WORKING PAPER
ALFRED P. SLOAN SCHOOL OF MANAGEMENT

DEVELOPMENT BANKING:
Return Performance of 186
Development Finance Institutions

J. D. Nyhart
Paul E. Roberts

May, 1969   396-69

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DEVELOPMENT BANKING:
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1. INTRODUCTION

Over three hundred development finance institutions are providing medium and long-term finance to the industrial, agricultural and small business sectors in 92 or more developing countries. In this paper, the performances of 186 of these development finance institutions are analyzed in the area of financial return.[1] The 186 institutions are examined using five measures of performance as independent variables and 18 independent variables, derived from recently published data.

Measurement of return is a traditional means of evaluating performance. The popularity of its use is based upon the assumption that an individual who commits funds does so to earn a return on their use. The investor, therefore, uses return as a measurement of the performance of the financial or other institution.

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[1]The data are taken from comparable profit and loss statements and balance sheets published in J.D. Nyhart and E.F. Janssens, Eds., A Global Directory of Development Finance Institutions in Developing Countries, Development Centre of the Organization for Economic Cooperation and Development, Paris, 1967. (Hereafter referred as the Directory). This working paper is part of a broader study analyzing data contained in the Directory. An associated working paper is: J.D. Nyhart, Development Banking:Global Patterns, Alfred P. Sloan School of Management Working Paper 347-68. Other papers are currently in preparation.

Using simple return, however, which might be construed to be con-
cerned with short-term behavior, to measure performance of development
finance institutions is complex.[2] These institutions are not wholly
oriented to short-term return on investment, e.g. traditional profit
standards. They are either public or mixed institutions or are private
but backed or supported by public funds.[3] Thus, the economy as a whole
has an interest in the return on those of its assets committed to use
through the development finance institution. The persons placing capital
at risk are particularly interested in the return on the equity of the
institution. The development finance institution itself is in a middle
position between the whole economy and the individual investor. It
wants to earn a respectable return, within the criteria set by the goals
or development plan for the economy. For these reasons, this analysis
employs five measurements of return, which view return from these several
prospectives – the investor, the economy, and the development portfolio
manager.

Before presenting these return measurements, the authors discuss
composite and typical profit and loss statements for the 186 institutions
in the sample. This material is the subject of Section 2. Section 3,

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[2]
    The financial data in the Directory was comprised of simplified bal-
ance sheets and profit and loss statements for a single comparable year
of the institutions in the study. The financial statements followed
one basic format, to enhance comparability. The absence of time series,
operating forecasts or more extensive data prohibited the use of more
sophisticated concepts of return, e.g. internal rate of return, dis-
counted cash flow, etc.

[3]
    There are two exceptions. See Nyhart, op. cit. footnote 1.

presenting the five measurements, follows.

In an attempt to better understand how and why development finance institutions vary in performance, 18 independent variables are tested statistically for relevance with high performance in each of the measures. The presentation of the independent variables and an examination of the statistical results comprise Section 4.

In Section 5, two groups of specific institutions, one of consistently good performers and another of consistently bad performers are characterized in terms of independent variables.

There follows in Section 6 a summary of findings and conclusions of this study.

2. THE PROFIT AND LOSS STATEMENT OF 186 INSTITUTIONS

The 186 institutions in the study collectively received $810.2
million in revenue during the time period.[4] The composite profit and
loss statement is presented in Table 2.1 below.

Table 2.1

Composite Profit and Loss Statement of 186
Development Finance Institutions (DFI's)
($Million)

Revenue	186 DFI's	Primary Institutions	National Private Institutions	Sub-National Institutions
		(113 or 61% of sample)	(41 or 22%)	(32 or 17%)
A. Interest Income	532.083	444.212	73.255	14.616
B. Dividends & Commissions	37.542	33.060	4.134	.348
C. Non-Development Income	23.911	16.516	6.649	.746
D. Other	216.744	107.998	6.853	101.893
Effective Revenue	810.280	601.786	90.891	117.603
Expenditure				
E. General & Administrative Costs	218.993	191.262	13.285	14.446
F. Capital Costs	258.696	201.716	49.939	7.041
G. Taxes	12.045	6.109	5.043	.893
H. Net Profit (Net of losses)	181.450	119.335	17.546	44.569
I. Other	139.096	83.364	5.078	50.654
	810.280	601.786	90.891	117.603

The mean profit and loss statement, presented in Table 2.2, reports
the operations of the "typical" institution in the study.

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[4]
The financial statements reported one year's operations of the in-
stitutions, normally either 1964 or 1965.

Table 2.2

Mean Profit and Loss Statement Representing
186 Development Finance Institutions
($Million)

Revenue	186 DFI's	Primaries	Nat'l Privates	Sub-Nationa.
Interest Income	2.861	3.931	1.744	.472
Dividends & Commissions	.202	.293	.099	.011
Non-Development Income	.128	.146	.158	.024
Other	1.165	.956	.163	3.287
Effective Revenue	4.356	5.326	2.164	3.794

Expenditure				
General & Adminis- trative Costs	1.177	1.693	.316	.466
Capital Costs	1.391	1.785	1.189	.227
Taxes	.065	.054	.120	.029
Net Profit (Net of Losses)	.975	1.056	.418	1.438
Other	.748	.738	.121	1.634
	4.356	5.326	2.164	3.794

2.1 Revenue. The Revenue side of the Profit and Loss Statement is comprised of four components, which together equal Effective Revenue. These components are discussed in Sections 2.1a 2.1d Table 2.3 presents the composite profit and loss statement with the components as percentages.

Table 2.3

Composite Profit and Loss Statement of 186 Development
Finance Institutions Presented as Percentages

Revenue	186 DFI's	Primaries	Nat'l Privates	Sub-National
Interest Income	65.7	73.8	80.6	12.5
Dividends & Commissions	4.6	5.5	4.6	.3
Non-Development Income	2.9	2.7	7.3	.6
Other	26.8	18.0	7.5	86.6
Effective Revenue	100.0	100.0	100.0	100.0
Expenditure				
General & Adminis-trative Costs	27.0	31.8	14.6	12.3
Capital Costs	31.9	33.5	54.9	6.0
Taxes	1.5	1.0	5.6	.7
Net Profit	22.4	19.8	19.3	37.9
Other	17.2	13.9	5.6	43.1
	100.0	100.0	100.0	100.0

2.1a Interest Income. Revenue received in the form of interest from

development loans forms the largest single category of effective revenue.

It also forms the most important component for both primary and national

private institutions, although not for the sub-nationals.[5] For the

latter, the most important item is "other". As Table 2.3 illustrates,

interest income accounts for approximately the same percentage of total

revenue for both primary and national private institutions. In the

former case it accounts 73.8 percent, in the latter 80.6 percent. The

contrast between these figures and the 12.5 percent that represents

interest income for the sub-national institutions is unusual, and will

be commented upon later.

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[5] Three basic categories of development finance institutions are
identified in J. D. Nyhart, Development Banking: Global Patterns. Sloan
School of Management Working Paper 347-68 August 1968. These charac-
teristic clusters are described by the following statement:
"1.   The first development finance institution or institutions
       established in a country are government-owned or government-
       dominated (if of mixed ownership), national in scope, and
       large in asset size when compared to those established sub-
       sequently. These are primary institutions.
 2.   Where privately owned or privately dominated development
       finance institutions are established at the national level,
       they are created after those described above and are smaller
       in asset size. These are national private institutions.
 3.   Institutions operating at a sub-national level within a
       country (e.g. regional, provincial or state) may be publicly
       or privately owned, or mixed. They are established after
       primary institutions, but frequently precede national private
       institutions; they are smaller in asset size than those
       operating on the national level, except for some general credit
       institutions operating at the sub-national level, which may be
       larger in total assets but not in development finance facility
       assets. These are sub-national institutions."

2.1b Dividends and Commissions. This category indicates the receipt of
dividend income from equity investments made by development finance
institutions and commissions on such transactions as underwriting and
similar financial support activities. Again the primaries and national
privates report similar proportions. The figure for all the primaries
taken as a whole is 5.5 percent while the comparable figure for the
national private institutions is 4.6 percent. However, the sub-nationals
again present an entirely different picture. Only 0.3 percent of their
total revenue is reported to come from dividend and commissions, suggesting
that the sub-national institutions do far less equity investment than
those in either of the other two categories.

2.1c Non-development Income. Another distinct component of income is non-
development income. Non-development income is that attributed to financial
activities other than development loans, medium or long-term loans and

equity investment.

Three general categories of lending activity may generate non-development income. First, development finance institutions may hold some of their resources in cash or equivalent, gaining short-term interest on such assets. This is frequently the case with young development finance institutions which have been funded liberally by the government or other sources. For these institutions, there is a substantial pool of funds earning short-term income before a longer-term portfolio is built up. This block funding is one type of leveraging common in financial institutions in developed countries as well.

A second category of non-development income derives from a specific policy on the part of a number of development finance institutions to follow a policy of mixed banking. Some institutions combine their medium-term lending or equity investments with short-term financing of different forms, such as consummer finance, which is a traditional commercial banking function, and with dealing in paper of various sorts. They have therefore been able to generate short-term income while awaiting the pay-out of their equity investments over a longer period of time. Several development finance institutions in Latin America, particularly in Colombia, follow this policy.

The third type of non-development income is generated by what are called in this study general credit institutions. These are large general commercial or government banks doing a wide type of financing, including medium-term financing. (This is the basis by which they gain representation in the Directory). Latin America counts for a number of

these institutions, particularly Argentina, Brazil and Costa Rica.

Here the national private institutions have a far larger percen-
tage of those institutions which generate non-development income, which
is approximately three times as much as the primaries, and twelve times
that of the sub-nationals. This probably reflects the mixed banking en-
gaged in by a number of the national private institutions.

2.1d Other Income. The directory carried a heading called Other, which
was designed to account for all other income. In fact, this category
turned out to be the second-most significant category accounting for
over a quarter, 26.8 percent, of all revenue. This suggests that a finer
breakdown may have been needed in the Directory. The 18 and 7.5 percent
respective components for the primaries and national privates, are
clearly dominated by the 86.6 percent component for the sub-nationals.

2.2 Effective Revenue. The 186 institutions have an effective revenue
of $810.28 million. This figure was net of deficits recorded by forty
institutions. These deficits appeared for individual banks in the
Directory, but were netted out of the composite statements here.

One hundred and thirteen primary institutions generate approximately
75 percent of all the effective revenue, while forming 61 percent of the
institutions.

The 41 national private institutions account for 11 percent of
revenue while comprising 22 percent of the total group. By contrast, the
32 sub-national institutions, or 17 percent, account for 14.5 percent of
the revenue. Therefore the primary institutions are contributing pro-
portionately.

2.3 <u>Expenditure.</u> The Expenditure sides of the Profit and Loss State-
ments in the Directory were comprised, as appropriate, of five compon-
ents, adding to form total expenditure. The overall relationship on
the expenditure side of the composite profit and loss statement is
obviously the same, with the primaries accounting for approximately
three-fourths of all expenditures, national private institutions under
an eighth, and sub-nationals over an eighth.

2.3a <u>General and Administrative Costs.</u> The costs of the operations
under the control of the manager account for 27.0 percent of all of the
costs recorded in this study. It is significant to note that the primary
institutions devote more than twice the proportion of resources to
these expenditures than do the national private and sub-national insti-
tutions. (Whether this phenomenon is a result of accumulated bureauc-
racy, of the longer average life-spans of primary institutions which
have given rise to vested running expenses, or of other causes are
questions which will be taken up in an associated study now in prepar-
ation) National private and sub-national institutions devote 14.6
percent and 12.3 percent respectively to general and administrative
expenses, as reflected in Table 2.3.

2.3b <u>Capital Costs.</u> Capital costs are the largest single component of
cost for all institutions in the study taken together. Nearly 40 per-
cent of all expenditures in the composite profit and loss statement
went for capital cost items. Among the different types of institutions,
however, a significant difference exists. National private institutions
spent 54.9 percent of their total expenditures on capital costs, while

primary institutions committed 33.9 percent and sub-nationals only 6.0 percent. National private institutions may go to the market place more frequently than the other types of institutions to raise their funds. Therefore they may be performing a mobilization function which the other institutions are not, that is in terms of developing local capital markets. It is interesting to note that sub-national institutions are spending only six percent of their expenditures on capital costs. It may be that they rely substantially on deposits for funds and are not borrowing or otherwise relying on capital markets for resources.

2.3c Taxes. Development finance institutions pay very little taxes according to the data in Table 2.3. Only 1.5 percent of total expenditures were allocated for this purpose. Primary and sub-national institutions pay approximately the same rate, one percent and .7 percent respectively, but the national private institutions pay approximately seven times that amount, or 5.6 percent.

2.3d Other. Other expenditures form 17.2 percent of the total for all institutions. They comprise a very large 43.1 percent of sub-national institution expenditures. The figures for primary institutions are 13.9 and for their national private colleagues 5.6 percent. The fact that the figure for sub-national institutions is three times that of primary and seven times that of national private institutions most likely relates to the high percentage of other revenues for sub-national institutions discussed earlier. They represent large expenses incurred in owning and managing functions of a few institutions. They also represent losses, reserves for bad debts, etc.

2.4 Net Profit. Net profit for all the institutions in the study comprises 22 percent of the expenditures or effective revenue. Primary and

national private institutions are amazingly close in their components, indicating at 19.8 and 19.3 percent respectively. Sub-national institutions are twice as high, 37.9 percent.

2.5   Institutions showing no profit or a deficit. Forty institutions do not show any profit. Most had a declared deficit on the revenue side of their profit and loss statement. However, approximately a sixth indicated neither a deficit nor a profit, presumably balancing their revenues and expenses precisely. It may be that some development finance institutions intend as a policy to break even, that is, to show neither a deficit nor a profit. If it is assumed that institutions wish to avoid a deficit but not make a profit, then it may be unjust to group those making no profit with those making a deficit. However, it may also be a policy of some development finance institutions to earn a deficit. Whichever is the case, the analysis below includes both of these two groups.

Twenty-nine, or 72.5   percent, of these 40 institutions are primary institutions. Seven, or 17.5 · percent, are national private institutions and five, or 12 .5 percent, are sub-national. The proportion of primary institutions having deficits is higher than the proportion of primary institutions in the overall sample of 186 institutions.[6]

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[6]Primary institutions comprise 61%, national private institutions 23% and sub-national institutions 16% of the sample.

2. 6 Summary. A typical or average development finance institution has been presented in this section. Implicit in any averaging process is that some of the institutions in the study deviate considerably from this profile. These deviations of individual development finance institutions are the subject matter of much of the analysis which follows.

Because development finance institutions are primarily concerned with the finance function, it is not surprising to learn that the largest single component of revenue is interest income from loans, and that the largest component of expense is the cost of capital. It is also noted that a fairly large number of the financial institutions in this study report a loss or just break even. However, the typical development finance institution generates income and expenses much like other types of financial institutions.

The five return measures (dependent variables) are the subject matter of the next section.

3. THE FIVE RETURN MEASURES

3.1 Introduction. Five different measures provide the framework for
analyzing the return performance of 183 institutions in the study.[7]
The measures are:

    1. Total Revenue/Total Assets (TR/TA)
    2. Development Revenue/Development Portfolio (DR/DP)
    3. Total Revenue/Development Portfolio (TR/DP)
    4. Earnings Before Interest and Taxes/Total Assets (EBIT/TA)
    5. Net Profit/Owners' Equity (NP/OE)

This section is concerned with each of these measures in four respects.

First, the usefulness of the measure in better understanding de-
velopment finance institutions is examined.

Second, the raw data reporting performance under the measure are
presented in different forms: an array showing the distribution, a
quartile summary,[8] and a graph showing frequency distribution. Through-
out the section, performance in the top quarter of a measure is called
"good", in the second quarter "fair", in the third quarter "poor" and
in the fourth quarter "bad". The relative quality of these terms is
emphasized throughout the discussion of the institutions' performances.

Next, the stability of the measures is tested by examining the
tendencies of institutions to place in the same quarter of different
measures. The overlap of institutions in the upper and lower quarters

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[7] These measures are sometimes referred to as dependent variables
in subsequent sections of this paper.
    Three of the 186 institutions presented a profit and loss statement
but no balance sheet in the Directory. Since the denominators of all
five measures are derived from the balance sheet, these institutions
drop out of the analysis at this point, leaving 183 in the sample.

[8] See Appendix A for a note on quartile analysis.

is compared for five different pairs of measurements. The distribution of institutions in each measurement in the pairing is also compared by quarters. Movement from one quarter of one measure to another quarter of another measure is taken as a sign of instability of institutions' positions under the measurements. Commonality, that is no movement between the quarters, is taken as sign of stability. In general, it will be seen that a high degree of overlap obtains between institutions showing good performance in one measurement and in the other measurement in the pair. Similarly, there was a high degree of overlap between bad performance in any of the paired measurements. A still higher overlap exists between good performance in any measurement and good or fair performance in the paired measurement. Correspondingly the same situation is found between bad performance and bad or poor performance in the paired measurement. In this analysis also, individual institutions which change to the extreme opposite quarter, e.g., top to bottom or vice versa, are taken as illustrations which help explain the behavior of particular types of institutions under the measurements. Such complete inversions occurred in only 19 cases, about 11% of the institutions in the sample.

Finally, this section is concluded with an examination of each measurement for indications which might help explain how institutions perform. This examination is also the topic of Section 4 which follows. However, preliminary lines of inquiry are set out at the close of the discussion of each measurement, by way of summarization.

3.2 The Gross Revenue Measures. The first three measures are gross
revenue measures. They deal with revenue before the cost of producing
revenue is considered. They thus differ from the last two, which are
net, in that general administrative and other expenses are extracted.[9]

Gross revenues are important because they indicate activity in the
development finance institution. In the case of the financing function,
the lending or investing in projects, the level of revenues indicates,
first, that the institution is in fact lending or investing in projects.
Secondly, the influx of revenues shows that these projects are paying
their interest or dividends. In the case of the owning and managing
function, gross revenues indicate that the institutions are generating
activities such as the operation of ventures, which are producing
revenues. In the authors' views, the generation of revenues are
essential to the well-being of a development finance institution. Costs
can be cut and efficiency improved, but if there is no revenue-gener-
ating activity or capability, the institution is moribund.

3.2a Total Revenue/Total Assets (TR/TA). The typical or median in-
stitution in the study generates gross revenues (and expenses) equal to
0.555 of its total assets. The importance of the relationship between
total revenues and total assets lies in its reflecting the gross revenue
generating capability of the institution measured in terms of the total
resources available. This ratio is a basic link between the institutions'

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[9]An additional study in preparation analyzes in detail a series
of efficiency measurements, focusing on the costs involved in pro-
ducing these revenues and on the financial structure of the institu-
tions in the study.

balance sheets and their profit and loss statements, discussed in the prior section.

The numerator is the net effective revenue accruing to the development finance institution, that is, its total revenue diminished by any operating deficit recorded on the revenue side of the Profit and Loss Statement.[10] The denominator, total assets employed in the institution, equals the claims on the assets by the government and the private sector, whether represented by owners of the institutions, lenders, or creditors of any other sort. The denominator thus reflects the total sum which these principal groups of interested parties have committed to the institution.

The ratio of TR/TA thus serves as an indication of how a development finance institution's capability to generate a volume of gross revenues relates to the assets employed in the institution. That volume is significant for it determines the current flow of funds available for expenses and, after the expenses are taken care of, to all those who committed funds.[11]

The Distribution. The 183 development finance institutions in the study had revenues which ranged between thirty and zero percent of their total assets. The most typical, as reflected in the median, was 5-1/2 percent. Table 3.1 summarizes the distribution by quarters.

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[10]See section 2.

[11] The fourth return measurement examines further the funds available for distribution to those groups committing funds.

Table 3.1

Summary Data: <u>Distribution of Total Revenue/Total Assets (TR/TA)</u>

Range: .29889 to .00009

Median: .05539

Boundary of	first quarter	.29889 to .07902
	second quarter	.07872 to .05564
	third quarter	.05514 to .03715
	fourth quarter	.03647 to .00009

Figure 3.1 shows the distribution graphically. The bell shaped curve is pronounced, with that half of the institutions between first and third quarters grouped solidly around the median. The dispersion at the high end (tail) is limited indicating further the compact quality of the range.   The mean, if calculated, would not be far from the median. In summary, performances under TR/TA for the 183 development finance institutions as a whole are fairly heavy bunched around the median of 5-1/2 percent.

The statistical analysis in Section 4 will focus particularly on the extent to which TR/TA indicates the level of overall activity in which a development finance institution engages. The hypothesis is that such activity generates revenues either from the portfolio of borrowers or from direct operations within the institution itself. In both cases, the activity is comprised of a wide spectrum of functions beneficial to the borrowers and/or the economy via economic growth. That analysis also focuses on the relationship between generation of comparatively higher revenues and the relatively higher associated costs of doing so.

