(1.836E-05) | 1.252 | 2.263E-06<br>(1.479E-06) | .153 |
| $X_5$ | .035<br>(.815) | .043 | 1.819<br>(1.829) | -.995 | 5.498<br>(2.804) | 1.96 |
| $X_6$ | -.527<br>(1.199) | -.439 | 2.179<br>(3.753) | .581 | -.5.094<br>(2.911) | -1.75c |

TABLE XVIII (Contd.)

| | | | | | | |
|---|---|---|---|---|---|---|
| $X_7$ | -1.642<br>(.775) | -2.118a | -22.735<br>(15.633) | -1.454c | .006<br>(6.411) | .0009 |
| $D_1$ | .649<br>(.360) | 1.805b | .549<br>(.126) | 4.359a | .291<br>(.122) | 2.382a |
| | R2 = .34<br>F = 2.73<br>N = 52 | | R2 = .66<br>F = 3.80<br>N = 48 | | R2 = .45<br>F = 1.25<br>N = 21 | |

NOTES: [d]MEANING OF SYMBOLS – Model II

X1 : entrepreneurial knowledge and experience
X2 : average hours worked per week by entrepreneur
X3 : years of schooling
X4 : real value of nonistitutional seed capital in the year enterprise started.
X5 : Debt ratio in 1988
X6 : Quadratic form of X5
X7 : Labour coefficient
D1 : Form of organization of enterprise

TABLE XIX: SECTORAL EVALUATION OF THE DETERMINANTS OF ENTERPRISE PERFORMANCE MEASURED BY LEVEL OF SALES

| Variable[d] | Agriculture | | Industry | | Commerce | |
|---|---|---|---|---|---|---|
| | Coefficient | T-Stat. | Coefficient | T-Stat. | Coefficient | T-Stat. |
| Constant | -55247.969 (40959.5) | -1.349 | 84907.747 (150799.65) | .563 | -133307.06 (92416.95) | -1.442 |
| X1 | 5.079 (2.639) | 1.924[b] | 9.969 (4.852) | 2.176[a] | 5.093 (2.084) | 2.443[a] |
| X2 | 2829.214 (3808.382) | 0.743 | 2937.629 (27100.315) | .108 | -209.264 (13977.023) | -0.15 |
| X3 | -57.394 (140.837) | -.408 | -280.899 (1129.961) | -.249 | 226.689 (553.862) | .409 |
| D1 | -49353.215 (31351.046) | -1.574[c] | -90634.220 (107605.92) | -.842 | 35199.546 (57053.275) | .617 |
| D2 | 23690.787 (16472.601) | 1.438[c] | -4603.303 (89213.205) | -.052 | 24954.351 (512277.194) | .487 |
| D3 | -5602.268 (13353.434) | -.419 | 79611.766 (47892.596) | 1.664[c] | -2621.597 (30291.419) | -.087 |

TABLE XIX (Contd.)

| | | | | | | |
|---|---|---|---|---|---|---|
| D4 | 27903.896 (12989.297) | 2.148[a] | -71192.693 (78131.654) | -.911 | 103788.70 (35857.612) | 2.894[a] |
| | $R^2$ = .41<br>F = 1.50<br>N = 23 | | $R^2$ = 44<br>F = 2.00<br>N = 26 | | $R^2$ = .22<br>F = 2.602<br>N = 73 | |

NOTES: [a]Significant at 99%
[b]Significant at 95%
[c]Significant at 90%
[d]MEANING OF SYMBOLS – MODEL III

$X_1$ : Real value of noninstitutional seed capital in the year enterprise started.
$X_2$ : Age of enterprise.
$X_3$ : Quadratic form of $X_2$.
$D_1$ : Dummy variable indicating whether entrepreneur had previously owned or managed an enterprise.
$D_2$ : Dummy variable indicating whether entrepreneur had completed courses in management or other vocational courses.
$D_3$ : Dummy variable indicating form of organization of enterprise.
$D_4$ : Dummy variable indicating State in the tri-State area.