<u>3.2b Development Revenue/Development Portfolio (DR/DP).</u> The majority development finance institutions earn gross revenues of between nine

FIGURE 3.1   20

TOTAL REVENUE/TOTAL ASSETS (TR/TA)
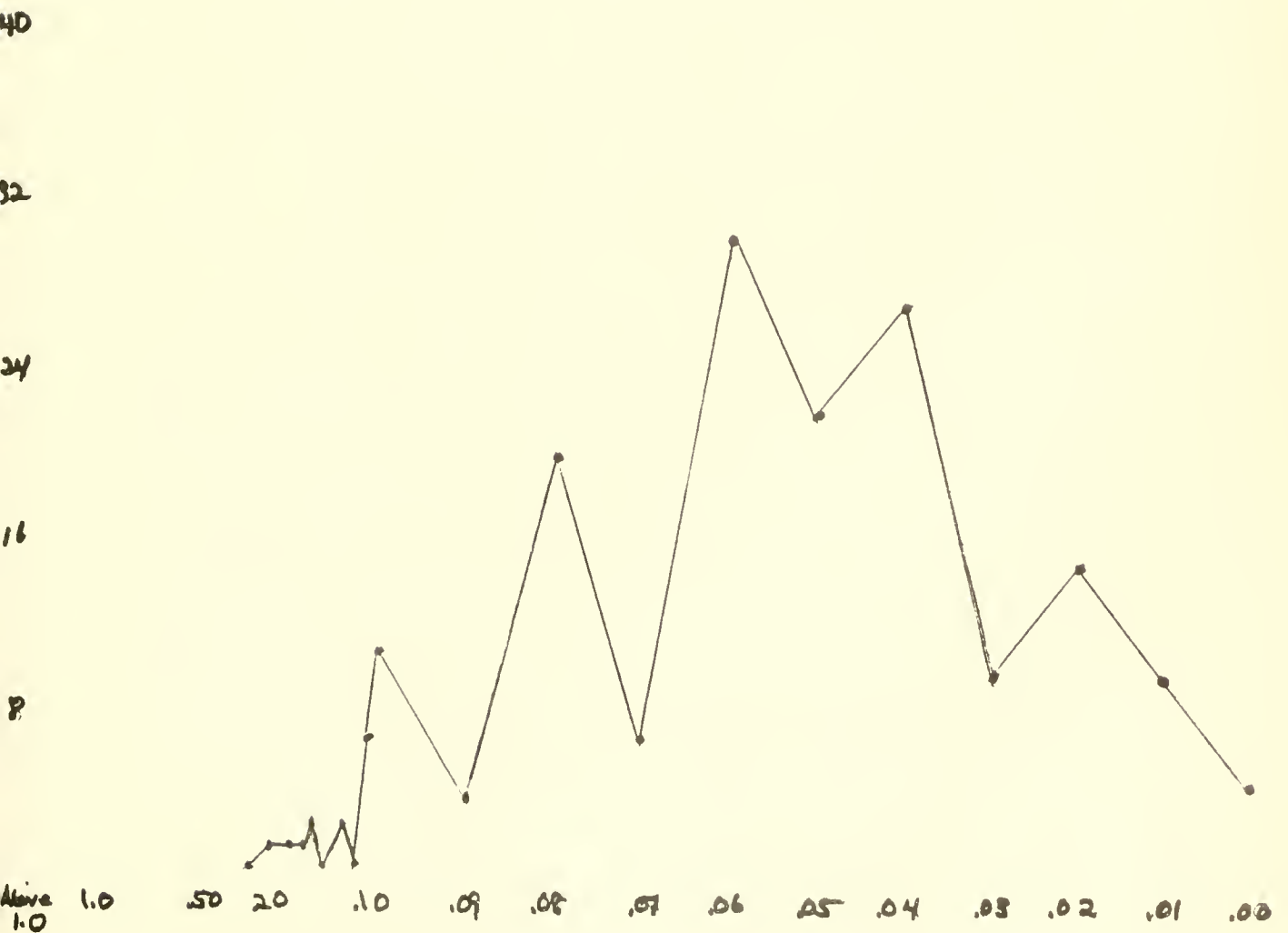
percent and just under four percent on their development portfolios.
The median or typical institution receives a six percent gross return
on that portion of its assets classifiable as development portfolio.

Not all of the assets of a development finance institution are
committed to its development portfolio. Nor is all the revenue derived
from these sources. This measure focuses only on the assets in the
development portfolio and the gross returns from it. The development
portfolio is comprised of two elements from the assets side of the
standard balance sheet in the Directory. These items are 'loans out-
standing' and 'equity investments', when the development finance in-
stitutions made such investments. Since the institutions also hold
their assets in the form of fixed assets, cash and equivalents, and
other forms, the development portfolio which comprises the two compon-
ents mentioned above forms only one segment of total assets. In deter-
mining the numerator, the headings: interest, commissions, fees on
loans, and dividends, were taken from the Directory profit and loss
statements and separated from other income, such as that accruing from
short-term investments or cash and equivalents. Thus, the portion of
assets directly concerned with development financing have been related
to the revenues derived from the employment of these assets.

The significance of DR/DP as a measure of gross return on develop-
ment portfolio lies in its indication of:

1. The general ability of the borrowers to repay. High
   DR/DP indicates that revenue is flowing in from the
   borrowers and the equity investments.

2. Financing activity. Borrowers do exist, loans have been
   extended.

3. Reflection of interest rate charged or dividends accrued.
   Some indication of the acumen of the institutions in
   approximating market rates.

The Distribution.   The institutions in the sample are distributed around a median of six percent for the variable DR/DP.   The quartile limits are as follows:

Table 3.2

Summary Data: Distribution of Development Revenue/
Development Portfolio (DR/DP)

MEDIAN - .06050

RANGE: 1.208 to .0000

1st Q	.08675	to	1.208
2nd Q	.06054	to	.08647
3rd Q	.03941	to	.06047
4th Q	0.0	to	.03910

Although the upper quarter includes at the top one anomalous situation in which the recorded interest, fees and commissions exceed the loans outstanding, the distribution as a whole falls with only one intervening point to 23 percent.   A total of ten institutions are found between 23 percent and 15 percent.   From that point, the ratios proceed downward in an orderly distribution to zero.   The two mid-quarters were fairly tightly packed around the median, within 2-1/2 percent on each side. Ninety percent of the distribution is between zero and 13 percent.

Figure 3.2 represents the distribution graphically, illustrating this tight grouping.   The high extreme of the curve is short, having only two entries above 23 percent and from 15 percent on down growing reasonably rapidly.   The mean would not be very close to the median here, due to the two entries, one at 1.2 and another at .69.

FIGURE 3.2   23

DEVELOPMENT REVENUE/DEVELOPMENT PORTFOLIO (DR/DP)

Basically, the data resemble those of the first measure, Total Revenue/Total Assets. The medians are only 1-1/2 percent apart and the bands of the middle two quarters are similar. The middle 92 institutions in the distribution are spread over a slightly wider range of percentage points than in the case of TR/TA. Comparing Table 3.2 with 3.4, another obvious similarity can be seen. Both curves peak at six percent with the same number of entries, 30 each. In the ratio DR/DP, Development Revenue (DR) is a subset of Total Revenue (TR) and Development Portfolio (DP) a subset of Total Assets (TA), so these similarities are not sur-prising.

Commonality between DR/DP and TR/TA. Such similarities are strong. There is a definite tendency for an institution to place in approx-imately the same position in the distributions of both TR/TA and DR/DP. Sixty-three percent of those in the upper quarter of the TR/TA dis-tribution are also in the upper quarter of the DR/DP distribution. An additional nine, or 19.6 percent, of top quarter TR/TA institutions are in the second quarter of DR/DP. The corresponding figure for top quarter DR/DP was 21.7 percent. Table 3.4 illustrates the point. This Table also lists those institutions which were in the top quarter of one measure and the bottom of the other.

Table 3.4

Commonality in the Top and Bottom Quarters of TR/TA
and DR/DP Distributions
Showing Number of Institutions in Respective Quarters

Quarter of TR/TA

Quarter of DR/DP	1st	2nd	3rd	4th
1st	29	10	4	3
2nd	9			2
3rd	4			6
4th	4	1	7	34

Inversions

Top TR/TA, Bottom DR/DP

Companhia Progresso de Estado De Guanabara (Brazil)
Corporación Boliviana de Fomento S.A.
Corporación Venezolana de Fomento
Corporación Venezolana de Guayana

Top DR/DP, Bottom TR/TA

Banco del Noreste S.A. (Spain)
Banque de Développement de la Republique du Niger
Société Nationale d'Investissement (Malagasy Rep.)

At the bottom end of the distribution, 74 percent of the bottom TR/TA quarter are also in the bottom DR/DP quarter. Another 13 percent are in the third quarter. Fifteen point two percent of the bottom DR/DP institutions are in the third TR/TA quarter. Thus, there appears to be a reasonable stability between the two measures.

The instances where instability was maximum are instructive. Four institutions in the top TR/TA quarter are in the bottom DR/DP quarter. They all performed substantial owning/managing functions, with subsidiaries in heavy industry, manufacturing and other fields. Their commitments to direct operations are signaled by the fact that between 44 and 87 percent of their assets are contained in either the fixed assets or

equity investments headings, usual indications of owning/managing function. These investment assets realized heavy revenues in the other income category, including in three cases government grants or subsidies.

These cases seem to illustrate that heavy involvement in owning and managing may generate considerable revenue, sometimes including needed governmental budgetary support, while at the same time the proportionally few assets devoted to the financing function are generating poor levels of revenues.

Three institutions were in the bottom TR/TA quarter but in the top DR/DP quarter, reversing the experience noted above. They shared a common characteristic: between 63 and 85 percent of their assets were comprised of cash and equivalents. These assets were evidently not producing revenues proportionate to those produced by other uses, hence a low overall TR/TA. However, the institutions did have sufficiently high revenues from those assets in their development portfolio to place them well in the DR/DP distribution.

The seven development finance institutions examined above illustrate two points. First, it is possible to produce proportionately high total gross revenues through such activities as owning and managing of own ventures while still failing to produce proportionately high revenues in the development finance function directly. It is also possible to do a good job in the latter area with those assets which are employed in development finance but still do a poor overall job because of the inadequate use of a large proportion of assets

which are not employed in either direct operations or, more importantly, in the development finance function.

Ideally, of course, high development portfolio revenues ought to be complemented with high overall revenues. Both normally should be maximized. How the involvement in owning and managing and in the other functions a development bank may perform relates to the production of high development finance revenues is the subject of part of the statistical inquiry in the next section. There, focus is on whether involvement in owning and managing, the educational function, etc. and the commitment of higher cost to the production of such revenues is beneficial to the institution in terms of raising gross revenues. The next measurement also deals with these questions.

3.2c Total Revenue/Development Portfolio (TR/DP). As noted earlier, development finance institutions have other sources of income beside interest and dividends flowing from their development portfolios. Revenue also arises from short term investments of cash and equivalents, commercial loans in the case of mixed banks, income producing fixed assets, as well as miscellaneous assets and financial services. The development portfolio manager is interested in building substantial revenues from development loans and equity investments, but he is interested as well in making good use of the other revenue producing assets held by the institution. The prior ratio provides a measure of the first, while the measure TR/TA gives an overall picture of the revenue earning capacity of all the assets.

In this section, a measurement relating total revenues from all

sources to the development portfolio (TR/DP) is introduced. The total
revenue earning capacity is put in the perspective of an institution's
development finance portfolio. As was noted in Section 2, income
attributed to the development portfolio of the institutions in the 183
balance sheets accounted for over 70 percent of all revenues. In effect,
this measurement adds the other 30 percent to the numerator, while
leaving the denominator the same as in the prior measurement.

The rationale for creating a third gross measure that combines
elements of the first two grows from the desireability of emphasizing the
role of development financing while keeping the other uses of assets
both in view and in perspective. This emphasis is supplied by placing
total revenue in proportion to the development portfolio assets alone,
since extremes caused by either high non-development portfolio revenues
or low development portfolio assets will tend to stand out. Put another
way, TR/DP provides more refined, more sensitive discrimination than
TR/TA in relating the balanced acquisition of revenues from all sources
to the substantial employment of assets in the development portfolio.

The Distribution. The distribution of TR/DP ranges widely from the
Corporacion Venezolana De Guayana, whose total revenues are actually
25 times its minuscule development portfolio, to a level approaching
zero. Table 3.5 summarizes.

Table 3.5

Distribution of Total Revenue/Development Portfolio
(TR/DP)

MEDIAN - .08230
QUARTILE LIMITS - .00016 to 25.71717

```
        1st Q     .13468 to 25.71717
        2nd Q     .08272 to   .13383
        3rd Q     .05200 to   .08187
        4th Q     .00016 to   .05115
```


The median TR/DP figure is .079. This figure is higher than both the DR/DP median figure of .060 and the TR/TA median figure of .055. The whole range of the TR/DP measurement is higher than those of the other two. This result is expected. In contrasting Total Revenue over Development Portfolio (TR/DP), the numerator is increased while the denominator remains the same. In contrasting the same measurement (TR/DP) with Total Revenue over Total Assets (TR/TA), the numerator is constant while the denominator is increased. In both cases, the TR/DP figure will be larger.

As Figure 3.3 indicates, the top quarter is well spread, indicating a diversity of measurements at the top of the distribution. The whole curve is flatter, less peaked than the prior two measurements. Put another way, each quarter of TR/DP is wider in range, as may be seen in the following three distributions. In each comparison, the range of the TR/DP quarter is broader.

FIGURE 3.3

30

TOTAL REVENUE/DEVELOPMENT PORTFOLIO   (TR/DP)

Table 3.6

Comparison of Range of Quarters in Terms of
Point Spread

	1st Q	2nd Q	3rd Q	4th Q
Total Revenue/Development Portfolio	12.900	.047	.027	.052
Total Revenue/Total Assets	.211	.023	.018	.036
Development Revenue/Development Portfolio	1.114	.026	.021	.039

The broader range signals the variety in performance of development finance institutions under this linking ratio, reflecting its greater sensitivity.

Commonality Among TR/DP, TR/TA and DR/DP. This increased sensitivity is visible in an analysis of commonality between TR/DP and each of the other two measures, TR/TA and DR/DP. There is less commonality between the top quarters of TR/DP and either of the other two measures when considered, with TR/DP, than as between the other two taken together. Fifty-two percent of the top quarter of TR/TA and fifty-five percent of the top quarter of DR/DP institutions are in the top quarter of TR/DP. By contrast a sixty-five percent overlap was noted earlier between TR/TA and DR/DP.

In an earlier examination of TR/TA, it was seen that good performance tends to be related to substantial commitment to the owning and managing function or to other non-development portfolio type activity, particularly when contrasted to high performance in DR/DP. This general tendency is emphasized again in a contrast of TR/DP and TR/TA. Table 3.7 indicates first the somewhat lower commonality mentioned above. Twenty-eight of

Table 3.7

Commonality in the Top and Bottom Quarter of TR/DP
and TR/TA Distributions Showing Number of Institutions
in Respective Quarters

| | | Quarter of TR/TA | | | |
		1st	2nd	3rd	4th
Quarter of TR/DP	1st	28	8	8	2
	2nd	17			3
	3rd	1			6
	4th	0	0	12	34

Inversions

Top TR/DP; Bottom TR/TA

Jamaica Agricultural Development Corporation
Banco del Noroeste S. A. (Spain)

the forty six institutions are in the top quarter in both measurements.
The remaining institutions with good TR/DP performance (those in the
top quarter) are found to have a wide range of TR/TA performance. Eight
are in the second quarter, eight are in the third quarter and two are
inverted (good TR/DP and bad TR/TA performances). The opposite case does
not hold. Good TR/TA performance indicates good or fair TR/DP performance,
and therefore is a good indicator of good or fair TR/DP, performance but
not vice versa.

Why is this so? An answer is suggested by an examination of the two
inversion cases. In both instances a very small development portfolio
appears to be the cause. The first, Jamaica Agricultural Development
Corporation, is an agricultural development corporation with heavy
fixed assets and large "assets not covered below". Together, they com-
prise 97% of all the institutions assets. These assets are associated

with owning and managing functions, which are heavily emphasized in the textual description in the Directory. The development portfolio was exceedingly small, comprising only three percent of all the assets and gross income was comparatively low but was nevertheless sufficiently high (relative to other institutions) to put it in the top quarter of TR/DP. This is the result of an extremely low base or denominator. However, when it is compared with other institutions in the TR/TA measure the revenue was proportionately small and the institution was in the bottom quarter.

The second institution, Spain's Banco del Noroeste S. A., had good revenue in relation to a relatively small development portfolio, which comprised eight and a half percent of total assets. A small development portfolio base gave the institution a high TR/DP measure. However, eighty percent of the institution's assets were in cash and equivalent. Evidentally these were not bringing in sufficient income relative to other institutions. Therefore the bank had a low comparative TR/TA.

These illustrations suggest that this measure, when used in contrast to TR/TA, is helpful in pinpointing a low commitment to the development portfolio and/or conversely a high use of funds in other non-development activities.

At the other end of the spectrum, the reverse situation holds regarding poor performance. Here institutions with low TR/DP performance are not spread over a wide range of TR/TA. Rather, they are concentrated in the third and fourth quarters of TR/TA. And, again in contrast, low TR/TA performance is spread over a wide range of TR/DP. The explanation

is suggested by an examination of the extremes, where there are two inversions. Their total revenue figures were too low compared to their total assets relative to the same comparison of other institutions. Yet they had high TR/DP because of their low portfolio base, as explained above. From this viewpoint, low total revenue also is added to the importance of low development portfolio. This is logical as the flow would seem to be from revenues into portfolio.

A comparison of TR/DP and DR/DP suggests the same basic pattern, regarding both good and bad performance. Table 3.7 sets out the data regarding commonality.

Table 3.8

Commonality in the Top and Bottom Quarters of TR/DP
and DR/DP Distributions Showing Number of Institutions
in Respective Quarters

		Quarter of DR/DP			
		1st	2nd	3rd	4th
Quarter of TR/DP	1st	26	1	6	5
	2nd	20			3
	3rd	0			5
	4th	0	1	12	33

Inversions

Top TR/DP; Bottom DR/DP

Corporacion Venezolana de Guayana
Companhia Progresso do Estado da Guanabara (Brazil)
Corporacion Boliviana de Fomento
Jamaica Agricultural Development Corporation
National Investment Bank (Ghana)

At the good performance end, good performers in TR/DP are spread across all the quarters of DR/DP. Consistent with the preceeding, the reverse is not true; good performers in TR/DP are all good or fair performers in DR/DP.

Again the inversions, or extremes, give some hint as to what may be happening. Comparatively high income from non-development portfolio sources have produced high total revenue. It is noteworthy that three of the five institutions with inversions also were found (in section 3.4) to have inverted between TR/TA and DR/DP. The analysis made there is applicable here. The effective ingredient here is still the high total revenues in those cases. In a fourth case, Jamaica Agricultural Development Corporation, discussed in the above paragraphs, a low portfolio base is still apparently the controlling factor. In both examples, either high revenues from non-development portfolio sources or a small development portfolio base seems to be evident. Both suggest the importance of different kinds of functions. On the other side high development revenues do tend to place an institution favorably in TR/DP.

Considering bad performance, the situation is similar to the TR/TA and TR/DP relationship. Low DR/DP performance is spread over all quarters of TR/DP, while the bad TR/DP performers are all bad or poor DR/DP performers. An explanation is suggested by the above discussion of the five inversions. They are cases of low development portfolio activity with consequent low development portfolio incomes. The financing function apparently has been subordinated to the owning and managing emphasis in most cases. The latter produced high total revenue. Consequently when total revenue and development portfolio are related (as is done here)

the high performance can come from either a high total revenue or a low development portfolio, while the bad TR/DP performance originates from low activity.

In summary, this analysis suggests the use of TR/DP as a measure for highlighting, at the good performance end, large disparities or imbalances between successful performance of the development portfolio, or financing activity, and other functions. This use of the TR/DP measure is particularly relevant when it is contrasted with another gross measure.

Good performance in Total Revenue/Total Assets and/or in Development Revenue/Development Portfolio is an indication of good or fair performance in Total Revenue/Development Portfolio but not vice versa. Good Total Revenue/Development Portfolio performance is, comparatively speaking, a notably bad indicator of good or fair Development Revenue/ Development Portfolio performance. The same more or less holds true for Total Revenue/Total Assets. (But bad performance in Total Revenue/ Development Portfolio is an indication of bad or poor performance in both Total Revenue/Total Assets and Development Revenue/Development Portfolio. Here the reverse situations do not hold.)

The main discriminating force in this measure is seen to be the kinds of functions the development finance institution participates in. As will be seen in the subsequent section, the functions a development finance institution perform appears to be important across most of the measures of performance.

3.3 The Net Measurements. Up to this point, measurements involving gross revenues have been the chief concern. The final two return measures

involve two net figures: Earnings Before Interest and Taxes, divided by

Total Assets, and Net Profit over Owners' Equity.

3. 3a Earnings Before Interest and Taxes/Total Assets (EBIT/TA). Two and

a half percent is the amount taken out yearly in taxes by the government,

in interest by lenders and available as profit to its owners by the

typical development finance institution in this study. This figure is

slightly less than half the median for total revenue/total assets. It

will be recalled that in the mean profit and loss statement, the com-

ponents forming this measurement also accounted for approximately half

of total average revenues.

There are three major parties with interest in the capital and

liabilities of a development finance institution: its owners, lenders,

and government. What these interested parties extract from the insti-

tution is represented by three components in the standard profit and

loss statement in the Directory: Net Profit, Taxes, and Interest.[12]

Excluded are two other standard items: general and administrative ex-

penses (sometimes called direct administrative expenses) and other

expenses.[13]

Total assets is the appropriate base, as it represents the resources

employed by the three parties in the institution.

As a net figure, EBIT/TA, offers an advantage over net profit/owners'

equity, which is the final measurement discussed. Interest and taxes

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[12]The formula used to derive the measurement was: Effective Revenue -
(General and Administrative Expenses and Other Expenses) ÷ Assets. The
authors are indebted to Dr. Heinz E. F. Luzny for calling to their attention
the importance of this measure.

[13]As the residual of total expenses minus general and administrative
and other expenses, EBIT reflects inversely the proportional size of these
direct expenses.

frequently are not within the manager's control and so an argument
exists that they should be discounted when using profits as a measure of
a manager's performance. Taking earnings before interest and taxes,
that is, before paying them out, seems to achieve this objective.

The Distribution. EBIT/TA performances range from .3913 to a
negative .2109. The quarter limits are as follows:

Table 3.9

Summary Data: Distribution of Earnings
Before Interest and Taxes (EBIT/TA)

Median - .02525

Quarter Limits - .3913 to -.2109

1st Q	.3913 to	.0478
2nd Q	.0475 to	.0253
3rd Q	.0252 to	.0109
4th Q	.0108 to	-.2109

As indicated in the accompanying graph of the frequency distribution, for the first time a measurement falls into an ascending pattern at the low end, rather than a full bell curve. In part, this phenomenon is caused by the fact that negative values for this ratio are recorded as zero in the distribution. The upward slope indicates the low overall figures for EBIT/TA and the concentration at a near zero or negative point.[14] This characteristic may also be seen by comparing the density of the quarters, e.g., the range between the quarter dimensions, with the ranges for the same quarters in the other measurements. Note also may be taken of the gradual tailing off at the high end, reflecting a reasonable variety of good performance.

Comparison of Commonality between EBIT/TA and TR/TA. A comparison of TR/TA and EBIT/TA brings together the gross and the net measurements based on total assets. As shown in Table 3.10, there exists between these two measurements, as between the other comparisons made, a substantial amount of overlap among the top quarters indicating good performance. The same situation holds for the bottom quarters indicating bad performance. Twenty-eight institutions, or sixty one percent of those showing good performance in each measurement also indicate good performance in the other. Fifty-six and a half percent is the comparable figure for the bottom quarter, indicating bad performance.

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[14] Negative EBIT/TA results from the existence of a deficit in the profit and loss statement. A general and administrative and other expenses become greater than effective revenue, that is, total revenue minus the deficit. However, where the deficit is small proportionately to the overall revenues, this effect may not occur and EBIT/TA may remain positive, but low.

FIGURE 3.4   40

EARNINGS BEFORE INTEREST & TAXES/TOTAL ASSETS (EBIT/TA)
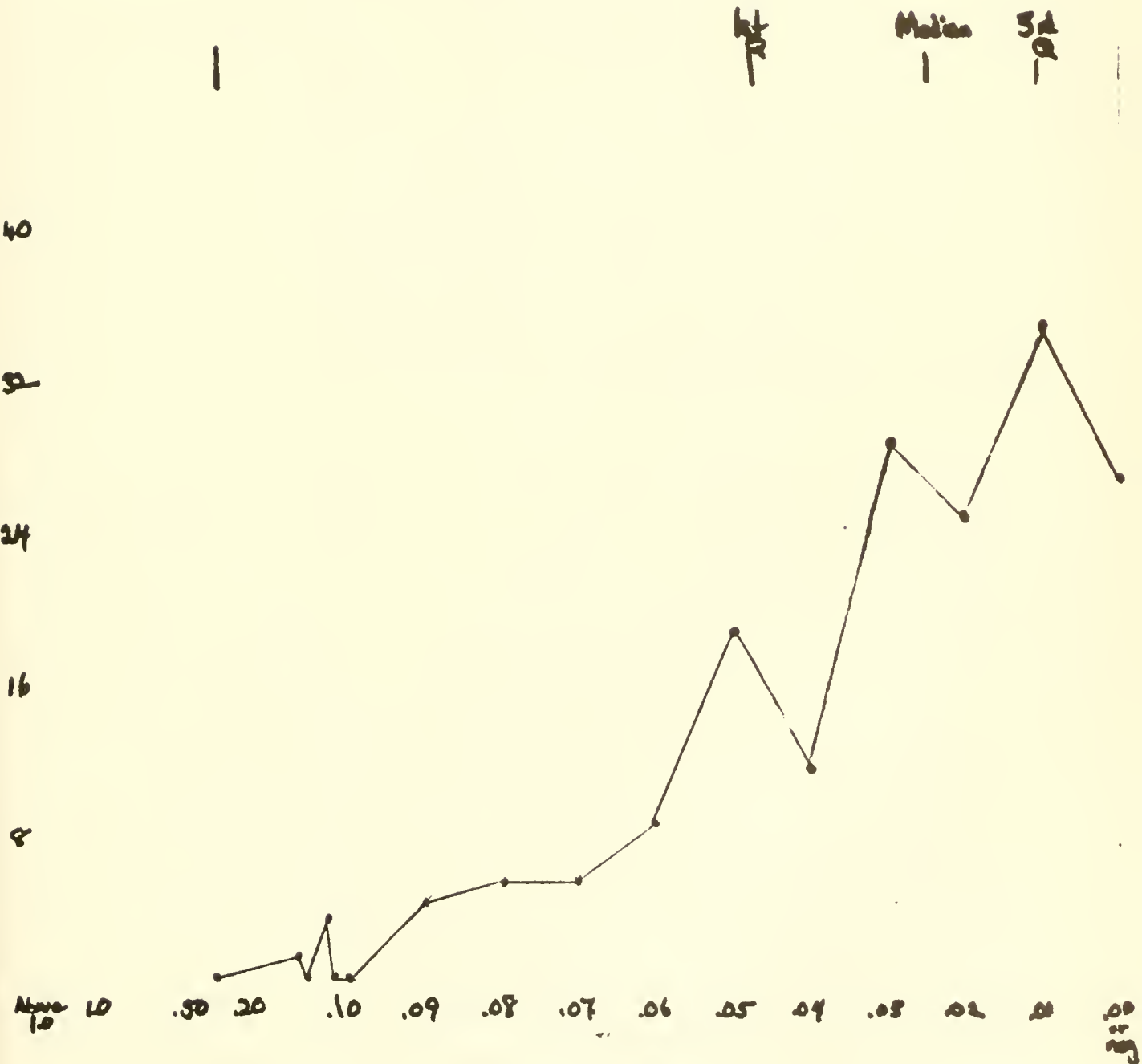
Table 3.10

Commonality in the Top and Bottom Quarters of EBIT/TA and TR/TA
Distributions Showing Number of Institutions in Respective Quarters

Quarter of TR/TA

Quarter of EBIT/TA		1st	2nd	3rd	4th
	1st	28	15	3	0
	2nd	6			4
	3rd	8			15
	4th	4	5	11	26

Inversions

Top TR/TA: Bottom EBIT/TA

Small Business Loan Board (Jamaica)
Crédit du Niger
Instituto de Fomento Economico (Panama)
African Loan and Development Company Limited (Rhodesia)

When comparing to the other pairings made earlier, commonality between these two measurements is markedly lower. However, good performance under EBIT/TA is a fine indication of good or fair performance in TR/TA. Ninety-three percent of the good performers under EBIT/TA are good or fair performers under TR/TA. Similarly, 91 percent of the bad performers under TR/TA are bad or poor performers under EBIT/TA.

An examination of the four institutions which are located at opposite ends of these two measurements illustrate some of their salient characteristics. All four rank in the first quarter of total revenue/total assets, but are in the bottom quarter of earnings before interest and taxes/total assets. Each case is an instance of large general and administrative expenses, rather than good total revenue records. In the Small Business Loan Board of Jamaica, TR/TA was at the bottom of the top

quarter. The only existing component of EBIT was earnings, amounting to
J£300 out of total assets equaling J£150,000 or .002. General and ad-
ministrative and other expenses accounted for J£15,700, of a total of
J£16,000 effective revenue. It is noteworthy that this bank has a rel-
atively low position in both of the net measurements but nevertheless
ranks in the top quarter of all three gross measurements, which further
suggests the need to consider both types of measures.

Crédit du Niger presents a similar picture. It is low in the
first quarter of TR/TA, has no profit, pays low taxes, has reasonable
capital costs, but very high general and administrative + other ex-
penses (.886 of total revenues). The same is true for the other two
banks. One, Instituto de Fomento Economico (Panama) had large owner/
manager activity with high associated costs.

In summary, some institutions are able to take out in EBIT a
figure substantially above the median. The elongated top quarter illus-
trates the point. Considerable stability exists between performance
under this measure and performance under total resources/total assets,
the comparable gross figure. However, it is less than the overlap or
stability between other measures already compared.

3. 3b Net Profit/Owners' Equity (NP/OE). The most typical development
finance institution in the study earns three percent on its share capital
and other forms of equity held by the owners, after taxes, operating
costs and capital costs. Net profit/owners' equity is perhaps the most
traditionally employed return measurement among those in this analysis.
It is a representation of the investor's view, his annual return on his

investment in the enterprise. As emphasized earlier, the importance of such a measure is, in the authors' views, substantially less in most development finance institutions, than in other forms of enterprise. The importance of public funds and the varying effects of capital costs and taxes on different development finance institutions are the two primary reasons. The measure remains, however, a critical one for potential investors, public or private, and as a traditional indication of performance.

The Distribution. Performances for Net Profit/Owners' Equity among the 183 development finance institutions range from 1.6 to zero. Zero includes institutions which had an operating deficit. The distribution is summarized in quarters in Table 3.11.

Table 3.11

Summary Data: Distribution of Net Profit/Owners' Equity
(NP/OE)

Median - .03063

Quarter Limits - 0.0 to 1.63636

1st Q	.07965 to	1.63636
2nd Q	.03084 to	.07843
3rd Q	.00321 to	.03042
4th Q 0.0	to	.00176

As in EBIT/TA, the frequency distribution shows an ascending slope toward the low end, with the whole fourth quarter occurring at the zero point. (Again, zero includes negative figures.) Thus, the bottom quarter is considerably more dense than that in any other measurement, including EBIT/TA.

FIGURE 3.5

44

NET PROFIT/OWNERS' EQUITY (NP/OE)
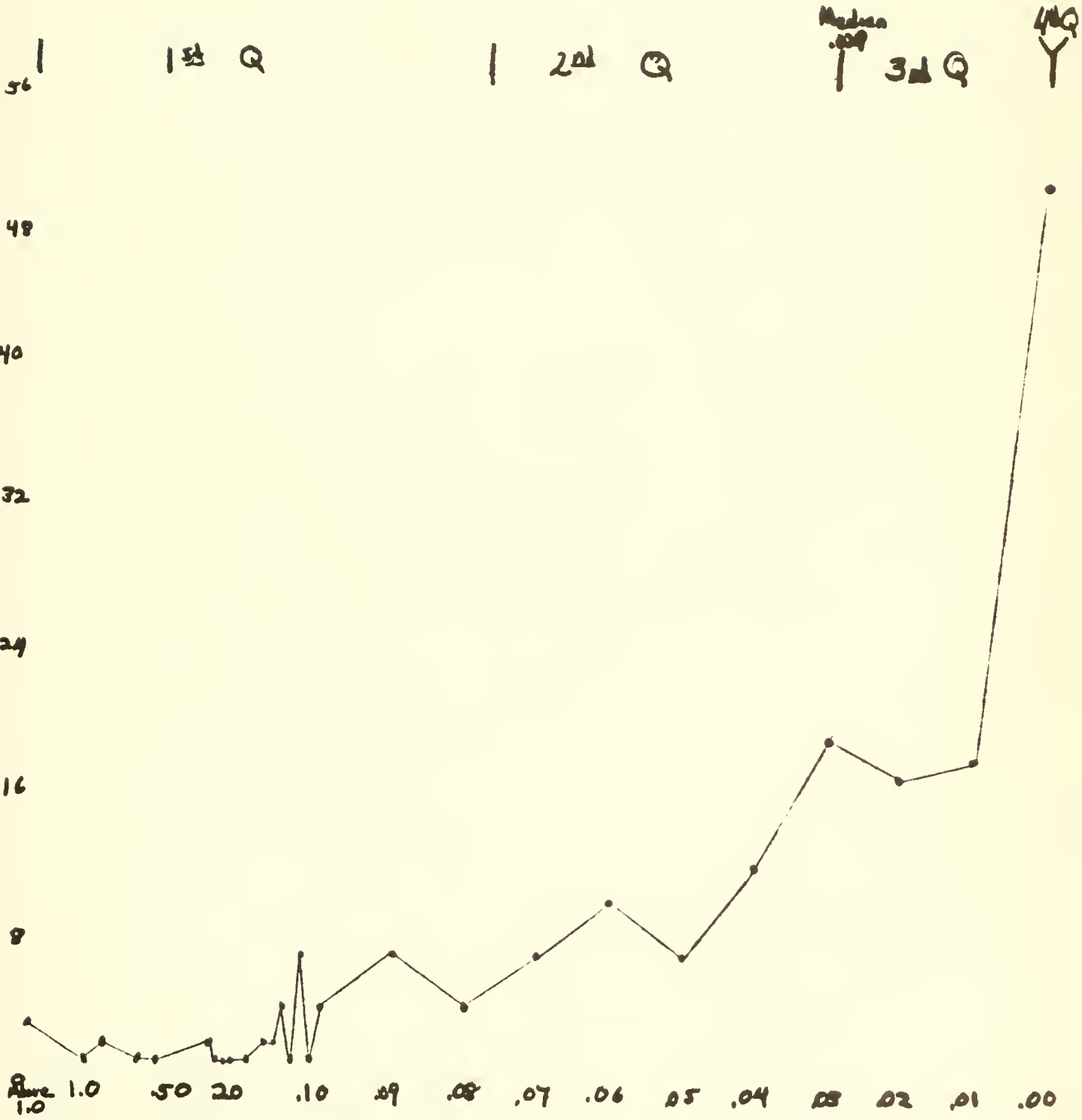
The upper quarter is dispersed over a wide range, from 160 percent to a little under eight percent. The institutions in this quarter can be divided into four groups. First, there are the two institutions with ratios larger than 100 percent. There follow five institutions with ratios between 99.6 percent and 61 percent. Next there is a gap between 61 percent and 33 percent. Twenty-six institutions are grouped between 33 percent and 10 percent in fairly even distribution. A fourth grouping, is composed of those nine institutions lying between the 10 percent mark and the end of the quarter.

A clear pattern stands out as to the clusters to which these institutions in the top quarter belong. Those in the first two groupings, that is, with ratios above 60 percent are with one exception primary institutions. Those in the third grouping, that is, ranging from 33 to 10 percent are predominantly national-private institutions. Those in the final section of the top quarter, that is, below 10 percent but above eight percent are again primary institutions.

The extraordinarily high profit to equity ratio reported by the five primary and two national-private institutions at the top of the distribution can be accounted for more readily by their capital structure, that is, the denominator of the ratio, than by their profit performance, or the numerator. In general, these institutions have a capital structure that is highly leveraged, i.e., a very small capital base with extensive debt. For example, the institution which has a 1.6 net profit to owners' equity ratio has capital stock of only $30,000 US equivalent, while one of its development banking parents has lent it $1.3 million US equivalent in unsecured income notes. The one agricultural bank in the

group is highly leveraged, with deposits coming from local government sources, local private funds, and the local US aid mission. Thus in the case of these primary institutions, the decision of the owning governments to keep the equity structure exceedingly small accounts in large major for the high NP/OE measurement. The national-private institutions ranking among the good performers generally have high leverage, but not as much as primary institutions referred to. The lower leveraging may mean their high return reflects actual operating results more than financial structure.

The lowest quarter consists of the 40 institutions which indicated either a deficit or no profit, [15] plus the addition of six institutions with a Net Profit/Owners' Equity ratio of .003 or less. In contrast to EBIT/TA, NP/OE differs markedly in its bottom quarter with a much higher number of zeros or deficits. In the first three quarters, the slopes of the two measurements are very similar. This is natural. Institutions may have taxes and interest costs and, therefore, higher EBIT figures while they may not be generating net profit as a return to their owners. The overall, somewhat lower, level of EBIT/TA results from the different basis, total assets rather than owners' equity, a portion of the capital liabilities which numerically equal total assets.

Commonality Between EBIT/TA and NP/OE. The stability of the two net measurements is quite high, as measured by the commonality of institutions in their different quarters. The top quarters indicate

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[15] See discussion in Section 2.

commonality in 67.5 percent of the institutions found there, while the bottom percentage is 65. See Table 3.12.

Table 3.12

Commonality in the Top and Bottom Quarters of EBIT/TA and NP/OE
Distribution Showing Number of Institutions in Respective Quarters

		Quarter of NP/OE			
		1st	2nd	3rd	4th
Quarter of EBIT/TA	1st	31	12	3	1
	2nd	9			5
	3rd	5			9
	4th	0	6	10	30

Inversions

Top EBIT/TA: Bottom NP/OE

Trinidad & Tobago Industrial Development
Corporation

More significantly, good or bad performance in either measure, that is, appearance in any top or bottom quarter, is a good indication of performance in the corresponding top or bottom half of the other measure. The probabilities range between 85 and 93.5 percent. For example, good performance in EBIT/TA is an indication of good or fair performance in NP/OE. It should be noted that there is only one inversion here, that is, movement from the top to bottom or bottom to top quarter.

In summary, the role of financial structure in determining performance under this measurement and the significance of membership in a particular category were emphasized earlier. These threads will be

picked up again in the statistical analysis found in the later section.
They tend to play a significant part in shaping performance.

3.4 Summary. The low return on assets employed, either on a gross or a
net basis, appears significant. Total revenues typically form 5-1/2
percent of total assets. The median figure for the percentage taken out
by government in taxes, lenders in interest, and owners in profit, is
2-1/2 percent. It is true that financial institutions differ from many
other enterprises in that they are particularly capital intensive by
nature. They deal in money, so their inventories are capital. Total
assets may be expected to be high, thereby lowering ratios based on
assets employed.

Whether or not the return performance of development finance in-
stitutions is high or low compared to other types of financial insti-
tutions is open to question. Development finance institutions are created
to perform financial services not performed by marketplace institutions.
Presumably a major reason marketplace institutions have not entered fur-
ther into the field of development finance is that they perceive a
comparatively low return.[16]

Taking the five different pairings together, it is noticed that
commonality in the bottom quarter was great in the three gross return
measures. In the two net measures, the reverse was true; the top

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[16] As a superficial indicator, EBIT/TA ratios were constructed for
33 large U. S. Commercial banks, based on data from Moody's Bank and
Finance Manual of April, 1967. The median was .0293, and the range was
from .0345 to .0183. TR/TA ratios were derived for a smaller sampling
of ten banks, mortgage associations and trust companies. The median
was .0418, and the range was from .1811 to .0140.

quarter showed slightly higher commonality.[17]   Thus, there seems to be
more stability or consistency in poor performance in gross revenues and
more in good performance in the net revenues. An examination of possible
forces which may shape these variances in performance is made in Section 5.

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[17]The figures for the bottom quarters, in the three pairings made,
were 74 percent, 74 percent, 72 percent; comparable pairings for the
top quarters for the last two pairings were

4. ANALYSIS OF THE DISTRIBUTIONS

4.1 <u>The Independent Variables.</u> Six groups of independent variables are used to help explain the variance in the five return measurements described in the prior section. In doing so, an attempt is made to explain the different behavior of the institutions' performances, using the measurements as criteria. The independent variables are:

Institutional Structure Variables

    Classification as a Primary Development Finance Institution
    Classification as a National Private Institution
    Classification as a Sub-National Institution

Systems Structure Variables

    Membership in a National System
    Membership in an International System

Source Structure Variables

    Qualification as a high overall mobilizer
    Qualification as a low overall mobilizer

Functional Structure Variables

    Number of Primary Functions Performed
    Performance of owning and managing functions
    Performance of promotion functions
    Performance of educational functions
    Performance of promotional educational functions combined
    Performance of institution building functions (2 variables)
    Number of sectors served

Cost and Financial Structure Variables

    Debt to Equity Ratio
    Cost per Dollar of Development Portfolio

Age Variable

The possible relevance of these 18 variables in helping to explain performance has been suggested by preliminary analysis of performance of

the development finance institutions in the study, by the authors' prior experiences and their discussions with development bankers, and by other research on the topic.[18] The data for construction of the variables are derived from the Directory. Most of the data are analyzed in detail in associated studies currently in preparation.

4.1a Institutional Structure Variables. Primary, national private and sub-national institutions. The first group of variables derives from the basic categorization distinguishing among primary, national-private, and sub-national institutions.[19] It will be recalled that these categories are based on characteristics of ownership, age, size, and scope of oper- ations within each individual country. One hundred thirteen, or 61% of the institutions in this study are primary institutions. Forty one, or 22% are national private institutions and thirty two, or 17% are sub- national institutions. Each of these groups of institutions is used as a sub-set of the total, as an independent categorical variable, to see whether the sub-set performs differently from the remainder of the sample of institutions in the study. The code identifications for the three independent variables are: CLPRM (primary institutions), CLNP (national private institutions), CLSN (sub-national institutions).

4.1b Systems Structure Variables. Membership in a national system. There are at least six national systems of development finance insti- tutions. The national systems are in Argentina, Brazil, Colombia,

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[18] Roberts, Paul E. Development Banking: The Issue of Public & Private Development Banking. Sloan School of Management Working Paper 395-69, May, 1969.
[19] See footnote 5.

India, the Philippines, and Spain. They include approximately 100 institutions, of which approximately a half are included in the study. Since the leading banks and the associations formed in these systems can be the source of much guidance, technical assistance, and direction, as well as funds, institutions in national systems have been taken as a sub-set to see whether their performance varies significantly from those institutions not in national systems. Hence, participation in a national system has become an independent variable, with the code identification of SYSNAT.

Membership in an international system. Similarly, six international systems can be identified, each headed by an international finance or bilateral aid agencies. The international systems are those associated with the World Bank Group, the Inter-American Development Bank, the Caisse Central de Cooperacion Economique, the Commonwealth Development Corporation, the Kreditanstalt Fur Wiederauflau of Germany and the U. S. Agency for International Development. Membership in a system was held to exist if a development finance institution received equity investment or loans from one of these agencies. Eighty-three development finance institutions in this study were included in one or more of the five international systems. The code identification for this variable is SYSINT.

4.1c Source Structure Variables. High overall mobilization. Development finance institutions draw on many sources. In the Directory, these fources are summarized as: local government sources, local private

sources, foreign aid sources, foreign private sources, and internally generated sources. The 27 development finance institutions which drew upon three or more of these sources to the extent of 10 percent of their capital and liabilities were considered to be high overall mobilizers. They comprise a sub-set in this analysis whose performances are compared with the remaining institutions. This characteristic becomes the independent variable designated mobilization high (MOBHI).

Low overall mobilization. In contrast, if a development finance institution was dependent on only one source for 80 percent or more of its total capital and liabilities, it was considered a low overall mobilizer. The 39 members of this sub-set provided another independent variable designated mobilization low (MOBLOW).

4.1d **Functional Structure Variables.** Number of primary functions performed. The descriptive analysis thus far has at times suggested that what development finance institutions do can be expected to affect their performance. As extra-market institutions, they frequently perform a wide variety of functions. The actual functions that an institution performs should, theoretically, be determined by the gaps which exist in the institutional structure in the particular community. It should be doing things not usually done by traditional market oriented institutions, or by other government agencies. Clearly, not all development finance institutions can be expected to perform the same functions. It is expected, however, that within a country there exists a need for six basic kinds of activities. Development finance institutions frequently

one or more of them.   The six basic functions are:

1.   The Provision of Finance
2.   The Owning and Managing of Enterprises
3.   The Promoting of Projects and Planning
4.   Educating
5.   Building Financial Institutions, and
6.   Mobilizing Capital   [20]

Development finance institutions may be classified in terms of the numbers of primary functions performed: 1) those indicating they perform one or two primary functions (low multi-functionality); 2) those indicating three or four (typical multi-functionality); and 3) those performing the five or above (high multi-functionality).[21] For the purpose of creating an independent variable, for this study, those institutions providing three or fewer functions formed a sub-set whose performance is contrasted with the remainder to see whether statistically significant variance existed.   The sub-set comprised approximately half of all the institutions in the study and the variable is code named (FUNTOT).

Owning and managing.   Twenty-eight and a half percent of the institutions in the study indicate in their descriptions that they own and operate subsidiaries or other ventures.   These 53 institutions comprise another sub-set whose performance is compared with the remainder.   The characteristic variable is coded as FUNOM.

Promotion.   Another important non-financial function is the catalystic activity of promoting projects.   Slightly over 50 percent of the

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[20]
See J. D. Nyhart, op. cit. Footnote 4A.

[21]
Data here is derived from analysis of the textual descriptions of the institutions' operations, found in the Directory.

institutions in the study gave indication of performing this function. Their performance is contrasted with those who do not perform this function. The sub-set is given the code identification FUNPRM.

Education. The provision of technical assistance, advice, or other forms of education if performed by 82 institutions or 45.2 percent of the total. The sub-set, identified by the characteristic FUNED, serves as another independent variable.