TABLE XX: MODEL IIIB: COUNTRY EVALUATION OF THE DETERMINANTS OF ENTERPRISE PERFORMANCE MEASURED BY LEVEL OF SALES

| Variable[d] | Trinidad | | Jamaica | | Barbados | |
|---|---|---|---|---|---|---|
| | Coefficient | T-Stat. | Coefficient | T-Stat. | Coefficient | T-Stat. |
| Constant | -70186.398 (72379.912) | -.969 | 122968.16 (88035.676) | 1.397c | -2910.158 (164295.75) | -.018 |
| X1 | 3.229 (2.309) | 1.399c | -.691 (3.514) | -.197 | 12.634 (3.714) | 3.402a |
| X2 | 8272.291 (14902.878) | .555 | -11519.212 (19939.468) | -.578 | 8176.124 (277899.516) | .293 |
| X3 | -281.350 (517.779) | -.492 | 455.320 (1123.969) | .405 | 105.547 (107170.49) | .100 |
| D1 | 19957.505 (62304.897) | .320 | 158947.54 (56845.081) | 2.796a | -140998.33 (107170.49) | -1.316 |
| D2 | -66236.427 (57889.449) | -1.444 | 100533.89 (48611.644) | 2.068a | 46852.164 (55640.323) | .842 |
| D3 | 65108.333 (29373.41) | 2.217a | -65149.975 (35487.094) | -1.836b | 46852.164 (55640.323) | .842 |

TABLE XX (Contd.)

| | | |
|---|---|---|
| $R^2$ = .17 | $R^2$ = 28 | $R^2$ = .53 |
| F = 1.63 | F = 2.58 | F = 2.78 |
| N = 54 | N = 46 | N = 22 |

[d]MEANING OF SYMBOLS – MODEL III

$X_1$ : real value of noninstitutional seed capital in the year enterprise started.
$X_2$ : Age of enterprise.
$X_3$ : Quadratic form of $X_2$.
$D_1$ : Dummy variable indicating whether entrepreneur had previously owned or managed an enterprise.
$D_2$ : Dummy variable indicating whether entrepreneur had completed courses in management or other vocational courses.
$D_3$ : Dummy variable indicating form of organization of enterprise.

TABLE XXI: MODEL IVA: SECTORAL EVALUATION OF THE DETERMINANTS OF ENTERPRISE PERFORMANCE MEASURED BY THE RATIO OF PROFITS TO REVENUE

| Variable[d] | Agriculture | | Industry | | Commerce | |
|---|---|---|---|---|---|---|
| | Coefficient | T-Stat | Coefficient | T-Stat | Coefficient | T-Stat |
| Constant | .433<br>(.552) | .786 | .332<br>(.281) | 1.179[b] | .556<br>(.102) | 5.537[a] |
| $X^1$ | -.004<br>(.009) | -.434 | -.004<br>(.021) | -.203 | -.010<br>(.005) | -2.015[a] |
| $X^2$ | 1.068E-05<br>(1.55E-05) | 0.689 | -3.193E-06<br>(7.553E-06) | .423 | 5.676E-06<br>(1.601E-06) | 5.545[a] |
| $X^3$ | -.109<br>(.078) | -1.409[c] | 0.24<br>(.025) | .947 | -.493<br>(.185) | -2.669[a] |
| $D^1$ | -.078<br>(.141) | .549 | .121<br>(.142) | .851 | -.076<br>(.041) | -1.869[b] |
| $D^2$ | .094<br>(.103) | .911 | -.062<br>(.073) | -.853 | .0005<br>(.024) | .019 |
| $D^3$ | -.144<br>(.298) | -.484 | -.006<br>(.099) | -.057 | .548<br>(.208) | 2.634[a] |

TABLE XXI (Contd.)