Performance of Promotion and Education Functions Combined. Those 51 institutions who perform both the promoting and educating functions comprise an additional sub-set, which as an independent variable is identified as FUNPED. They comprise 28 percent of the sample.

Institution Building. Some development finance institutions are active in supporting and building other financial institutions, either other development finance institutions or capital market structures. A total of 29 institutions in the study appear to be performing this function. These nine percent are divided into those concerned with other financial institutions and those concerned with building capital markets. The performance of each sub-set is contrasted with the performances of those not performing the functions. The two independent variables are identified as FUNIB1 and FUNIB2. A somewhat different type of variable is the number of sectors to which a development finance institution provides financial assistance. These sectors are agricultural, industrial, service, commercial, and small business sectors. An analysis showed that the median number of sectors served is three.[22] Fifteen percent of

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[22]Derived from analysis of text describing the operations of the institutions in the Directory.

the sample listed three sectors, while 45 percent listed one or two and 39 percent listed four, five, or more. In this analysis, institutions indicating activity in two or less sectors are said to have low multi-sectorality. Ninety-two such institutions, comprising nearly 50 percent of the sample, form a sub-set, and their performance is compared to the remainder of the sample. The characteristic variable is identified as Sector Low (SECLOW).

4.1e Cost and Financial Structure. One measurement relating to the efficiency and another to financial structure of development finance institutions are taken as independent variables in examining the return measurements.

Debt equity ratio. The relationship indicating the amount of debt financing as a ratio to the amount of equity is the first of these two independent variables. The distribution ranged from 120.9 to 0 with the median being 1.2. The variable is designated as FSDE.

Cost per dollar of development portfolio. The second efficiency variable is the cost per dollar of loans in the development portfolio. To arrive at this ratio, the general and administrative plus other expenses taken from the profit and loss statements of the institutions are divided by the total amount of the development portfolio. The independent variable is identified as COSTPT. The distribution of the 183 institutions for this variable ran from 57.4 to 0, with the median being .045.

4.1f Age. Finally, the prospect that performance varies with the age of the institution, presumably with improvement over time, suggested the use of a variable, AGE, as a final factor in examining the return

performances. The age of the 183 institutions ranged from 102 years to less than one, with 6 years being the median.

These 18 factors then represent the independent variables and form the framework for examining the differences in performance, employing the five return measures, for the 183 development finance institutions.

4.2 Statistical Results (Regression Analysis). In this section the five dependent variables identified in this paper as measurements of return, Total Revenue/Total Assets, (TR/TA), Development Revenue/ Development Portfolio (DR/DP), Total Revenue/Development Portfolio (TR/DP), Earnings Before Interest and Taxes/Total Assets (EBIT/TA), and Net Profit/ Owners' Equity (NP/OE), are analyzed with regard to the eighteen independent variables, described immediately above. The summary results of this analysis are presented in Table 4.1. A detailed explanation of the regression analysis used in this study is presented in Appendix A.

In reference to the summary Table 4.1, for any of the independent variables (i.e., categories or functions) to be statistically significant at the 0.025 level, the calculated "t" value must be greater than $^{+}_{-}1.98$, and to show some correlation, the calculated "t" value should be between $^{+}_{-}1.0$ and $^{+}_{-}1.98$.

4.2a Total Revenue/Total Assets (TR/TA). The first return variable to be examined is a gross measure of revenue flows and asset stocks. This is the one overall relationship which contrasts all assets with revenue from all sources. TR/TA is thus the broadest of all the return measures. Revenue are measured against all elements of assets. The largest number of independent variables used to explain variation are found to be significant in this measure. A total of nine relationships

are discussed. Three are statistically significant and the remaining six display varying degrees of correlation.

Within these nine, the group of functional structure variables account for six. The number of total primary functions performed by a development bank provides, in the authors" views, an indication of the level of overall activity, dispersed over a number of functional areas. The calculated "t" value of -2.2 shows a significant relationship between the performance of more than three of these functions and high TR/TA.[23] This relationship implies that those institutions performing higher number of primary functions tend to generate higher total revenues in proportion to their assets. Emphasis could either be on high revenues or lower assets, but the relationship provides the comparison. Without further analysis, it seems sufficient to suppose that the gain is in higher gross revenues.

The inclusion of performance of the owning-managing function, FUNOM, provides a significant relationship to high TR/TA. A large, positive and statistically significant "t" value (+2.4) was found. The positive "t" value indicates that larger proportional gross revenues or a larger ratio of total assets is associated with those development finance institutions which own and manage enterprises. Such a relationship may be expected. By accounting convention, the gross receipts of the owned and managed

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[23]
The construction of the regression analysis compared to performance of all those institutions performing three or fewer functions with high TR/TA performance, an inverse relationship. The negative calculated "t" thus indicates a positive correlation between performance of more than three primary functions and high performance.

enterprises, whether separate subsidiary entities or integrated activities of the institution, will most likely be entered in the accounts of the development finance institution. For example, if it is providing warehouse facilities which generate revenue, the gross receipts are included. Gross receipts from such activities can be contrasted with the interest payments or dividends a development finance institution receives from borrowers. The latter form only a portion of the cash flows generated by the borrower enterprise, that is, the portion returned to the lendor. These sums are part of the cost of doing business for the borrower. In the case of most owned and managed enterprises the whole generated cash flow, excepting such items as cash flows arising from depreciation, would appear as gross revenues. The relationship between the performance of the educational function, FUNED, the promotion function, FUNPRM, and the two combined, FUNPED, to high TR/TA performance, provide one of the most interesting sets of relationships in the study. Taken individually, the education function (FUNED) and the promotion functions (FUNPRM) both have calculated "t" values in excess of +1.5 but less than +2.0. But when the two are combined in the promotion and education function independent variable (FUNPED) the calculated "t" value is greater than +2.0 and the relationship is, therefore, statistically significant. Thus the proportion of banks of the total sample which provide education to the borrowers get "paid" for this service through loan repayments of interest and principal at a rate higher than those banks which do not provide this service. Exactly this same sort of reasoning applies to those banks which promote as their normal course of operation. But the combination of both the promotion and education functions

increases the "t" value such that it is large and positive (+2.4).
The implication is clear: the combined function of education and pro-
motion is worthwhile for a development bank to engage in, in terms of
increasing gross revenues.

When low sectorality is compared with total revenue/total assets,
the relationship is negative but not significant (the calculated "t"
value is -1.3). In comparing gross revenues as a fraction of total
assets, the institutions which are involved in a low number of sectors
tend to generate a lower gross revenue to total asset ratio.

Consistent with each of the above findings is a high cost per
dollar of portfolio associated with high gross revenues to total
portfolio (+1.7). Since the denominator in both ratios is develop-
ment portfolio, we are in the position to directly compare cost per
dollar of portfolio with revenues per unit of portfolio. This relation-
ship reinforces the conclusion that to generate additional revenues a
development bank must incur proportional costs.

Membership in the sub-national cluster of institutions relates,
below statistically significant levels, to high TR/TA. Here the ex-
istance of one very large institution, the Corporación Venezolana de
Guayana, the large area development corporation for the Guayana River
is believed to distort the array. Corporación Venezolana de Guayana
has assets of US $515M. and is several magnitudes larger than the
bulk of the sub-national institutions. There is therefore tendency
to discount this statistic.

The ninth relationship is just barely at a correlation level.
A high debt equity ratio correlates at the+.98 level with high TR/TA.

The behavior of this independent variable is discussed elsewhere.

4. 2h Development Revenue/Development Portfolio (DR/DP). This measure
indicates the relationship of income from development loans and equity
investments to those loans and investments. In Section 3, it was noted
that a high DR/DP ratio may indicate a healthy development portfolio
situation in which the borrowers are repaying their debts. In comparing
this measure with the independent variables, several relationships are
revealed.

Costs per dollar of portfolio held by the bank show a very significant
and positive relationship (the calculated "t" value is +3.3) when com-
pared to Development Revenue/Development Portfolio (DR/DP). Since the
denominators in these two ratios are the same, (i.e., DR/DP and COST/DP;
both having the common element, Development Portfolio), we can directly
compare costs with income. As might be expected, each dollar of port-
folio income has a directly associated cost attached to it. Income gen-
erated from portfolio holdings is the result of activities of the bank
which cost money. The costs of an appraisal staff to process a large
volume of loans is an example. The statistical association here suggests
that, as in the case of high TR/TA, high investment by the institution
in the costs of building the portfolio does in fact produce high returns
proportionate to the development portfolio, or base.

The above point is reinforced again when the education function
variable, FUNED, is examined. The degree of correlation is high, but
not quite high enough to be considered statistically significant at
the .0025 level (T=+1.5). The positive observed "t" value indicates
that those banks which provide a high degree of education

(as previously defined) tend to generate a larger income from their development portfolio. Implicit in provision of an education function by a development finance institutions is such activity as providing technical assistance to borrowers. If the institution provides technical assistance in the operation phase of the borrower firm, this could certainly be a significant factor in loan repayment. The same sort of reasoning applies to follow-up procedures provided by the bank, also part of its education function. They frequently result in closer co-ordination between bank and borrower and tends to become a factor in insuring the repayment of loans made by the bank.

The remaining independent variables which have calculated "t" values greater than one all show simple correlation. None are near the significance level of $^{+}_{-}2.0$ yet they are worth noting. These variables are low sectorality (SECLOW), international systems (SYSINT), and (AGE).

Low sectorality (SECLOW) implies that more than average number of development finance institutions in the sample have higher proportionate development revenues associated with a low number of sectors served. The implication is that a degree of specialization emphasizing a rel-atively small number of sectors of lending activity tends to generate higher proportionate development revenues. It must be remembered, however, that this relationship only indicates correlation and not statistical significance, and that the results in two other measures suggest the opposite conclusion.

Involvement in international systems (SYSINT) has a negative

calculated "t" value slightly in excess of -1.0. There is thus a

suggestion that those development finance institutions which are in-

volved with international systems, (i.e., like the World Bank Group

and USAID) tend to generate lower levels of development revenue as

compared with those institutions which do not. This suggestion is

interesting since one would tend to think that involvement with in-

ternational systems would make foreign exchange available to the banks

in question for the purpose of re-lending in developing countries and

that such activity would be associated with higher rather than lower

development revenues. Once again, however, the calculated "t" value

is very close to 1.0, which indicates slight correlation, but certainly

not one of statistical significance.

When age is compared with income from development loans (DR/DP),

the calculated "t" value is positive not significant ("t" is >1 but

< 2). This relationship might be expected, in that an older institu-

tion has acquired a more mature and experienced staff which should

generate higher development revenue per dollar of portfolio. Also,

the grace period granted will tend to slow down interest and loan

repayments. This implies that the older development finance in-

stitution will have less of a proportion of portfolio at any point

in time involved with grace periods. This factor can be a sub-

stantial contributor to the association of age with higher revenues.

4.2c Total Revenue/Development Portfolio (TR/DP). The changed com-

position of the denominator distinguishes this dependent variable

from the proceeding measure. Here only that part of the asset

structure of the development finance institutions classified as development portfolio, (the more variable part of the assets) is taken as the value to be divided into total revenue. Also, it should be noted that considering only development portfolio, rather than all assets, reduces variability of the distribution such that only one significant relationship and two correlations are present here.

In the functional structure variables, none are statistically significant at the point 0.025 level, e.g., all have calculated "t" value less than the required ± 2.0. The variable FUNOM, performance of the owning and managing function, shows a strong relationship, having a calculated "t" value of ± 1.87, which however is not high enough to be considered significant. The positive slope of the regression coefficient indicates that a high proportion of development finance institutions performing the owner/management function have a high gross revenue to total asset ratio. Again the position of the performance of the owning and managing function is believed to be explained largely by the accounting convention discussed above. Additionally there is the possibility that those development finance institutions which do perform the owner/management function are in a position to generate a greater gross revenue flow than those which do not because they are in a position to exercise tighter financial controls than otherwise possible.

None of the other functional structure variables showed significant results when compared with TR/DP.

There was a positive correlation between membership in the subnational group of institutions and high TR/DP performance. To some extent

the same explanation as was reviewed in Section 4.9 would seem to apply.
That is, the position of one or two very large sub-national institutions.
The impact in this measurement is compounded for the assets base that
produces the income other than development portfolio revenue has been ex-
cluded. Other institutions with a heavy owner/managing function or other
forms of banking functions such as commercial banking may well have assets
that have been excluded from this base. Argentina's large provincial banks,
with a large component of short-term loans in their portfolio, serves as
an example.

The variable with the highest calculated "t" value in the entire
study is per dollar cost of the portfolio (COSTPT), with a calculated
"t" value of +8.8. This very strong and positive relationship between
the cost of portfolio and gross revenue suggests that there is a definite
cost associated with generating higher revenues, the increased revenue
figure reflecting a larger portfolio of earning assets.

Or, the reverse reasoning can be applied. A large investment in
the bank's portfolio will generate high gross revenues. This is entirely
consistent with logic. The main revenue-producing item in a development
bank ought to be the institution's portfolio. Also the management of a
portfolio costs the institution in terms of resource utilization. What
is suggested here is that a very direct relationship exists between
larger portfolio holdings and higher dollar costs per unit of portfolio.

4.2d Earnings Before Interest and Taxes/Total Assets (EBIT/TA). In
this measure, the same denominator (Total Assets) is used as was the
case in TR/TA, the first measure examined. Here, however, only three

Table 4.1

Results of Statistical Analysis

(Return) 24

	TR/TA	DR/DP	TR/DP	EBIT/TA	NP/OE
	d.f. 25 = 177	d.f. = 177	d.f. = 177	d.f. = 177	d.f. - 176
	26 "t" ± 1.98	"t" ± 1.98	"t" ± 1.98	"t" ± 1.98	"t" ± 1.98
dependent Variables					
CLPRM	-.761	.888	-.536	-2.209	.328
CLNP	-.213	-.588	-.807	2.574	-.545
CLSN	1.232	-.502	1.604	.029	.178
FUNTOT	-2.214	.610	.298	-.195	.059
FUNOM	2.421	-.644	1.866	.727	-.527
FUNED	1.606	1.509	.129	.085	-1.230
FUNPRM	1.526	.693	.820	.007	-.228
FMNPED	2.361	-.700	-.837	.563	-.511
FUNIB1	-.207	.213	.700	.721	-.070
FUNIB2	-.073	-.437	-.507	-1.101	.686
SECLOW	-1.327	1.150	-.273	.063	-1.196
MOBLOW	-.871	-.248	.953	-.673	-.405
MOBHI	-.016	-.433	-.534	.187	-.595
SYSNAT	-.379	-.336	-.796	.498	-.028
SYSINT	.306	-1.027	.337	-.424	1.016
AGE	-.335	1.059	-.286	.618	4.551
COSTPT	1.693	3.329	8.763	-.529	-.335
FSDE	.983	-.186	-.363	1.404	2.192

24 . See Section 4.2 for Variable Names

25 . d.f. defined as: The total number of variables sub-
tracted from the total sample size (183 or less).

26 . "t" means the value derived from students "t" table
for the appropriate d.f.

27 . See Section 4.1 for variable names

components of total revenue are considered, classified as earnings before interest and taxes. [28]

It is immediately apparent that the measure earnings before interest and taxes/assets shows significant effects in the cluster variables. Perhaps one of the more interesting relationships in the study is the behavior of primary and national private institutions when analyzed in these terms. The primary institutions show a negative relationship while the national private institutions show a positive relationship. Relatively high earnings before interest and taxes/assets is a characteristic of national private development institutions and the reverse is indicated for primary institutions (i.e., a lower EBIT/TA ratio).

Part of the reason lies in a basic difference in ownership between these two types of banks. The primary institutions are public while equity of the national private institutions is owned or controlled by the private sector. Since earnings before interest and taxes is comprised of those components paid out or available to be paid out, after the expenses of running the operation before total revenue minus the sum of general and administrative and other expenses. Left out of this calculation is interest, profit and taxes. Consequently these items constitute the explanation for the difference in the two types of banks. Also, the asset configuration for the two types of banks are different again by definition such that assets are larger for the primary institutions relative to the national private development finance

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[28] See Section 3.

institutions. Now, if interest, profit, and taxes are omitted from the calculation, and if national private development banks are suspected to contribute a reasonable portion of their net revenue to each of these entities (government for taxes, equity share holders for interest or dividends, and profit internally to the private bank) then for the private banks to show statistically significant (positive) differences without these items included in the calculation means that if these three accounts were added for both types of banks, the difference would be even greater than it is at present. The private banks then appear to pay in the aggregate much more of their earnings to external sources (from within the bank itself,) than do the public banks. This is an interesting point which will be expanded on later in the analysis.

Two minor relationships are exhibited in analyzing the significance of the independent variables with the ratio of earnings before interest and taxes divided by total assets (EBIT/TA). These appear in FUNIB2 (the building of capital markets) and in the debt equity ratio. So far as building capital markets are concerned, the negative correlation suggests that those banks which provide a capital market function have a lower earnings before interest and taxes/assets ratio. Two points lend themselves to explanations in this case. One is that those banks with larger asset bases tend to provide this service. If this is so, then the explanation may lie in the larger assets base of those banks, which tend to reduce the size of the ratio such that the relationship is negative, (i.e., low EBIT/TA) associated with banks which provide the capital market service.) Moreover, costs are most certainly incurred in the process of institution-building which raise the relative

proportion of general and administrative expenses and lessen the amount of EBIT/TA. Both forces are possibly at work. Without a further breakdown and analysis of the ratio, it is impossible to make a more conclusive statement at this point.

The debt to equity ratio shows a degree of correlation, but not significant. The calculated "t" value indicates that a higher debt to equity ratio is associated with high earnings before interest and taxes/total assets ratio. This would seem to indicate that in order to generate higher earnings before interest and taxes, a development finance institution would be well advised to create a large amount of debt relative to equity.

4.2e Net Profit/Owners' Equity (NP/OE). The last dependent variable to be examined in this section is Net Profit over Owners' Equity (NP/OE). This variable measures the internal return to the development bank's equity base. If the bank were a private market oriented concern, this measure would be the basis for external equity participation in the bank (i.e., the basis for common stock valuation).

Two independent variables show statistical significance when tested against this variable. These are AGE and the debt to equity ratio FSDE. For age, the calculated "t" value is highly significant (+4.6) and indicates a direct relationship between older development finance institutions and a higher return to owners' equity.

The other independent variable indicating statistical significance is the Debt/Equity ratio, with a calculated "t" value of (+2.2). High debt is associated with high net profit. That statement can be strongly made because the denominators of both ratios are the same. The higher

leverage position which those development finance institutions have by being able to maintain a relatively high debt to equity position turns out to be a positive benefit to the shareholders of the development bank.

There are three minor relationships yet to be explained. The first has to do with the education function. For each gross return measure which was compared to the education function (FUNED), a direct association between existence of the function and higher gross revenues was found. However, when the education function is tested against Net Profit/Owners' Equity, the "t" value is negative, although not statistically significant (-1.2). The relation suggests that there are direct costs associated with the education function which are not sufficiently offset by revenues to protect or build earnings on the equity base.

Low sectorality is associated with low net profit to owners' equity. It behaves in the same manner as was found in the previous analysis of total revenue to total portfolio (TRTP). In other words, those development finance institutions which are engaged in a broad number of areas i.e., several types of industry and agriculture, tend to generate a higher return on equity.

The remaining variable indicating correlation but not statistical significance is involvement in international systems (SYSINT). Here it is found that those banks which deal in systems exterior to their domestic environment tend to generate a higher return to equity.

4.3 Consistent Behavior of Independent Variables. The use of the independent variables to help explain the performance of institutions can be further extended by examining how a single independent variable

or related group of them relate in a consistent manner to a number of
return measurements. This sub-section focuses on independent variables
and cuts across the dependent variables, whereas analysis up to this
point has used the dependent variables as focal points.

Cluster. For example, in the previous section membership of
development finance institutions in the sub-national cluster was correl-
ated with high performance in both measurements involving total revenue
in the numerator, e.g., Total Revenue/Total Assets (TR/TA) and Total
Revenue/Development Portfolio (TR/DP). The extraordinarily large size
of a small number of sub-national development finance institutions
which have very high total revenues resulting especially from owned and
managed operations has been found to account for much of this fact.
But the statistical analysis is consistent here.

Functional structure variables. The series of functionally related
independent variables indicate several similar internal consistencies.

Number of functions performed (FUNTOT). Performance of a compar-
atively high number of primary functions relates significantly to high
Total Revenue/Total Assets (TR/TA). The actual performance of a number
of primary functions other than the financing function, each taken
singley, is also related to a high TR/TA. Owning and managing, perfor-
mance of the educating function, performance of the promoting function,
and performance of the promoting and educating functions combined, show
some positive correlation to high TR/TA. These consistencies help support
the suggestion that the performance of these non-financial functions
helps to promote high revenues.

Owning and Managing. Performance of the owning and managing

function (FUNOM) is related statistically to one gross measure involving total revenue, TR/TA. A relationship also exists with the other measure involving total revenue, TR/DP, though below the statistically significant level. The correlation of sub-national institutions with high performance involving total revenue (TR/TA and TR/DP) is probably related, since the best apparent explanation for the relationship of the sub-national cluster involves institutions with a large proportion of owning and managing.

The educational function. The educational function (FUNED) shows some positive correlation (but below the significant level) with high performance in two measures of gross revenue, Total Revenues/Total Assets (TR/TA) and Development Revenue/Development Portfolio (DR/DP). This double though limited correlation supports the argument that spending resources on the provision of technical assistance may partially explain proportionately high revenues, since technical assistance may nurture healthy borrowers who are able to pay their interest charges. Since FUNED is also correlated, again below the statistically significant level, negatively with high net profit over owners' equity, there may be a logical consistency which says that the cost of such technical assistance may cut into owners' profit.

Performance of the educating and promoting functions combined. Institutions which perform both the educating and promoting functions are related heavily statistically to higher TR/TA. The performance of the promoting function alone shows a correlation, but not a statistically significant one with the same measure. As noted above, so does the education function. It would seem consistent that each of these

functions showed some positive correlation and that, when combined, they showed a stronger, statistically significant relationship.

Debt-Equity Ratio. A high debt-equity ratio in an institution is correlated significantly with a high Net Profit/Owners' Equity (NP/OE). There is also a positive correlation between a high debt/equity ratio and high performance in Total Revenue/Total Assets (TR/TA) as we-1 as high Earnings Before Interest and Taxes/Total Assets (EBIT/TA), although in both cases below the statistically significant level. The logical coupling seems plain: high debt/equity relates to high performance in three return measures.

Cost of Portfolio. A comparatively high cost of producing portfolio, as represented in the figure of cost per portfolio dollar (COSTPT) is significantly correlated with high Development Revenue/Development Port-folio (DR/DP), and indicates some correlation (below the level of statis-tical significance) with high performance in the other two gross revenue measures, Total Revenue/Total Assets (TR/TA) and Total Revenue/Develop-ment Portfolio (TR/DP). These statistics suggest consistent behavior of the cost portfolio variable: high gross revenues appear associated with high costs.

Another internal consistency which cuts across the educating and promoting functions, is also associated with cost (COSTPT). As noted above, the former show some correlation with high performance in measure-ments involving total revenue. It is logical to say that perhaps the performance of these functions, therefore, is a contributor to high costs.

Age. The older institution is, the more likely it is to have high Net Profit/Owners' Equity (NP/OE). It also relates positively (below the level of statistical significance) with high performance in

Development Revenue/Development Portfolios (DR/DP). Hence the role of age in higher performance finds support in two instances.

One apparent inconsistency should also be noted. Involvement in a low number of sectors, that is, concentration in one or two sectors, such as industry or agriculture, shows a positive correlation (below the level of statistical significance) with high performance in Development Revenue/Development Portfolio (DR/DP). However, there is a negative correlation (again below statistically significant levels) with high performance both in Total Revenue/Total Assets (TR/TA) and Net Profit/ Owners' Equity (NP/OE). These results would seem to be saying that concentration in a few sectors is associated with high gross return on the development portfolio, but inversely with high gross return on all the assets and high net profit on owner's equity. Although there is no correlation at statistically significant levels, the possible contradiction is brought to the reader's attention.

5. CONSISTENT GOOD AND BAD PERFORMANCE

Throughout the analysis in Section 3, the stability of the measurements, that is, the extent to which development finance institutions have performed well or badly in different pairs of the five measurements, received considerable attention. There is a small group of institutions at either end of the spectrum that has shown remarkable consistency of performance.

Seven of the 183 banks in the measurement study are in the upper quarter of each of the five return measurements. Another 15 are in the upper quarter in four of the five measurements and in the second quarter in the fifth. These 22 institutions account for 12.1 percent of all the institutions in the study. By contrast, 12 institutions ranked in the bottom quarter in all return measurements, while another eight ranked in the bottom quarter of four of the five measurements, and in the third quarter in the fifth. These consistently bad performers on return account for 11 percent of all institutions in the study. Thus, there are two groups of almost identical size, one consistently ranking high and the other consistently ranking low. There follows some comparisons between these two groups of institutions, made in light of the statistical survey.

Some interesting sets of relationships are revealed in examination of the aggregates involved in high and low development finance institution performers. The first three columns, CLPRM, CLNP, CLSN refer to the previously defined cluster relationships. Two general observations can be

made about these relationships. The first has to do with the proportion
of each type of bank in the study which is either a high or low performer.
First the high performers. Six percent of the primary (CLPRM; 7/111), 32
percent of the national private (CLNP; 13/41) and three percent of the
sub-national (CLSN; 3/31) are high performers.

On the other hand, 17 percent of the primary, seven percent of the
national private and 10 percent of the sub-national development finance
institutions are overall low performers.

It is clear from the above that a greater proportion of the pri-
maries (CLPRM) in the study are low rather than high performers. However,
national private institutions (CLNP) disportionate to their total number,
are high performers.

Another way to present the above point is that about 60 percent (13/23)
of the high performers are national private institutions while 75 percent
(19/25) of the low performers are primary institutions.

Additional relationships between high and low performers are examined
by reference to the remaining independent variables.

It is observed that about four times as many development finance in-
stitutions which are high performers belong to a national system of
development as compared to low performers. Additionally about one-half
as many high performers, or twice as many low performers, are low mo-
bilizers of resources and perform an education function.

The high performers appear to be, on average, higher leveraged than the low performers. The mean debt equity ratio for the high performers is about 9.7, about twice the average of 5.2 for the low performers.

There does not appear to be much difference between the high and low performers in terms of their cost per unit of development portfolio. The same is true for the average age of both high and low performers.

In summary, this section provides some additional insight concerning development finance institutions consistently positioned at the extreme ends of the return measurements. It is interesting to note that with few exceptions, these relationships are representative and supportive of findings noted earlier.

Table 4.2

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Summary of Independent Variable Characteristics of 23 Overall High Performers

	1 CIPRM	2 CINP	3 CLSN	4 SYSNAT	5 SYSINT	6 MOBHI	7 MOBLO	8 FUNTOT	9 FUNOM	10 FUNPRM	11 FUNED	12 FUNPED	13 FUNIB1	14 FUNIB2	15 SECLON	16 FSDE	17 COSTPT	18 AGE
103		X		X				X				X			X	2.998	.036	20
172		X			X	X		X		X				X	X	2.314	.037	15
130		X						X								1.271	.027	12
1	X							X		X	X	X				3.737	.066	72
165	X								X	X						.082	.014	1
89	X				X			X		X	X	X			X	2.759	.076	1
10	X							X		X	X	X	X		X	4.65	.028	13
86	X							X			X					2.772	.034	4
144		X					X	X	X						X	2.248	.376	10
106		X		X				X	X						X	2.263	.138	22
131		X					X	X		X	X					1.271	.046	9
132		X				X		X	X	X		X				0.	.015	5
181	X		X	X	X		X	X								.212	2.186	4
185			X	X	X			X							X	23.2	.056	3
136				X	X			X		X		X			X	.785	.022	5
100		X		X	X		X	X		X					X	1.605	.013	28
104		X			X		X	X		X					X	14.761	.027	5
26			X		X			X	X	X				X		1.053	.003	4
174	X	X					X	X	X	X	X	X		X	X	120.909	.008	1
20		X									X				X	3.81	.013	5
102		X		X						X						15.975	0.	30
101		X		X						X						14.842	.009	28
76																1.018	.007	4
	7	13	3	8	8	2	6	17	6	14	7	7	1	3	12			

Table 4.3

79

Summary of Independent Variable Characteristics of 25 Overall Low Performers

	1 CIPRM	2 CINP	3 CISN	4 SYSNAT	5 SYSINT	6 MOBHI	7 MOBLO	8 FUNTOT	9 FUNOM	10 FUNPRM	11 FUNED	12 FUNPED	13 FUNIB1	14 FUNIB2	15 SECLON	16 FSDE	17 COSTPT	18 AGE
184	X							X								.125	.001	8
175	X				X			X	X		X				X	24.601	.051	32
178	X				X		X	X								.557	.044	18
146	X				X			X			X				X	.459	.306	4
32	X				X			X								1.052	.018	87
5	X			X			X	X	X	X						-3.806	.076	10
2			X		X			X								1.521	0.	91
46	X	X			X			X		X	X	X				0.	.024	1
85	X							X		X	X	X				0.	.074	12
92	X							X		X	X	X				0.	.184	2
50	X				X		X	X	X	X					X	.215	.161	3
169	X					X						X	X		X	46.684	.01	19
41					X		X		X	X	X			X	X	.457	.037	2
180	X	X						X		X					X	.095	.024	1
44	X									X		X			X	.102	.002	1
152	X				X		X	X	X	X	X					29.725	.004	24
164	X				X		X	X	X	X	X					0.	.027	3
183												X				1.583	.007	7
51	X	X			X										X	6.483	.01	1
29	X							X								1.18	.007	3
121	X		X		X		X	X	X	X	X	X	X		X	1.217	.062	8
37			X				X	X		X	X				X	.284	.034	19
157				X			X				X				X	.023	.035	1
15	X						X	X								8.879	.012	21
81	X						X	X		X	X				X	8.098	3.567	12
	19	3	3	2	12	1	11	19	7	13	12	7	2	1	12			

6. Summary of Findings and Conclusions. The findings of this study are summarized in this section and are followed by a brief conclusion. The analysis of 183 development finance institutions, when analyzed with respect to the six types of structure variables revealed the following:

6.1 Findings.

1.   Institutional Structure

      With respect to the institutional variables, membership in the primary, national private, or sub-national systems of development finance institutions does not explain high or low return performance.

      National private institutions tend to have higher earnings before interest and taxes than do the primary institutions.

2.   Systems Structure

      Membership in either national or international systems of development finance also does not explain variation in the return measures.

3.   Source Structure

      Development finance institutions which are either high or low mobilizers of resources do not explain variation in the return measures.

4.   Functional Structure

      Performance of a wide range of functions by development finance institutions tends to generate higher gross but lower net measures of return. Performance of the educational function is associated with high values of gross revenue measures but tends to consistently indicate lower values of the net revenue measures.

5.   Cost and Financial Structure

      Development finance institutions which are highly levered with debt (have high debt to equity ratios) are strongly associated with high return performance. Additionally, high gross revenue measurements are associated with high proportional costs.

6.   Age

      High net measures of return (net profit and development income) improve as the age of the development finance institution increases.

6.2 Conclusions. The above findings are re-inforced when a small group of
development finance institutions defined as good (high) performers were
compared with a small group of consistently bad (low) performers.

In Section 4.11, consistently high and low performers were analyzed.
There are 23 development finance institutions which perform in the upper
quarter of all five return measurements, or in four out of the five, with
the fifth being in the next to top quarter. Similarly, 25 institutions
perform in the bottom quarter for all five return measurements or in
four out of the five, with the fifth being the third quarter.

The high and low performers tended in most instances to collaborate
the results found for the entire sample of 183 development finance in-
stitutions.

In using all of the various forms of analysis, and in using the five
return measures, plus the eighteen structure variables, the authors have
attempted to explain a few of the many aspects of a development finance
institution's performance.

Because so much of a development finance institution's benefits accrue
to society through the activities of the projects financed, while simul-
taneously costs are accrued by the institution itself, profit maximization,
or even maximization of return to those staking the institution are less
relevant than in wholly private endeavors.

With the help of a number of different kinds of analyses, the picture
is beginning to emerge of the high performer in the return field. It is
a development finance institution which is not narrowly concentrated on
the financing function alone, but one involved in educating, promoting,
and, as appropriate, owning and managing. This type of institution

concentrates not solely on one sector but on a range of sectors, in-
cluding commerce, services, construction, agriculture, as well as industry.
It is an institution well leveraged with debt, frequently public debt.
It is an institution which improves its performance over time, which seeks
to generate fairly high levels of revenue, and at the same time respects
costs.   It may belong to any one of the three basic categories, primary,
national private, or sub-national, but in terms of higher gross revenues,
there may be a tendency for it to be a sub-national institution, and in
the case of net revenues for it to be a national private institution.
However, the most prevalent type of institution is the primary.   It is
now apparent that what development finance institutions do is much more
important than what type of institution they happen to be.

Costs are a vital factor in the health of the institution, along
with the financial structure of development finance institutions.   Addi-
tional criteria in these areas form the subject matter of the next study
in this series.

7. APPENDIX A

7.1 Statistical Analysis

(A brief explanation of the techniques of analysis used in this paper)

There are several kinds of statistics used in this paper to analyze the large number of development finance institutions (183 in number) as well as the high number of dependent and independent variables, described in the text. The basic purpose for using any level of statistical sophistication is to draw the reader's attention more sharply to the relationships which are investigated in this study.

The nature of the data in this study is cross sectional, that is, data which reflects conditions existing at a point in time. The base for the data which appears in Appendix B is the Directory.[1] The advantage to cross sectional analysis is that problems associated with time series are eliminated. Some of these more obvious problems are small sample size, lack of independence among variables, etc. However, a major limitation to cross sectional analysis is that conditions existent at the time of the sample may change rapidly over time, thus seriously impeding generalization. However, this limitation is off set by analyzing (a) a large number of institutions and (b) a diverse set of institutions.

Two basic types of statistics are used which warrent some explanation. One type is descriptive in nature and the other is quite specific. A major part of the descriptive statistics used is quartile analysis. In addition to such concepts the median, range and quarters of the quartile distribution, the mean or average is also used to help explain the profit and loss section (2). One type is descriptive in nature and the other is quite specific. A major part of the descriptive statistics used

is quartile analysis. In addition to such concepts the median, range and quarters of the quartile distribution, the mean or average is also used to help explain the profit and loss section (2). The other is regression analysis. Concepts requiring amplification are the nature of the variables used, both dependent and independent, positive and negative slopes of the regression equations, correlation coefficients (the explained vs. unexplained variation in the distributions), the "t" statistic (difference between calculated and theoretical "t" values), levels of statistical significance vs. simple correlation and the 0.025 level of significance (similar to two standard deviations of the area under a normal curve as compared with the .01 and .05 level).

Descriptive Statistics. Each of the dependent variables used in this analysis were subjected to a quartile analysis. The technique of this type of analysis is briefly as follows. The distribution (variable) must be ranked in some logical order (ascending-low to high or descending-high to low). The distributions in this study have been consistently arrayed in descending order - high to low. An example of a quartile distribution is presented in Figure 1.

FIGURE 7.1

Example of Quartile Distribution

Hypoth: Average Rate of Return on Capital for 200 Development
Finance Institutions

.25 percent

First Quarter

First Quartile

Second Quarter

Second Quartile

Third Quarter

Third Quartile

Fourth Quarter

.01 percent
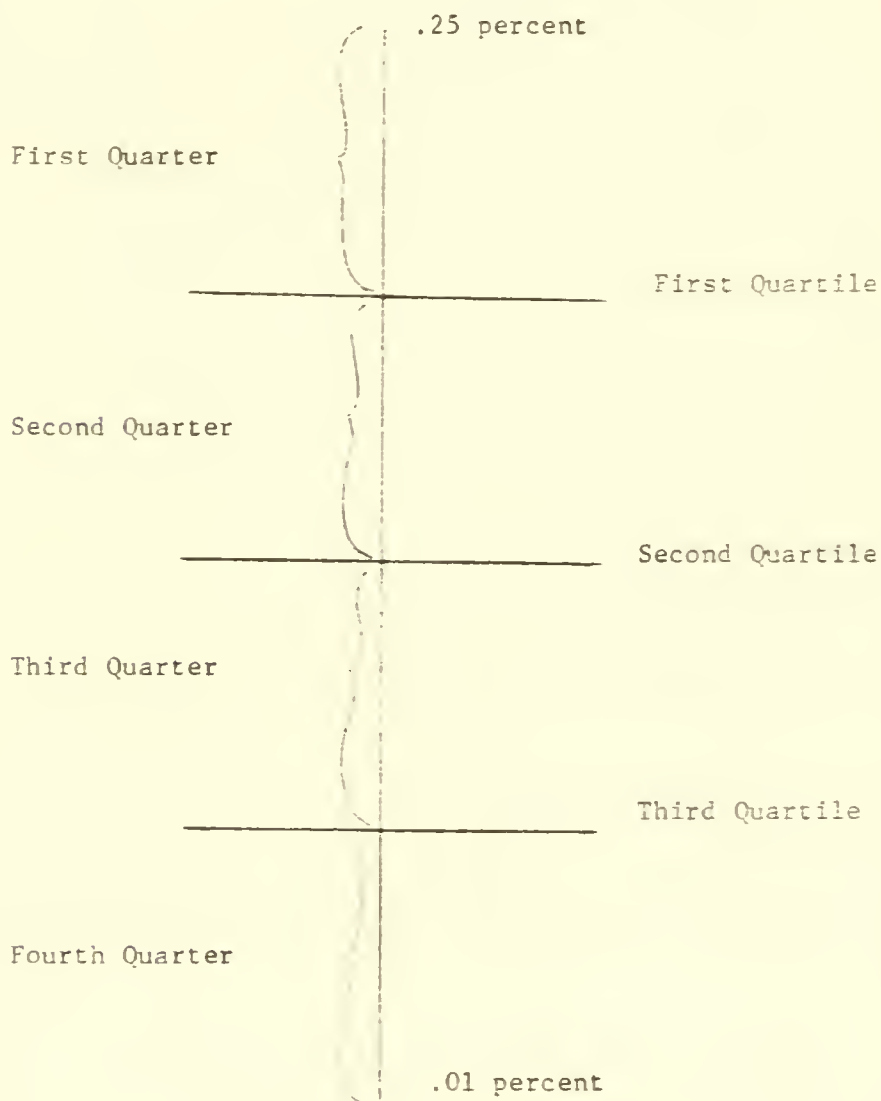
Suppose for purposes of illustration that one of the dependent variables consisted of measuring the average rate of return on capital for 200 development finance institutions. By definition, the 50 development finance institutions with the highest rates of return will comprise the first quarter (25% of 200 development finance institutions). The second quartile defines the median value of the distribution. It includes both the first and second quarters (50% of the distribution). The median (second quartile) is the value, the average rate of return on capital, for the 100th bank (50% of 200) in the distribution. The median is contrasted with the mean in that while the median emphasizes measurement of a given value (the rate) for a particular observation in the distribution (the 100th bank), the mean is the average value for all observations in the distribution. It (the mean) is derived by adding 200 return values and dividing by 200. The mean and the median values are usually close to one another.

The third quartile is the boundary defining the end of the third quarter and the beginning of the fourth quarter. The fourth quarter contains development finance institutions with the lowest values of each distribution.

The manner in which quartile analysis is used is as follows. A separate analysis has been conducted for each of the five dependent variables in the text. The position of each bank has been established as to which quarters that bank belongs to for each measure. Certain banks have been noticed to "invert" themselves, that is, to be in the top quarters in some variables, but in bottom quarters for others. These inversions were pointed out as they occurred.

The median (second quartile) for each measure was determined by inspection, and where appropriate, the mean was calculated. (See Section 2 Profit and Loss). These measures are used for the purpose of comparison of bank performance under each of the five measures of return.

B. The Regression Analysis

The type of regression analysis used in this paper is simple regression analysis, employing the technique of ordinary least squares to determine levels of statistical significance. First however, a discussion of the types of variables used in the analysis is presented.

A discussion of variables should perhaps begin with those variables which are not measured or accounted for in this study. Factors such as location, political stability within a particular country or organizational management of the development finance institutions themselves account for much of the unexplained variation in the measurements (dependent variables) analyzed in this study. In this analysis, the authors attempt to analyze a rather narrow range of cross sectional activity of a large percentage of all viable development finance institutions. There are certain advantages to (a) concentrating efforts on a small number of variables for a large number of different types of development finance institutions or (b) conducting a much more detailed analysis on a relatively small number of institutions. In this study, the former objective has been employed. Consequently, we are in a position to make some general statements concerning a wide range of types of development finance institutions, because we have included each variety of institution in the study.

Dependent Variables. As was mentioned in the text, this analysis embodies five dependent variables. These have been adequately defined and explained in Section 3, and are the basic measurements which variations for the 183 development finance institutions is explained (partially) by independent variables.

Independent Variables. There are a total of 18 independent variables used in this study. The structural form of these variables consists of two types, one a ratio and the other categorical. The independent variables which have the form of a ratio are straight forward and require no further explanation. However, the categorical variables do require some discussion. The basic nature of a categorical variable helps to test pre-established relationships against the measurements of dependent variables. An example of a set of categorical variables used in this study is the cluster variables. The way in which they are used is as follows. First, a determination of the type of cluster (primary, national private, sub-national) to which each development finance institution belongs (see Section 3 footnote 16 for the criteria) was made. The analysis is to determine if belonging to one or the other types of independent variables (clusters) is statistically significant when compared with one of the dependent variables (i.e. TR/TA). The method used, since three categories of development finance institutions exist, is to separate all institutions in the primary category (CLPRM which is 60% of the total number of development finance institutions), and group the other two types of development finance institutions (CLNP AND CLSN, both comprising the remaining 40% of the distribution) in the other group. This particular grouping therefore constitutes one of our independent variables, defined as

primary clusters (CLPRM).

Coefficient Value, Standard Error of the Coefficient and the Calculated "t" Statistic. There are basic tools necessary to interpret the statistical relationships which have been developed in the text. Figure 2 represents some essential points needed to interpret the more technical aspects of the regression analysis. It should be kept in mind that the major reason for using this type of analysis in the first place is to logically sort out the most obvious relationships among the great many possibilities which exist. The underlying relationships are all implicit rather than explicit. In other words, inspection of the data alone could not possibly reveal the intricate set of relationships we have set forth in this study.

In reference to the statistical relationships in Figure 2, for convenience and demonstration purposes, the values of the dependent variables TR/TA are shown on the Y axis, ranging from 0.0 to the highest percent in the distribution. The values for each type of bank are plotted in the space under each appropriate development finance institution's designation. For example, if the sample size consists of 200 development finance institutions (hypothetical) and 50% are (CLPRM), then there must be 100 points in the "space" for the categorical variable (CLNP valued at (1.0), as shown (note, the number of points is only representative). The same holds for the other classifications, (NP, SN). They must have 100 values for their individual TR/TA ratio plotted in the "space" allotted for the (0.0) valued development finance institution. In this manner, using categorical variables for classification purposes, the distribution is split between the pre-determined (defined) groups (clusters) of development finance institutions.