| | | |
|---|---|---|
| $R^2$ = .39 | $R^2$ = .24 | $R^2$ = .30 |
| F = 1.61 | F = .99 | F = 4.638 |
| N = 22 | N = 26 | N = 73 |

NOTES: [a]Significant at 99%
[b]Significant at 95%
[c]significant at 90%

[d]MEANING OF SYMBOLS – MODEL IV

$X_1$ : Years of schooling.
$X_2$ : real value of noninstitutional seed capital in the year enterprise started.
$X_3$ : exogenous industry demand measured by average annual rate of growth, of the industry encompassing this enterprise (1985-89).
$D_1$ : Dummy variable indicating whether entrepreneur had completed courses in management or other vocational courses.
$D_2$ : Dummy variable indicating form of organization of enterprise.
$D_3$ : Dummy variable indicating State in the tri-State area.

TABLE XXII: MODEL IVB: COUNTRY EVALUATION OF THE DETERMINANTS OF ENTERPRISE PERFORMANCE MEASURED BY PROFITS AS A PERCENT OF REVENUE

| Variable[d] | Trinidad | | Jamaica | |
|---|---|---|---|---|
| | Coefficient | T-Stat. | Coefficient | T-Stat. |
| Constant | -.009<br>(.006) | -.132 | .384<br>(.088) | 4.372[a] |
| $X_1$ | .008<br>(2.309) | 1.658[b] | -.022<br>(3.514) | -3.558[a] |
| $X_2$ | 5.199E-06<br>(14902.878) | 2.934[a] | -6.436E-09<br>(19939.468) | -.005 |
| $X_3$ | .018<br>(.011) | 1.589[c] | .008<br>(.006) | 1.34 |
| $D_1$ | -.009<br>(.045) | -.192 | .004<br>(.039) | 1.114 |
| $D_2$ | -.015<br>(.022) | -.649 | -.007<br>(0.21) | -.336 |
| | $R^2$ = .26<br>F = 3.44<br>N = 54 | | $R^2$ = .50<br>F 3.15<br>N = 22 | |

[d]MEANING OF SYMBOLS - MODEL IV

$X_1$ : Years of schooling.
$X_2$ : Real value of noninstitutional seed capital in year the enterprise started.
$X_3$ : Extogenous industry demand measured by average annual rate of growth of the industry encompassing this enterprise (1985-89).
$D_1$ : Dummy variable indicating whether entrepreneur had completed courses in management or other vocational courses.
$D_2$ : Dummy variable indicating form of organization of enterprise.

years of schooling ill-affect enterprise performance and may be explained by the dearth of data points (small sample bias) in the Barbados subsample. In the case of Trinidad, however, this variable confirms my expectations. It is significant with the "correct" sign. In addition, a larger real value of non-institutional seed capital as well as growth of exogenous industry demand enhance small enterprise performance in this country.

## SUMMARY AND CONCLUSION

In summary, it can be said that the enterprise formation process is overdetermined, that is, no single factor accounts for the outcome or process (Liebholm 1987). Indeed, a number of factors is necessary, but no single one is sufficient.

My empirical analysis shows that for a relatively large number of enterprises, the entrepreneur's personal savings as well as that of relatives and friends were the source of seed capital. In point of fact, amongst the most significant factors engendering successful small scale entrepreneurship, are adequate availability of seed capital at start-up, and adequacy of the entrepreneur's human capital. The higher the level of formal education, and the greater the depth of entrepreneurial skills and managerial experience, the greater is the likelihood of enhanced enterprise performance (Downes [1988]). Entrepreneurs in the commercial sectors are relatively well-endowed with human capital and perhaps for this reason enjoy greater access to financial capital.

Thus, unless explained by other factors, my data suggest that human and financial capital spawn small scale enterprise formation. My evidence also suggests a significant relationship between capital availability and enterprise performance measured by sales. A relatively high level of sales is an important indicator of success, since it reflects an acceptance of the product or service of the enterprise, and perhaps growth of its clientele. Such a level of sales also provides greater cash flow, which is normally viewed positively by institutional creditors.