FIGURE 7.2

Representation of Graph (Hypothetical Plotts) of Dependent Variable
(TR/TA) Regressed on Categorical Variable (CLPRM) With Actual Results
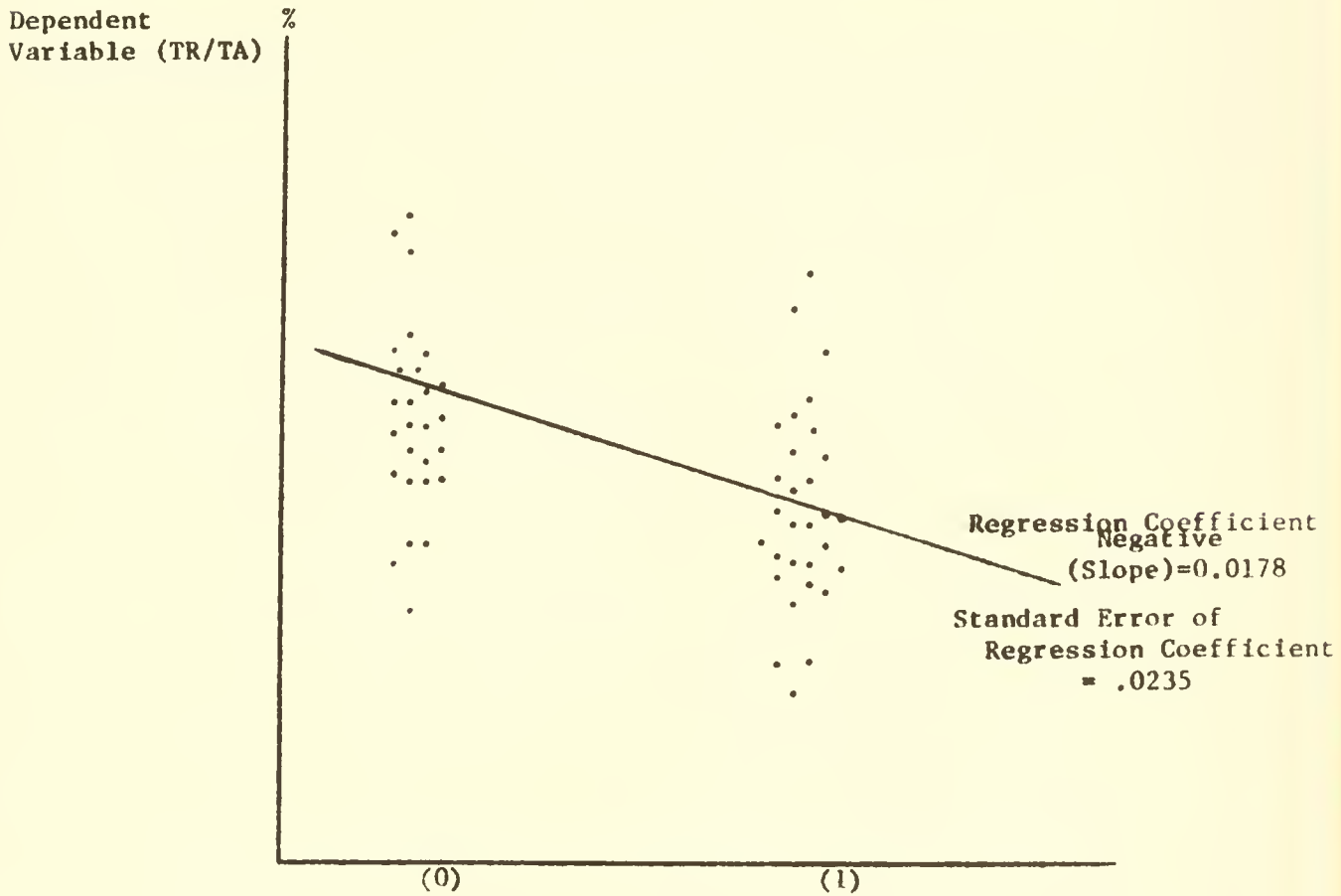
Categorical Variable (CLPRM)

Clusters: (1) = Primary (0) = National Private;
                                Sub-National

Next, the data is subjected, once this form has been established, to
a simple regression analysis where ordinary least squares (OLSQ) are cal-
culated. In this technique (OLSQ) the objective is to minimize the
vertical distance (least squares) between the observation points (200 in
this case) and the curve. (as a matter of fact, the curve will have been
fitted to this particular set of data when the sum of the squares has
been calculated). It is the properties of this curve in which we are
most interested. One is the regression coefficient. Two important points
must be observed for this value. One is the absolute size of the number,
and the other is the sign (+ or -). The next matter of importance is
the standard error of the regression coefficient. This number indicates
the value of one standard deviation (64%) of the observations around the
trend line (regression coefficient). It is needed to determine the pro-
portion of the variance in this dependent variable (TR/TA) which is ex-
plained by the bank belonging to the cluster primary development finance
institution (CLPRM).

The remaining step to be taken is to construct the ratio of the re-
gression coefficient (0.0178 $\div$ the standard error of the regression co-
efficient (.0235, or (-0.0178/.0235) = -0.7607, the "t" statistic.

Now that the "t" statistic is determined, it can be interpreted in
terms of statistical significance. Given that the number of development
finance institutions is 183, a general rule which can be useful is that
any calculated "t" value $\pm$ 2.0[29] will be considered statistically

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[29] The theoretical "t" value for relationships (comparison of a depen-
dent and independent variable) in this study is found by reference to a
students' "t" distribution. For example, for 177 degrees of freedom, the
theoretical "t" value at 0.025 level $\pm$1.98

significant at the 0.025 level. (The reason for using the 0.025 level is by design.) Furthermore any calculated "t" value in excess of ($\pm$1.0) but less than ($\pm$2.0) constitutes evidence of correlation, which is interpreted to be a weaker relationship than is statistical significance.

One final word on the use in this study of the 0.025 level. The next most probable levels would be the 0.01 or the 0.05 level. (The 0.05 level is generally used, by convention). The reason for not consistently using the 0.05 or 0.10 level of significance (refer again to a students' "t" table to see this comparison) is that the theoretical "t" values for this level are somewhat lower than for the 0.025 level. In other words, more relationships (variables) would be considered statistically significant, and the implications drawn about the relationships, weaker. Counterwise, the 0.01 level (and lower) is too severe a test. The theoretical "t" value is even lower than at the 0.025 level and fewer variables would be considered as reasonable explanations for variation in the dependent variables. Therefore, the 0.025 level is a reasonably stringent compromise.

In this manner then a pattern or set of relationships about the development finance institutions can be formulated from the more than 90 distributions examined in this study.

The significance tests are not ends in themselves. Daniel Suits wrote that significance tests, like the "t" test, "are but auxiliary tools to be used when needed. They are not needed when the existence of correlation is apparent to the unaided eye." The use of rather technical

tools has been necessary in this study, but it is the meaning of the relationships which have been set forth in the summary and conclusions of this study which bear the burden of research, not the techniques of analysis.

7.2 <u>APPENDIX B</u>

**186 Development Finance Institutions
Analyzed in this study - Arranged by
Cluster, Primary, National Private,
Sub-National**

Note: Exceptions (included in the profit and loss
section but not in the statistical analysis)

1. SIERRA LEONE - Agricultural Loans Scheme
(Primary)
2. COLOMBIA - Instituto Colombiano de Reforma Agraria
(Primary)
3. PHILIPPINES - Second Cebu City Development Bank
(Sub-National)

(1) The Primary Institutions are:

Country	Institution
ARGENTINA	Banco de la Nación Argentina Banco Industrial de la República Argentina
BRITISH WEST INDIES	Barbados Development Board
BOLIVIA	Banco Minero de Bolivia Corporación Boliviana de Fomento
BRAZIL	Banco Nacional do Desenvolvimento Economico
CAMBODIA	Caisse Nationale d'Equipement du Cambodge
CAMEROON	West Cameroon Development Agency
CENTRAL AFRICAN REPUBLIC	Banque Nationale de Développement de la República Centrafricaine
CEYLON	Agricultural and Industrial Credit Corporation of Ceylon
CHAD	Banque de Développement du Tchad
CHILE	Banco del Estado de Chile Corporación de Fomento de la Produción
COLOMBIA	Caja de Crédit Agrario, Industrial y Minero Instituto de Fomento Industrial
CONGO (Brazzaville)	Banque Nationale de Développement du Congo
COSTA RICA	Banco Anglo-Costarricense Banco de Costa Rica Banco Nacional de Costa Rica Banco de Crédito Agricola de Cartago
CYPRUS	Cyprus Development Corporation Limited
DAHOMEY	Banque Dahomeenne de Développement

DOMINICAN REPUBLIC	Banco Agrícola de la República Dominicana
ECUADOR	Banco Nacional de Fomento
EL SALVADOR	Instituto Salvadoreno de Fomento Industrial
ETHIOPIA	Development Bank of Ethiopia Investment Bank of Ethiopia
GABON	Banque Gabonaise de Développement
GHANA	National Investment Bank
GREECE	Agriculture Bank of Greece Hellenic Industrial Development Bank
GUATEMALA	Banco Nacional Agrario
GUYANA	Guyana Credit Corporation-Listed as: British Guiana Credit Corporation
HAITI	Institut de Développement Agricole et Industriel
HONDURAS	Banco Nacional de Fomento
ICELAND	Iceland Bank of Development
INDIA	Industrial Finance Corporation of India National Small Industries Corporation Industrial Development Bank of India
IRAN	Agricultural Credits and Rural Development Bank of Iran Industrial Credit Bank Industrial Guarantee Bank
IRELAND	Industrial Credit Company, Ltd.
ISRAEL	Industrial Development Bank of Israel, Ltd.
IVORY COAST	Credit de la Côte d'Ivoire Caisse Nationale de Credit Agricole
JAMAICA	Agricultural Development Corporation Small Business Loan Board Development Finance Corporation
JORDAN	Development Bank of Jordan, Ltd. Agricultural Credit Corporation

KENYA	Land and Agricultural Bank of Kenya
	Industrial and Commercial Development Corporation
	Agricultural Finance Corporation
	Development Finance Company of Kenya, Ltd.
KOREA	The Korean Reconstruction Bank
	Medium Industry Bank
LAOS	Crédit National Lao
LIBYA	Libyan Industrial and Real Estate Bank
MALAGASY REPUBLIC	Banque Nationale Malgache de Développement
MAURITANIA	Banque Mauritienne de Développement
MAURITIUS	Development Bank of Mauritius
MEXICO	Nacional Financiera S. A.
MOROCCO	Caisse Nationale de Crédit Agricole
NEPAL	Nepal Industrial Development Corporation
NEW CALEDONIA	Société Immobilière et de Crédit de la Nouvelle-Calédonie
NICARAGUA	Banco Nacional de Nicaragua
	Instituto de Fomento Nacional
NIGER	Crédit du Niger
	Banque de Developpement de la République du Niger
	Union Nigérienne de Crédit et de Cooperation
PAKISTAN	Industrial Development Bank of Pakistan
PANAMA	Instituto de Fomento Economico
PARAGUAY	Banco Nacional de Fomento
PERU	Banco de Fomento Agropecuario del Perú
	Banco Industrial del Perú
	Banco Minero del Peru
PHILIPPINES	National Development Company
	Development Bank of the Philippines
	National Investment and Development Corporation
PUERTO RICO	Puerto Rico Industrial Development Company
	Government Development Bank for Puerto Rico

SENEGAL	Banque Nationale de Développement de Senegal
SIERRA LEONE	Sierre Leone Investments, Ltd.
SINGAPORE	Singapore Factory Development, Ltd. Economic Development Board
SOMALI REPUBLIC	Crédito Somalo
SPAIN	Banco de Crédito Industrial
SUDAN	Agricultural Bank of Sudan Industrial Bank of Sudan
SURINAM	National Development Bank, Ltd.
SYRIAN ARAB REPUBLIC	Industrial Bank, Damascus
TANZANIA	Tanganyika Development Finance Company, Ltd. National Development Corporation
TOGO	Crédit du Togo
TRINIDAD AND TOBAGO	Trinidad and Tobago Industrial Development Corporation Agricultural Credit Bank
TUNISIA	Société National d'Investissement Banque Nationale Agricole
TURKEY	State Investment Bank
UGANDA	Development Finance Company of Uganda, Ltd.
UNITED ARAB REPUBLIC	Agricultural Credit and Cooperative Bank Industrial Bank
UPPER VOLTA	Banque Nationale de Développement
VENEZUELA	Banco Industrial de Venezuela Banco Agricola y Pecuario Corporacion Venezolana de Fomento
VIETNAM	Industrial Development Center
YUGOSLAVIA	Yugoslavian Investment Bank
ZAMBIA	Industrial Development Corporation of Zambia, Ltd. African Loan and Finance Company, Ltd.

(2)   The National Private Institutions are:

Country	Institution
BOLIVIA	Banco Industrial, S. A.
CEYLON	Development Finance Corporation of Ceylon
CHINA (Taiwan)	China Development Corporation
COLOMBIA	Corporación Financiera Nacional Corporación Financiera Colombiana Corporación Financiera del Norte
COSTA RICA	Corporación Costarricense de Financiamento Industrial S. A.
GREECE	Investment Bank S. A. National Investment Bank for Industrial Development S. A.
HONDURAS	Financiera Hondurena, S. A.
INDIA	Industrial Credit & Investment Corporation of India, Ltd.
IRAN	Industrial and Mining Development Bank of Iran
ISRAEL	Discount Bank Investment Corporation, Ltd.
LEBANON	Banque de Crédit Agricole Industriel et Foncier S. A. L.
MALAGASY REPUBLIC	Société Nationale d'Investment
MALAYSIA	Malaysian Industrial Development Finance, Limited
MEXICO	Crédito Minero y Mercantil, S. A. Compañia General de Aceptaciones, S. A. Crédito Bursatil, S. A. Impulsora Comercial e Industrial, S. A. Financiera México, S. A. Financiera Bancomer, S. A. Financiera Metropolitana, S. A.
MOROCCO	Banque Nationale Pour le Développement Economique

NICARAGUA	Corporación Nicaraguense de Inversiones
NIGERIA	Nigerian Industrial Development Bank, Ltd.
PAKISTAN	The Pakistan Industrial Credit and Investment Corporation, Ltd.
PERU	Financiera Peruana, S. A.
	Inversiones Abancay, S. A.
	Peruinvest Compañía de Fomento e Inversiones, S. A.
PHILIPPINES	Private Development Corporation of the Philippines
RHODESIA	African Loan and Development Company Limited
	Anglo American Rhodesian Development Corporation Limited
SPAIN	Banco de Financiación Industrial
	Banco del Desarrollo Economico Español, S. A.
	Banco de Fomento
	Banco Europeo de Negocios
TANZANIA	Mwananchi Development Corporation, Ltd.
THAILAND	Industry Development Corporation of Thailand
TURKEY	Industrial Development Bank of Turkey
VENEZUELA	C. A. Venezolana de Desarrollo

(3) The Sub-National Institutions are:

Country	Institution
ARGENTINA	Banco Provincial de Santa Fe
	Banco de Entre Rios
BRAZIL	Banco do Nordeste do Brazil S. A.
	Companhia Progresso do Estado da Guanabara
COLOMBIA	Corporación Financiera del Valle
	Corporación Financiera de Caldas
INDIA	Madras Industrial Investment Corporation, Ltd.
	Maharashtra State Financial Corporation
	Punjab State Financial Corporation
	Bihar State Financial Corporation
	West Bengal Financial Corporation
	Madlhya Pradesh Financial Corporation
	Rajasthan Financial Corporation
	Andhra Pradesh State Financial Corporation
	Jammu and Kashmir State Financial Corporation
	Mysore State Financial Corporation
	Gujarat State Financial Corporation
	Kerala State Industrial Development Corporation, Ltd.
MALAYSIA	Borneo Development Corporation, Ltd.
	Sarawak Development Finance Corporation
NIGERIA	Development Finance Company (Eastern Nigeria), Ltd.
	Northern Nigeria Investments, Ltd.
	Western Region Finance Corporation
	Western Nigeria Development Corporation
PHILIPPINES	Pasay City Development Bank
	Quezon Development Bank
	The Second Rizal Development Bank
SPAIN	Banco de Granada
	Banco Industrial de Leon
	Banco del Noroeste S. A.
VENEZUELA	Corporación Venezolana de Guayana

7.3 APPENDIX C

Data [30] for 186 Development Finance Institutions

Notes:

(1) Read data across. For example, to locate data associated
with development finance institution number 100, locate
number 97, (by reading down the left side of the page) and
then go across to the fourth column. (For example, the
first column is development finance institution number 97,
the second 98, the third 99 and the fourth 100). The value,
for instance, of the 100th observation is 28 for the variable
AGE.

(2) Any particular development finance institution, by knowing
his numbered position in the data, can translate this infor-
mation into the arrays for each dependent variable (the Return
measures) in the text of this study. For example, the 58th
development finance institution in the data for the variable
TR/TA has a value of 0.066. By referring to Table 3.1 (page 18),
a value of 0.066 is bounded by the second quarter (termed "fair").
In a similar manner, each bank can determine their position in
the other arrays. All that is needed by an institution is to
know its' numerical position in the data base. This information
has been provided to each development finance institution, on
an individual basis, in this study.

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[30] Directory. J.D. Nyhart and E.F. Janssens, Eds.

Total Revenue/Total Assets (TR/TA)
(Read data across)

1 -	0.096	0.	0.083	0.079
5 -	0.002	0.068	0.183	0.167
9 -	0.049	0.163	0.081	0.083
13 -	0.029	0.042	0.007	0.049
17 -	0.036	0.047	0.027	0.099
21 -	0.047	0.076	0.083	0.054
25 -	0.071	0.154	25.144	0.076
29 -	0.012	0.06	0.087	0.018
33 -	0.181	0.038	0.06	0.064

37 -	0.035	0.056	0.076	0.063
41 -	0.034	0.037	0.06	0.01
45 -	0.043	0.014	0.042	0.041
49 -	0.065	0.017	0.014	0.058
53 -	0.048	0.058	0.036	0.064
57 -	0.112	0.055	0.049	0.052
61 -	0.058	0.036	0.018	0.048
65 -	0.058	0.052	0.063	0.052
69 -	0.053	0.062	0.042	0.029
73 -	0.08	0.034	0.046	0.075
77 -	0.064	0.059	0.017	0.107
81 -	0.005	0.041	0.05	0.083
85 -	0.022	0.115	0.058	0.058
89 -	0.103	0.037	0.052	0.022
93 -	0.038	0.023	1.587	0.054
97 -	0.043	0.041	0.053	0.099
101 -	0.103	0.089	0.154	0.107
105 -	0.111	0.158	0.077	0.078
109 -	0.041	0.046	0.062	0.096
113 -	0.007	0.111	0.018	0.084
117 -	0.299	0.059	0.046	0.038
121 -	0.016	0.066	0.022	0.075
125 -	0.207	0.07	0.075	0.066
129 -	0.095	0.172	0.162	0.12
133 -	0.066	0.018	0.02	0.099
137 -	0.059	0.079	0.078	0.036
141 -	0.039	0.059	0.081	0.1
145 -	0.029	0.023	0.011	0.035
149 -	0.096	0.052	0.014	0.004
153 -	0.053	0.03	0.079	0.047
157 -	0.033	0.022	0.055	0.044
161 -	0.058	0.058	0.063	0.023
165 -	0.128	0.062	0.083	1.346
169 -	0.02	0.064	0.04	0.127
173 -	0.044	0.129	0.012	0.039
177 -	0.041	0.033	0.034	0.023
181 -	0.195	0.099	0.014	0.002
185 -	0.111	0.061		

Development Revenue/Development Portfolio (DR/DP)
(Read data across)

1 -	0.147	0.	0.105	0.07
5 -	0.002	0.094	0.049	0.031
9 -	0.138	0.38	0.002	0.091
13 -	0.04	0.046	0.061	0.049
17 -	0.011	0.056	0.013	0.124
21 -	0.043	0.081	0.086	0.051
25 -	0.061	0.108	25.144	0.031
29 -	0.02	0.06	0.078	0.004
33 -	0.197	0.039	0.217	0.073
37 -	0.041	0.093	0.063	0.068
41 -	0.037	0.06	0.05	0.009
45 -	0.05	0.017	0.005	0.048
49 -	0.072	0.034	0.034	0.078
53 -	0.052	0.055	0.038	0.062
57 -	0.743	0.055	0.067	0.058
61 -	0.063	0.015	0.006	0.043
65 -	0.064	0.059	0.069	0.063
69 -	0.054	0.07	0.078	0.03
73 -	0.066	0.028	0.049	0.147
77 -	0.065	0.061	0.059	0.144
81 -	0.	0.052	0.05	0.088
85 -	0.031	0.156	6.86	0.272
89 -	0.135	0.033	0.053	0.035
93 -	0.529	0.011	0.053	0.052
97 -	0.06	0.043	0.062	0.092
101 -	0.097	0.087	0.174	0.101
105 -	0.107	0.178	0.089	0.084
109 -	0.227	0.039	0.066	0.069
113 -	0.	0.059	0.114	0.082
117 -	1.208	0.069	0.087	0.039
121 -	0.04	0.061	0.02	0.065
125 -	0.042	0.118	0.083	0.073
129 -	0.101	0.202	0.158	0.135
133 -	0.066	0.002	0.021	0.099
137 -	0.05	0.079	0.093	0.032
141 -	0.058	0.056	0.085	0.103
145 -	0.038	0.	0.011	0.009
149 -	0.075	0.056	0.026	0.005
153 -	0.043	0.061	0.12	0.694
157 -	0.047	0.133	0.365	0.026
161 -	0.148	0.079	0.219	0.033
165 -	0.153	0.073	0.103	0.058
169 -	0.026	0.225	0.026	0.096
173 -	0.04	0.134	0.027	0.042
177 -	0.048	0.023	0.045	0.021
181 -	0.029	0.037	0.022	0.001
185 -	0.111	0.176		

Total Revenue/Development Portfolio (TR/DP)
(Read data across)

1 -	0.153	0.	0.125	0.113
5 -	0.002	0.094	0.289	0.362
9 -	0.145	0.413	0.161	0.092
13 -	0.051	0.048	0.008	0.05
17 -	0.04	0.08	0.028	0.129
21 -	0.057	0.086	0.1	0.056
25 -	0.074	0.015	25.144	0.083
29 -	0.022	0.07	0.111	0.018
33 -	0.215	0.045	0.223	0.093
37 -	0.047	0.102	0.08	0.07
41 -	0.042	0.073	0.131	0.012
45 -	0.05	0.017	0.172	0.151
49 -	0.074	0.036	0.044	0.081
53 -	0.053	0.062	0.05	0.066
57 -	1.253	0.066	0.069	0.077
61 -	0.085	0.072	0.028	0.059
65 -	0.065	0.07	0.072	0.063
69 -	0.057	0.07	0.088	0.056
73 -	0.088	0.038	0.049	0.157
77 -	0.081	0.062	0.06	0.147
81 -	0.175	0.052	0.059	0.13
85 -	0.033	0.156	8.79	0.273
89 -	0.137	0.043	0.056	0.035
93 -	0.74	0.011	0.118	0.087
97 -	0.067	0.098	0.069	0.105
101 -	0.106	0.092	0.175	0.111
105 -	0.116	0.178	0.094	0.096
109 -	0.305	0.055	0.087	0.128
113 -	0.008	0.135	0.114	0.135
117 -	10.125	0.088	0.264	0.04
121 -	0.04	0.085	0.023	0.085
125 -	0.756	0.125	0.087	0.079
129 -	0.143	0.206	0.221	0.137
133 -	0.072	0.021	0.065	0.103
137 -	0.064	0.088	0.108	0.036
141 -	0.132	0.599	0.085	1.11
145 -	0.042	0.031	0.011	0.115
149 -	0.099	0.062	0.026	0.005
153 -	0.088	0.061	0.12	0.694
157 -	0.047	0.263	0.365	0.07
161 -	0.148	0.079	0.219	0.036
165 -	0.155	0.123	0.109	0.802
169 -	0.027	0.225	0.074	0.143
173 -	0.049	0.134	0.027	0.046
177 -	0.053	0.036	0.048	0.034
181 -	25.717	0.107	0.023	0.002
185 -	0.111	0.244		

Earnings Before Interest and Taxes/Total Assets (EBIT/TA)
(Read data across)

1 -	0.0461	0.	0.0211	0.0348
5 -	-0.1126	0.0257	0.0121	0.0176
9 -	0.0215	0.141	-0.0008	0.0602
13 -	-0.0395	0.0019	-0.0037	0.0407
17 -	0.0274	0.0115	0.0138	0.0892
21 -	0.0095	0.0632	0.0636	0.0227
25 -	0.0542	-0.4896	1.	0.0478
29 -	0.0075	0.0239	0.0599	0.
33 -	0.0383	0.0076	0.0248	0.0253
37 -	-0.0011	0.0162	0.0196	0.0282
41 -	0.	0.0241	0.021	0.0073
45 -	0.0123	-0.0061	0.021	0.0086
49 -	0.0336	-0.0585	0.0067	-0.0035
53 -	0.0385	0.0547	0.0132	0.0611
57 -	0.0217	0.0511	0.0437	0.0458
61 -	0.0414	0.0256	0.0107	0.0454
65 -	0.0509	0.0461	0.0566	0.0467
69 -	0.0294	0.0042	0.0323	0.015
73 -	0.0587	0.0297	0.0428	0.0717
77 -	-0.0077	0.02	0.0105	0.0023
81 -	-0.1096	0.0216	0.0339	0.0475

85 -	-0.0268	0.0897	0.0513	0.0466
89 -	0.0236	0.0265	0.0269	-0.0938
93 -	0.0118	0.0223	0.3913	0.0359
97 -	-0.027	0.0198	0.0069	0.0773
101 -	0.0899	0.0703	0.1194	0.076
105 -	0.0962	0.0354	0.0687	0.0494
109 -	0.0094	-0.0159	0.0279	0.0273
113 -	-0.0067	0.0252	0.0178	0.0096
117 -	0.043	0.0284	0.025	0.0241
121 -	-0.0201	0.0364	0.0146	0.0686
125 -	-0.017	0.0095	0.0109	0.0336
129 -	0.016	0.15	0.1244	0.0892
133 -	0.0452	0.0133	0.0126	0.0754
137 -	0.0499	0.048	0.047	1.
141 -	0.029	0.0278	-0.0433	0.066
145 -	0.0119	-0.2109	1.	0.0231
149 -	0.0623	0.0348	0.0117	0.0003
153 -	0.05	0.025	0.0696	0.031
157 -	0.0081	0.0023	0.0118	0.
161 -	0.0216	0.043	-0.0015	0.0056
165 -	0.1163	0.0288	0.025	0.1455
169 -	0.0125	0.0434	0.007	0.0794
173 -	0.0262	0.1213	-0.0131	0.0223
177 -	-0.0402	-0.0126	0.0167	0.0067
181 -	0.0835	0.0836	0.0092	0.0007
185 -	0.0555	0.0303		

Net Profit/Owners' Equity (NP/OE)
(Read data across)

1 -	0.336	0.	0.	0.086
5 -	0.	0.031	0.028	0.036
9 -	0.997	0.872	0.066	0.086
13 -	0.	0.	0.	0.049
17 -	0.026	0.022	0.013	0.146
21 -	0.006	0.14	0.084	0.032
25 -	0.122	1.838	0.	0.059
29 -	0.043	0.028	0.23	6.15
33 -	0.009	0.004	0.025	0.014
37 -	0.	0.001	0.002	0.022
41 -	0.	0.075	0.017	0.007
45 -	0.	0.	0.021	0.024
49 -	0.	0.	0.038	0.
53 -	0.089	0.096	0.085	0.098
57 -	0.04	0.037	0.069	0.057
61 -	0.02	0.014	0.049	0.012
65 -	0.053	0.061	0.064	0.03
69 -	0.	0.	0.092	0.018
73 -	0.124	0.021	0.	0.093
77 -	0.	0.	0.051	0.001
81 -	0.	0.027	0.034	0.021
85 -	0.	0.262	0.007	0.093
89 -	0.176	0.041	0.138	0.
93 -	0.004	0.	0.02	0.057
97 -	0.	0.003	0.038	0.12
101 -	0.115	0.15	0.107	0.162
105 -	0.105	0.124	0.093	0.03
109 -	0.	0.001	0.056	0.011
113 -	0.	0.051	0.073	0.
117 -	0.048	0.029	0.046	0.019
121 -	0.	0.027	0.097	0.139
125 -	0.	0.	0.	0.044
129 -	0.026	0.134	0.039	0.081
133 -	0.035	0.071	0.034	0.118
137 -	0.08	0.005	0.056	0.01
141 -	0.056	0.025	0.	0.121
145 -	0.019	0.	0.	0.024
149 -	0.085	0.032	0.009	0.013
153 -	0.041	0.036	0.063	0.068
157 -	0.002	0.004	0.014	0.
161 -	0.006	0.07	0.	0.006
165 -	0.134	0.072	0.16	0.
169 -	0.	0.611	0.009	0.142
173 -	0.	1.636	0.	0.031
177 -	0.003	0.	0.04	0.006
181 -	0.103	0.032	0.031	0.001
185 -	0.2	0.024		

Primary Development Finance Institutions (CLPRM)
(Read data across)

All development finance institutions with a value of 1.0 are defined as
Primary development finance institutions. National private and sub-
national development finance institutions have a value of 0.0.

1 -	1.	0.	0.	1.
5 -	1.	0.	1.	1.
9 -	0.	1.	0.	1.
13 -	1.	1.	1.	0.
17 -	1.	1.	1.	0.
21 -	1.	0.	0.	0.
25 -	0.	0.	0.	1.
29 -	1.	1.	1.	1.
33 -	1.	0.	1.	1.
37 -	1.	1.	1.	1.
41 -	1.	1.	1.	1.
45 -	1.	0.	0.	1.
49 -	1.	1.	0.	1.
53 -	1.	0.	1.	1.
57 -	1.	0.	0.	0.
61 -	0.	0.	0.	0.
65 -	0.	0.	0.	0.
69 -	0.	1.	1.	1.
73 -	0.	1.	1.	0.
77 -	1.	1.	1.	1.
81 -	1.	1.	1.	1.
85 -	1.	1.	1.	1.
89 -	1.	1.	0.	1.
93 -	1.	0.	0.	0.
97 -	0.	1.	1.	0.
101 -	0.	0.	0.	0.
105 -	0.	0.	1.	0.
109 -	1.	1.	1.	1.
113 -	0.	1.	1.	1.
117 -	1.	0.	0.	0.
121 -	0.	0.	1.	0.
125 -	1.	1.	1.	1.
129 -	1.	0.	0.	0.
133 -	1.	1.	1.	0.
137 -	0.	0.	0.	0.
141 -	1.	1.	0.	0.
145 -	1.	1.	1.	1.
149 -	1.	1.	0.	1.
153 -	0.	0.	0.	0.
157 -	0.	0.	1.	1.
161 -	1.	1.	0.	1.
165 -	1.	0.	1.	1.
169 -	1.	1.	1.	0.
173 -	1.	1.	1.	1.
177 -	1.	1.	1.	0.
181 -	0.	1.	1.	1.
185 -	1.	1.		

National Private Development Finance Institutions (CLNP)
(Read data across)

All development finance institutions with a value of 1.0 are defined as National Private development finance institutions. Primary and sub-national development finance institutions have a value of 0.0.

1 -	0.	0.	0.	0.
5 -	0.	1.	0.	0.
9 -	0.	0.	0.	0.
13 -	0.	0.	0.	1.
17 -	0.	0.	0.	1.
21 -	0.	1.	0.	1.
25 -	1.	0.	0.	0.
29 -	0.	0.	0.	0.
33 -	0.	1.	0.	0.
37 -	0.	0.	0.	0.
41 -	0.	0.	0.	0.
45 -	0.	1.	1.	0.
49 -	0.	0.	1.	0.
53 -	0.	1.	0.	0.
57 -	0.	0.	0.	0.
61 -	0.	0.	0.	0.
65 -	0.	0.	0.	0.
69 -	0.	0.	0.	0.
73 -	1.	0.	0.	1.
77 -	0.	0.	0.	0.
81 -	0.	0.	0.	0.
85 -	0.	0.	0.	0.
89 -	0.	0.	1.	0.
93 -	0.	1.	0.	1.
97 -	0.	0.	0.	1.
101 -	1.	1.	1.	1.
105 -	1.	1.	0.	1.
109 -	0.	0.	0.	0.
113 -	1.	0.	0.	0.
117 -	0.	0.	1.	0.
121 -	0.	0.	0.	1.
125 -	0.	0.	0.	0.
129 -	0.	1.	1.	1.
133 -	0.	0.	0.	0.
137 -	1.	0.	0.	1.
141 -	0.	0.	1.	0.
145 -	0.	0.	0.	0.
149 -	0.	0.	1.	0.
153 -	1.	1.	1.	0.
157 -	0.	0.	0.	0.
161 -	0.	0.	1.	0.
165 -	0.	1.	0.	0.
169 -	0.	0.	0.	1.
173 -	0.	0.	0.	0.
177 -	0.	0.	0.	1.
181 -	0.	0.	0.	0.
185 -	0.	0.		

Sub-National Development Finance Institutions (CLSN)
(Read data across)

All development finance institutions with a value of 1.0 defined as
Sub-National development finance institutions. Primary and national
private development finance institutions have a value of 0.0.

1 -	0.	1.	1.	0.
5 -	0.	0.	0.	0.
9 -	1.	0.	1.	0.
13 -	0.	0.	0.	0.
17 -	0.	0.	0.	0.
21 -	0.	0.	1.	0.
25 -	0.	1.	1.	0.
29 -	0.	0.	0.	0.
33 -	0.	0.	0.	0.
37 -	0.	0.	0.	0.
41 -	0.	0.	0.	0.
45 -	0.	0.	0.	0.
49 -	0.	0.	0.	0.
53 -	0.	0.	0.	0.
57 -	0.	1.	1.	1.
61 -	1.	1.	1.	1.
65 -	1.	1.	1.	1.
69 -	1.	0.	0.	0.
73 -	0.	0.	0.	0.
77 -	0.	0.	0.	0.
81 -	0.	0.	0.	0.
85 -	0.	0.	0.	0.
89 -	0.	0.	0.	0.
93 -	0.	0.	1.	0.
97 -	1.	0.	0.	0.
101 -	0.	0.	0.	0.
105 -	0.	0.	0.	0.
109 -	0.	0.	0.	0.
113 -	0.	0.	0.	0.
117 -	0.	1.	0.	1.
121 -	1.	1.	0.	0.
125 -	0.	0.	0.	0.
129 -	0.	0.	0.	0.
133 -	0.	0.	0.	1.
137 -	0.	1.	1.	1.
141 -	0.	0.	0.	0.
145 -	0.	0.	0.	0.
149 -	0.	0.	0.	0.
153 -	0.	0.	0.	1.
157 -	1.	1.	0.	0.
161 -	0.	0.	0.	0.
165 -	0.	0.	0.	0.
169 -	0.	0.	0.	0.
173 -	0.	0.	0.	0.
177 -	0.	0.	0.	0.
181 -	1.	0.	0.	0.
185 -	0.	0.		

Affiliation with a National System (SYSNAT)
(Read data across)

All development finance institutions belonging to a national system of development finance have a value of 1.0. All others valued at 0.0.

1 -	0.	1.	1.	0.
5 -	0.	0.	0.	0.
9 -	0.	0.	1.	0.
13 -	0.	0.	0.	0.
17 -	0.	0.	0.	0.
21 -	0.	1.	1.	1.
25 -	1.	1.	0.	0.
29 -	0.	0.	0.	0.
33 -	0.	0.	0.	0.
37 -	0.	0.	0.	0.
41 -	0.	0.	0.	0.
45 -	0.	0.	0.	0.
49 -	0.	0.	0.	0.
53 -	0.	0.	0.	0.
57 -	0.	1.	1.	1.
61 -	1.	1.	1.	1.
65 -	1.	1.	1.	1.
69 -	1.	0.	0.	0.
73 -	0.	0.	0.	0.
77 -	0.	0.	0.	0.
81 -	0.	0.	0.	0.
85 -	0.	0.	0.	0.
89 -	0.	0.	0.	0.
93 -	0.	0.	0.	0.
97 -	0.	0.	0.	1.
101 -	1.	1.	1.	1.
105 -	1.	1.	0.	0.
109 -	0.	0.	0.	0.
113 -	0.	0.	0.	0.
117 -	0.	0.	0.	0.

121 -	0.	0.	0.	0.
125 -	0.	0.	0.	0.
129 -	0.	0.	0.	0.
133 -	0.	0.	0.	1.
137 -	0.	1.	1.	1.
141 -	0.	0.	0.	0.
145 -	0.	0.	0.	0.
149 -	0.	0.	0.	0.
153 -	1.	1.	1.	1.
157 -	1.	1.	1.	0.
161 -	0.	0.	0.	0.
165 -	0.	0.	0.	0.
169 -	0.	0.	0.	0.
173 -	0.	0.	0.	0.
177 -	0.	0.	0.	0.
181 -	0.	0.	0.	0.
185 -	0.	0.		

Affiliation with an International System (SYSINT)
(Read data across)

All development finance institutions which belong to an international
financial organization (as defined in the text) have a value of 1.0.
All others are valued at 0.0.

1 -	0.	1.	0.	0.
5 -	0.	1.	0.	1.
9 -	1.	1.	1.	1.
13 -	0.	1.	0.	1.
17 -	1.	0.	1.	1.
21 -	0.	1.	1.	1.
25 -	1.	1.	0.	0.
29 -	1.	1.	0.	1.
33 -	1.	1.	0.	1.
37 -	1.	0.	0.	1.
41 -	0.	1.	1.	0.
45 -	1.	0.	0.	0.
49 -	0.	1.	0.	1.
53 -	1.	1.	0.	1.
57 -	1.	0.	0.	0.
61 -	0.	0.	0.	0.
65 -	0.	0.	0.	0.
69 -	0.	0.	0.	1.
73 -	1.	0.	1.	0.
77 -	0.	1.	0.	0.
81 -	0.	1.	0.	0.
85 -	1.	0.	0.	1.
89 -	0.	1.	1.	0.
93 -	1.	0.	1.	1.
97 -	0.	1.	0.	0.
101 -	0.	0.	0.	0.
105 -	0.	0.	1.	1.
109 -	0.	1.	1.	1.
113 -	0.	0.	1.	1.
117 -	0.	1.	1.	1.
121 -	0.	0.	1.	1.
125 -	1.	1.	1.	1.
129 -	0.	0.	0.	1.
133 -	0.	0.	0.	0.
137 -	1.	0.	0.	0.
141 -	0.	0.	0.	0.
145 -	1.	1.	0.	0.
149 -	1.	1.	0.	0.
153 -	1.	0.	0.	0.
157 -	0.	0.	0.	0.
161 -	0.	1.	0.	1.
165 -	0.	1.	1.	0.
169 -	0.	1.	0.	1.
173 -	0.	1.	0.	0.
177 -	1.	1.	0.	1.
181 -	1.	0.	1.	1.
185 -	1.	0.		

High Resource Mobilizers (MOBHI)
(Read data across)

Development finance institutions which draw on three or more sources of
capital to the extent of 10% or more of capital and liabilities have a
value of 1.0. All others have a value of 0.0.

1 -	0.	0.	0.	0.
5 -	0.	0.	1.	1.
9 -	0.	0.	0.	0.
13 -	0.	0.	0.	0.
17 -	0.	0.	0.	0.
21 -	0.	1.	1.	1.
25 -	1.	0.	0.	0.
29 -	0.	0.	1.	0.
33 -	0.	0.	0.	0.
37 -	0.	0.	0.	0.
41 -	0.	1.	0.	0.
45 -	0.	0.	0.	0.
49 -	0.	0.	0.	1.
53 -	0.	0.	0.	0.
57 -	0.	0.	0.	0.
61 -	0.	0.	0.	0.
65 -	0.	0.	0.	0.
69 -	0.	0.	0.	0.
73 -	1.	1.	1.	0.
77 -	0.	0.	0.	0.
81 -	0.	0.	0.	0.
85 -	0.	0.	0.	0.
89 -	0.	0.	0.	0.
93 -	1.	0.	0.	1.
97 -	0.	0.	1.	0.
101 -	0.	0.	0.	0.
105 -	0.	0.	0.	1.
109 -	0.	0.	0.	0.
113 -	0.	0.	0.	0.
117 -	0.	0.	1.	0.
121 -	0.	0.	0.	0.
125 -	1.	1.	0.	0.
129 -	1.	0.	0.	1.
133 -	0.	0.	0.	0.
137 -	0.	0.	0.	0.
141 -	0.	0.	0.	0.
145 -	0.	0.	0.	0.
149 -	0.	0.	0.	0.
153 -	0.	0.	0.	0.
157 -	0.	0.	0.	0.
161 -	0.	0.	0.	0.
165 -	0.	1.	1.	0.
169 -	0.	0.	1.	1.
173 -	0.	0.	0.	0.
177 -	1.	0.	0.	1.
181 -	0.	0.	0.	0.
185 -	0.	0.		

Low Resource Mobilizers(MOBLOW)
(Read data across)

Development finance institutions which draw on only one source of capital
for 80 percent or more of its total capital and liabilities has a value
of 1.0.   All others have a value of 0.0.

1 -	0.	0.	0.	0.
5 -	1.	0.	0.	0.
9 -	0.	0.	0.	0.
13 -	1.	0.	1.	0.
17 -	0.	0.	0.	0.
21 -	0.	0.	0.	0.
25 -	0.	0.	0.	0.
29 -	0.	0.	0.	0.
33 -	0.	0.	1.	0.
37 -	0.	0.	0.	0.
41 -	1.	0.	0.	1.
45 -	0.	0.	0.	0.
49 -	0.	0.	0.	0.
53 -	0.	0.	1.	0.
57 -	0.	0.	0.	0.
61 -	0.	1.	0.	0.
65 -	0.	0.	0.	0.
69 -	0.	0.	1.	0.
73 -	0.	0.	0.	0.
77 -	0.	0.	0.	1.
81 -	1.	0.	0.	0.
85 -	0.	0.	0.	1.
89 -	0.	0.	0.	1.
93 -	0.	1.	0.	0.
97 -	1.	0.	0.	1.
101 -	0.	0.	0.	1.
105 -	1.	0.	0.	0.
109 -	1.	0.	0.	0.
113 -	0.	0.	0.	0.
117 -	1.	0.	0.	0.
121 -	1.	1.	0.	0.
125 -	0.	0.	0.	0.
129 -	0.	0.	1.	0.
133 -	0.	0.	0.	0.
137 -	0.	0.	0.	0.
141 -	1.	0.	0.	1.
145 -	0.	0.	0.	0.
149 -	0.	0.	1.	1.
153 -	1.	1.	1.	0.
157 -	1.	1.	0.	1.
161 -	1.	1.	0.	0.
165 -	0.	0.	0.	0.
169 -	0.	0.	0.	0.
173 -	0.	1.	0.	0.
177 -	0.	1.	0.	0.
181 -	0.	1.	0.	0.
185 -	1.	0.		

Total Functions Performed (FUNTOT)
(Read data across)

Development finance institutions which perform one, two or three functions
(as defined in the text) are valued at 1.0. Institutions which provide
in excess of three functions are valued at 0.0. If providing many func-
tions is desirable, then a negative correlation is desirable.

1 -	1.	1.	1.	0.
5 -	1.	0.	1.	0.
9 -	0.	0.	0.	1.
13 -	0.	1.	1.	1.
17 -	0.	0.	0.	0.
21 -	0.	0.	1.	0.
25 -	1.	0.	1.	0.
29 -	1.	1.	1.	1.
33 -	1.	1.	0.	1.
37 -	0.	1.	0.	1.
41 -	0.	1.	0.	0.
45 -	0.	0.	1.	1.
49 -	1.	1.	1.	0.
53 -	1.	1.	1.	1.
57 -	1.	1.	0.	1.
61 -	1.	0.	1.	1.
65 -	1.	1.	1.	1.
69 -	1.	1.	0.	1.
73 -	0.	0.	1.	1.
77 -	1.	1.	1.	1.
81 -	1.	1.	1.	1.
85 -	1.	1.	1.	1.
89 -	1.	1.	1.	1.
93 -	1.	1.	0.	0.
97 -	1.	1.	0.	1.
101 -	0.	1.	1.	1.
105 -	1.	1.	0.	0.
109 -	1.	0.	1.	0.
113 -	0.	0.	0.	1.
117 -	0.	1.	0.	1.
121 -	0.	1.	1.	0.
125 -	0.	1.	1.	1.
129 -	0.	1.	1.	0.
133 -	1.	1.	0.	1.

137 -	1.	1.	1.	1.
141 -	1.	0.	1.	1.
145 -	1.	1.	1.	0.
149 -	1.	1.	1.	1.
153 -	1.	0.	1.	1.
157 -	1.	1.	1.	1.
161 -	1.	1.	0.	1.
165 -	0.	1.	1.	0.
169 -	1.	0.	1.	1.
173 -	1.	1.	1.	0.
177 -	1.	1.	0.	1.
181 -	1.	0.	0.	1.
185 -	1.	0.		

Owner Management Function (FUNOM)
(Read data across)

The development finance institutions which own and manage subsidiaries
are valued at 1.0. All other institutions have a value of 0.0.

1 -	0.	0.	0.	0.
5 -	1.	0.	0.	1.
9 -	0.	0.	1.	1.
13 -	1.	1.	0.	0.
17 -	0.	1.	1.	0.
21 -	1.	0.	0.	0.
25 -	0.	0.	0.	1.
29 -	0.	0.	0.	0.
33 -	0.	0.	0.	0.
37 -	0.	0.	0.	1.
41 -	1.	0.	0.	0.
45 -	1.	0.	0.	0.
49 -	0.	1.	0.	1.
53 -	0.	0.	0.	0.
57 -	0.	0.	0.	0.
61 -	0.	1.	0.	0.
65 -	0.	0.	0.	0.
69 -	0.	0.	1.	0.
73 -	1.	1.	1.	1.
77 -	0.	0.	0.	0.
81 -	1.	0.	0.	0.
85 -	0.	1.	0.	0.
89 -	0.	0.	0.	0.
93 -	0.	1.	1.	1.
97 -	0.	0.	0.	0.
101 -	0.	0.	0.	0.
105 -	0.	0.	1.	1.
109 -	0.	1.	0.	0.
113 -	0.	1.	1.	0.
117 -	1.	0.	1.	0.
121 -	1.	0.	0.	0.
125 -	1.	0.	1.	0.
129 -	1.	0.	0.	0.
133 -	0.	1.	0.	0.
137 -	0.	0.	0.	0.
141 -	0.	1.	0.	1.
145 -	0.	0.	0.	1.
149 -	1.	0.	0.	0.
153 -	0.	0.	0.	0.
157 -	0.	0.	0.	0.
161 -	0.	0.	1.	0.
165 -	1.	0.	0.	1.
169 -	0.	1.	1.	0.
173 -	0.	1.	1.	0.
177 -	0.	0.	0.	0.
181 -	1.	1.	1.	0.
185 -	0.	1.		