In conclusion, therefore, it can be said that a shortage of risk capital provides a serious barrier to effective small scale entrepreneurial strategy (Harper and Soon [1979]). This is evidenced in the relatively small number of enterprises in the industrial sector, a sector which requires larger start-up capital. Scarcity of risk capital will stifle formation and growth of enterprise, and in the absence of effective government assistance, it compels an increased reliance on debt, making enterprises that are relatively new more vulnerable to economic fluctuations. Even the *dirigiste* would support measures that enhance the availability of risk capital, since it effects small enterprise formation, and by extension, given the relatively large labour coefficient of small enterprises (Liedholm and Mead [1987), may enhance development of the forces of production.

## NOTES

[1]That is, a subsector of the private sector.

[2]The enumerators were trained by the author.

[3]And, most important not causation.

[4]This hypothesis is based on the observed statistical association and will be below.

[5]This sector tends to be more capital intensive, hence the larger start-up capital required.

[6]For example, in the late 1960s when capital became more available, many black entrepreneurs in the US found relatively more capital intensive enterprises (Fusfeld and Bates (1984, p. 226). Normally, however, black entrepreneurs established enterprises in the commercial sector.

[7]1980 dollars.

[8]Total equity capital refers to the total used by our sample of small enterprises in the tri-State area.

[9]The term social capital is borrowed from Loury (1920).

[10]That is, debt capital used by the sample of entrepreneures *in toto*.

## REFERENCES


Aldrich, Howard. 1981. "Business Development and Self-Segregation" in Ceri Peach et al. (eds.) *Ethnic Segregation in Cities.* Athens, Ga: University of Georgia.

Barrow, C. and J.E. Greene. 1979. *Small Business in Barbados: A Case of Survival.* Cave Hill, Institute of Social and Economic Research, University of the West Indies.

Caplowitz, Daniel. 1973. *The Merchants of Harlem.* New York: Sage.

Chen, Garvin. M. 1988. "A Note on Emerging Issues in Minority Business Research", 16, *The Review of Black Political Economy.*

Chen, Garvin. M. and John A. Cole. 1988. "The Myths, Facts and Theories of Ethnic Small-Scale Enterprise Financing", 16, *The Review of Black Political Economy.*

Downes, Andrew S. 1988. "The Development of Small Business in Barbados". Paper presented at The Emancipation Lecture Series IV, March.

Fratoe, Frank. 1988. "Social Capital of Black Business Owners", 16, *The Review of Black Political Economy.*

Fusfeld, Daniel and Timothy Bates. 1984. *The Political Economy of Urban Ghetto.* Carbondale: Southern Illinois University Press.

Hamilton, Trevor and Associates. 1989. "Assessment of the Jamaican Small Business Environment" Kingston: USAID.

Harper, Malcolm and Tan Thain Soon (eds.). 1979. *Small Enterprises in Developing Countries*, London: Intermediate Technology Publications Ltd.

Harris, Michael and Sharon Laurent. 1989. *The General Issues and Constraints Affecting the Development and Growth of Small Business With Respect To The Access and Utilization of The Technical Resources of the Caribbean.* St. Agustine: CARIRI.

Harwood, Edwin. 1989. "The Sociology of Entrepreneurship" in *Encyclopedia of Entrepreneurship* eds. Calven A. Kent et al., Eaglewood Cliffs: Prentice-Hall.





Henry, C. Michael. 1989. "Capital Availability, Small Business Formation and Performance, in Barbados, Jamaica and Trinidad: A Preliminary Analysis", Working Paper Series (A) St. Augustine: University of the West Indies.

Liedholm, Carl and Donald Mead. 1987. "Small Scale Industries in Developing Countries: Empirical Evidence and Policy Implications". MSU International Development Paper No. 9.