Promotion Function (FUNPRM)
(Read data across)

The development finance institutions which promote investment projects
are valued 1.0. All other institutions are valued at 0.0.

1 -	1.	0.	0.	1.
5 -	1.	1.	1.	1.
9 -	1.	1.	1.	0.
13 -	1.	0.	0.	0.
17 -	1.	1.	0.	1.
21 -	1.	1.	1.	1.
25 -	1.	1.	1.	0.
29 -	0.	0.	0.	0.
33 -	1.	0.	1.	0.
37 -	1.	0.	1.	0.
41 -	1.	0.	1.	1.
45 -	1.	1.	1.	0.
49 -	1.	1.	1.	1.
53 -	0.	0.	0.	0.
57 -	0.	0.	1.	1.
61 -	1.	1.	0.	1.
65 -	0.	0.	0.	0.
69 -	0.	0.	1.	0.
73 -	1.	0.	0.	0.
77 -	0.	0.	0.	0.
81 -	1.	0.	0.	1.
85 -	1.	0.	1.	0.
89 -	1.	0.	0.	1.
93 -	0.	1.	1.	1.
97 -	0.	0.	1.	1.
101 -	1.	1.	0.	1.
105 -	1.	0.	1.	1.
109 -	0.	0.	0.	1.
113 -	1.	1.	1.	0.

117 -	0.	0.	0.	1.
121 -	1.	0.	1.	1.
125 -	1.	0.	0.	0.
129 -	1.	0.	0.	1.
133 -	0.	1.	1.	0.
137 -	1.	0.	0.	0.
141 -	0.	1.	0.	0.
145 -	0.	0.	0.	1.
149 -	1.	0.	1.	0.
153 -	0.	1.	0.	1.
157 -	0.	1.	1.	0.
161 -	0.	1.	1.	1.
165 -	1.	0.	0.	1.
169 -	0.	0.	1.	1.
173 -	0.	1.	0.	1.
177 -	1.	0.	1.	0.
181 -	1.	1.	1.	0.
185 -	0.	1.		

Education Function (FUNED)
(Read data across)

The development finance institutions which provide services previously
classified as education for the benefit of the borrower are valued 1.0.
All other institutions are valued at 0.0.

```
-  ...
     1 -      1.         0.         0.         1.
     5 -      0.         1.         1.         1.
     9 -      1.         1.         1.         0.
    13 -      1.         0.         1.         1.
    17 -      1.         0.         1.         1.
    21 -      1.         0.         0.         0.
    25 -      0.         0.         1.         1.
    29 -      0.         0.         0.         0.
    33 -      0.         1.         1.         0.
    37 -      0.         1.         1.         0.
    41 -      1.         0.         1.         1.
    45 -      1.         1.         1.         1.


    49 -      0.         0.         0.         1.
    53 -      0.         0.         0.         0.
    57 -      1.         0.         1.         0.
    61 -      0.         0.         0.         0.
    65 -      0.         0.         0.         0.
    69 -      1.         1.         1.         0.
    73 -      1.         0.         1.         0.
    77 -      1.         0.         0.         0.
    81 -      1.         0.         0.         1.
    85 -      1.         0.         1.         1.
    89 -      1.         0.         0.         1.
    93 -      1.         0.         1.         1.
    97 -      0.         1.         1.         0.
   101 -      1.         0.         0.         0.
   105 -      0.         0.         1.         0.
   109 -      1.         1.         0.         1.
   113 -      1.         1.         1.         0.
   117 -      1.         0.         1.         1.
   121 -      1.         0.         0.         0.
   125 -      1.         0.         0.         1.
   129 -      1.         0.         1.         1.
   133 -      0.         0.         1.         0.
   137 -      0.         1.         0.         0.
   141 -      0.         0.         0.         0.
   145 -      0.         0.         1.         1.
   149 -      0.         1.         0.         0.
   153 -      0.         1.         0.         0.
   157 -      0.         0.         1.         1.
   161 -      0.         0.         1.         0.
   165 -      0.         1.         0.         1.
   169 -      0.         0.         0.         0.
   173 -      0.         0.         1.         0.
   177 -      0.         0.         1.         0.
   181 -      0.         0.         1.         0.
   185 -      0.         1.
```

Promotion and Education Function (FUNPED)
(Read data across)

Those development finance institutions which provide both a promotion and education function are valued 1.0. All others are valued 0.0.

1 -	1.	0.	0.	1.
5 -	0.	1.	1.	1.
9 -	1.	1.	1.	0.
13 -	1.	0.	0.	0.
17 -	1.	0.	0.	1.
21 -	1.	0.	0.	0.
25 -	0.	0.	1.	0.
29 -	0.	0.	0.	0.
33 -	0.	0.	1.	0.
37 -	0.	0.	1.	0.
41 -	1.	0.	1.	1.
45 -	1.	1.	1.	0.
49 -	0.	0.	0.	1.
53 -	0.	0.	0.	0.
57 -	0.	0.	1.	0.
61 -	0.	0.	0.	0.
65 -	0.	0.	0.	0.
69 -	0.	0.	1.	0.
73 -	1.	0.	0.	0.
77 -	0.	0.	0.	0.
81 -	0.	0.	0.	0.
85 -	1.	0.	0.	0.
89 -	1.	0.	0.	1.
93 -	0.	0.	1.	1.
97 -	0.	0.	1.	0.

101 -	1.	0.	0.	0.
105 -	0.	0.	1.	0.
109 -	0.	0.	0.	1.
113 -	1.	1.	1.	0.
117 -	0.	0.	0.	1.
121 -	1.	0.	0.	0.
125 -	1.	0.	0.	0.
129 -	1.	0.	0.	1.
133 -	0.	0.	1.	0.
137 -	0.	0.	0.	0.
141 -	0.	0.	0.	0.
145 -	0.	0.	0.	1.
149 -	0.	0.	0.	0.
153 -	0.	1.	0.	0.
157 -	0.	0.	1.	0.
161 -	0.	0.	1.	0.
165 -	0.	0.	0.	1.
169 -	0.	0.	0.	0.
173 -	0.	0.	0.	0.
177 -	0.	0.	0.	0.
181 -	0.	0.	1.	0.
185 -	0.	1.		

Financial Institutional Building (FUNIB1)
(Read data across)

Those development finance institutions which are engaged in creating domestic
financial institutions are valued 1.0. All other institutions are valued 0.0.

1 -	0.	0.	0.	0.
5 -	0.	0.	0.	0.
9 -	0.	1.	0.	0.
13 -	0.	0.	0.	0.
17 -	0.	0.	0.	0.
21 -	0.	0.	0.	0.
25 -	0.	0.	0.	0.
29 -	0.	1.	0.	0.
33 -	0.	0.	0.	0.
37 -	1.	0.	0.	0.
41 -	0.	0.	0.	0.
45 -	0.	0.	0.	0.
49 -	0.	0.	0.	0.
53 -	0.	1.	1.	0.
57 -	0.	0.	0.	0.
61 -	0.	0.	0.	0.
65 -	0.	0.	0.	0.
69 -	0.	0.	0.	1.
73 -	0.	0.	0.	0.
77 -	0.	0.	0.	0.
81 -	0.	0.	0.	0.
85 -	0.	0.	0.	0.
89 -	0.	1.	0.	0.
93 -	0.	0.	0.	0.
97 -	0.	0.	0.	0.
101 -	0.	0.	0.	0.
105 -	0.	0.	1.	0.
109 -	1.	0.	0.	0.
113 -	0.	0.	0.	0.
117 -	1.	0.	0.	0.
121 -	0.	1.	0.	1.
125 -	0.	0.	0.	0.
129 -	0.	0.	0.	0.
133 -	1.	0.	0.	0.
137 -	0.	0.	0.	0.
141 -	0.	0.	0.	0.
145 -	0.	0.	0.	1.
149 -	0.	0.	0.	0.
153 -	0.	0.	0.	0.
157 -	0.	0.	0.	0.
161 -	0.	0.	0.	0.
165 -	0.	0.	0.	0.
169 -	1.	0.	0.	0.
173 -	0.	0.	0.	1.
177 -	0.	0.	0.	0.
181 -	0.	0.	0.	0.
185 -	0.	0.		

Capital Market Building (FUNIB2)
(Read data across)

Development financial institutions which are engaged in building domestic capital markets are valued 1.0. All others are valued 0.0.

```
  1 -      0.          0.          0.          1.
  5 -      0.          0.          0.          0.
  9 -      0.          0.          0.          0.
 13 -      0.          0.          0.          0.
 17 -      0.          0.          0.          0.
 21 -      0.          1.          0.          1.
 25 -      0.          1.          0.          1.
 29 -      0.          0.          0.          0.
 33 -      0.          0.          0.          0.
 37 -      0.          0.          0.          0.
 41 -      1.          0.          0.          0.
 45 -      0.          0.          0.          0.
 49 -      0.          0.          0.          0.
 53 -      0.          1.          0.          0.
 57 -      0.          0.          0.          0.
 61 -      0.          0.          0.          0.
 65 -      0.          0.          0.          0.
 69 -      0.          0.          0.          0.


 73 -      1.          1.          0.          1.
 77 -      0.          0.          0.          0.
 81 -      0.          0.          0.          0.
 85 -      0.          0.          0.          0.
 89 -      0.          0.          0.          0.
 93 -      0.          0.          0.          0.
 97 -      0.          0.          0.          0.
101 -      0.          0.          0.          0.
105 -      0.          0.          0.          0.
109 -      0.          0.          0.          0.
113 -      0.          1.          0.          0.
117 -      0.          0.          1.          0.
121 -      0.          0.          0.          1.
125 -      0.          0.          0.          0.
129 -      0.          0.          0.          0.
133 -      0.          0.          0.          0.
137 -      1.          0.          0.          0.
141 -      0.          0.          0.          0.
145 -      0.          0.          0.          0.
149 -      0.          0.          0.          0.
153 -      0.          0.          0.          0.
157 -      0.          0.          0.          0.
161 -      0.          0.          0.          0.
165 -      0.          0.          0.          0.
169 -      0.          0.          0.          1.
173 -      0.          0.          0.          0.
177 -      0.          0.          0.          0.
181 -      0.          0.          0.          0.
185 -      0.          0.
```

Low Sector Involvement (SECLOW)
(Read data across)

Development finance institutions lending to less than two different
sectors are valued 1.0. All others are valued 0.0.

1 -	0.	0.	0.	1.
5 -	0.	1.	1.	0.
9 -	0.	0.	0.	1.
13 -	1.	1.	0.	1.
17 -	1.	0.	0.	1.
21 -	0.	1.	0.	0.
25 -	1.	0.	0.	1.
29 -	0.	1.	0.	0.
33 -	0.	0.	0.	0.
37 -	1.	0.	0.	1.
41 -	1.	0.	0.	1.
45 -	1.	0.	1.	1.
49 -	0.	0.	1.	0.
53 -	0.	1.	1.	0.
57 -	1.	1.	1.	1.
61 -	1.	1.	1.	1.
65 -	0.	0.	1.	0.
69 -	0.	1.	1.	1.
73 -	0.	1.	1.	1.
77 -	0.	0.	0.	1.
81 -	1.	1.	0.	1.
85 -	0.	0.	1.	1.
89 -	1.	1.	0.	1.

93 -	1.	0.	0.	1.
97 -	1.	1.	0.	1.
101 -	0.	0.	1.	1.
105 -	1.	1.	1.	1.
109 -	1.	0.	1.	0.
113 -	1.	0.	0.	1.
117 -	1.	1.	0.	0.
121 -	1.	0.	1.	1.
125 -	0.	0.	0.	0.
129 -	1.	0.	1.	0.
133 -	0.	0.	1.	1.
137 -	1.	0.	0.	1.
141 -	0.	0.	1.	0.
145 -	0.	1.	1.	1.
149 -	1.	0.	1.	0.
153 -	1.	0.	0.	0.
157 -	1.	0.	1.	1.
161 -	0.	1.	0.	0.
165 -	0.	1.	0.	0.
169 -	1.	0.	0.	1.
173 -	0.	1.	1.	1.
177 -	0.	0.	0.	1.
181 -	0.	0.	0.	0.
185 -	1.	0.		

Debt to Equity Ratio (FSDE)
(Read data across)

1 -	3.737	1.521	1.404	1.46
5 -	-3.806	1.085	0.977	2.822
9 -	1.484	4.65	0.219	2.116
13 -	0.053	1.478	8.879	2.133
17 -	0.993	0.718	0.253	3.81
21 -	1.76	2.231	0.695	0.924
25 -	2.213	1.053	0.	0.323
29 -	1.18	1.964	1.746	1.052
33 -	0.387	1.584	0.	2.877
37 -	0.284	0.895	0.807	0.536
41 -	0.457	1.846	0.104	0.102
45 -	4.784	0.	0.	1.606
49 -	-74.147	0.215	6.483	1.71
53 -	5.499	6.207	5.288	5.767
57 -	5.871	1.049	1.844	1.308
61 -	0.	0.	1.878	2.223
65 -	5.678	1.52	3.518	1.103
69 -	3.556	0.134	0.158	0.204
73 -	2.613	0.637	0.402	1.018
77 -	1.104	8.557	3.8	0.
81 -	8.098	0.131	0.	0.
85 -	0.	2.772	0.763	1.807
89 -	2.759	1.132	13.362	0.
93 -	3.344	0.	0.411	1.726
97 -	25.385	1.796	3.884	1.605
101 -	14.842	15.975	2.998	14.761
105 -	15.423	2.263	7.928	1.855
109 -	15.029	0.509	2.785	1.192
113 -	0.489	0.669	0.967	0.485
117 -	0.	0.	0.839	0.088
121 -	1.217	4.67	17.237	5.936
125 -	0.499	0.582	2.204	1.761
129 -	0.244	1.271	0.	1.996
133 -	1.797	3.872	1.598	0.785
137 -	1.621	1.8	0.241	0.
141 -	0.035	0.428	0.192	2.248
145 -	1.508	0.459	0.	0.003
149 -	1.12	4.656	4.489	29.725
153 -	3.653	1.239	1.124	0.254
157 -	0.023	0.004	0.034	0.556
161 -	0.	1.164	1.311	0.
165 -	0.082	1.433	3.827	23.194
169 -	46.684	2.786	0.148	2.314
173 -	2.236	120.909	24.601	5.731
177 -	0.714	0.557	0.393	0.095
181 -	0.212	0.047	1.583	0.125
185 -	23.2	0.468		

Cost Per Dollar of Development Portfolio (COSTPT)
(Read data across)

1 -	0.066	0.	0.065	0.042
5 -	0.076	0.059	0.259	0.268
9 -	0.071	0.028	0.157	0.009
13 -	0.032	0.021	0.012	0.008
17 -	0.009	0.04	0.012	0.013
21 -	0.019	0.015	0.023	0.018
25 -	0.018	0.003	0.	0.031
29 -	0.007	0.036	0.034	0.018
33 -	0.121	0.036	0.11	0.041
37 -	0.034	0.065	0.058	0.039
41 -	0.037	0.022	0.085	0.002
45 -	0.032	0.024	0.085	0.112
49 -	0.03	0.161	0.01	0.058
53 -	0.002	0.004	0.003	0.002
57 -	0.468	0.005	0.008	0.01
61 -	0.024	0.021	0.007	0.002
65 -	0.008	0.008	0.006	0.005

69 -	0.004	0.064	0.017	0.027
73 -	0.024	0.005	0.003	0.007
77 -	0.081	0.029	0.022	0.144
81 -	3.567	0.025	0.019	0.049
85 -	0.074	0.034	1.01	0.051
89 -	0.076	0.011	0.02	0.184
93 -	0.435	0.	0.089	0.029
97 -	0.094	0.015	0.06	0.013
101 -	0.009	0.	0.036	0.027
105 -	0.013	0.138	0.008	0.019
109 -	0.221	0.037	0.04	0.091
113 -	0.013	0.07	0.	0.062
117 -	7.708	0.043	0.116	0.014
121 -	0.062	0.033	0.006	0.007
125 -	0.241	0.088	0.06	0.025
129 -	0.04	0.027	0.046	0.015
133 -	0.021	0.005	0.022	0.022
137 -	0.01	0.021	0.043	0.
141 -	0.034	0.181	0.094	0.376
145 -	0.022	0.306	0.	0.04
149 -	0.036	0.014	0.004	0.004
153 -	0.005	0.009	0.014	0.238
157 -	0.035	0.236	0.258	0.07
161 -	0.083	0.02	0.082	0.027
165 -	0.014	0.066	0.028	0.41
169 -	0.01	0.069	0.037	0.037
173 -	0.001	0.008	0.051	0.01
177 -	0.032	0.044	0.022	0.024
181 -	2.186	0.015	0.007	0.001
185 -	0.056	0.08		

Age to Date of Data (AGE)
(Read data across)

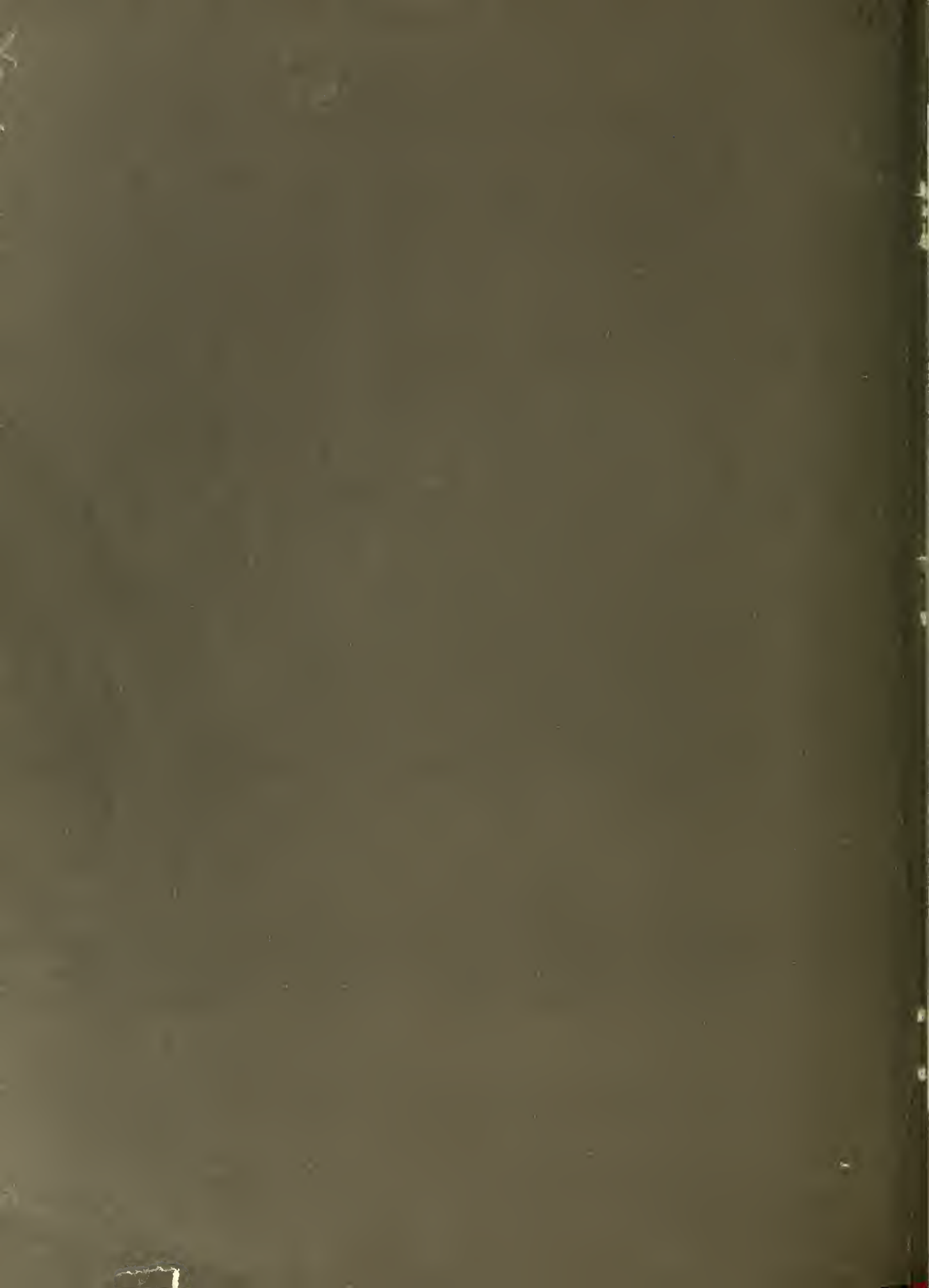|				
1 -	72.	91.	1.	20.
5 -	10.	2.	28.	22.
9 -	10.	13.	3.	8.
13 -	8.	5.	21.	9.
17 -	3.	11.	24.	5.
21 -	32.	5.	3.	1.
25 -	5.	4.	2.	24.
29 -	3.	50.	102.	87.
33 -	46.	1.	1.	4.
37 -	19.	21.	2.	13.
41 -	2.	5.	2.	1.
45 -	35.	1.	1.	12.
49 -	11.	3.	1.	15.
53 -	11.	9.	1.	17.
57 -	10.	9.	11.	5.
61 -	7.	3.	10.	16.
65 -	14.	6.	12.	10.
69 -	11.	30.	10.	4.
73 -	6.	31.	7.	4.
77 -	5.	9.	5.	6.
81 -	12.	5.	13.	1.
85 -	1.	4.	33.	11.
89 -	3.	7.	8.	2.
93 -	6.	1.	6.	5.
97 -	6.	2.	1.	28.
101 -	28.	30.	20.	5.
105 -	21.	22.	32.	6.
109 -	3.	5.	9.	53.
113 -	1.	10.	3.	6.
117 -	3.	6.	1.	5.
121 -	8.	8.	4.	7.
125 -	11.	5.	34.	28.
129 -	24.	12.	9.	5.
133 -	19.	45.	2.	5.
137 -	2.	3.	3.	2.
141 -	20.	22.	2.	10.
145 -	1.	4.	4.	2.
149 -	16.	10.	1.	24.
153 -	1.	24.	1.	1.
157 -	1.	1.	5.	2.
161 -	1.	4.	2.	3.
165 -	1.	5.	8.	5.
169 -	19.	5.	5.	15.
173 -	1.	1.	32.	13.
177 -	2.	18.	26.	1.
181 -	4.	19.	7.	8.
185 -	3.	5.		

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