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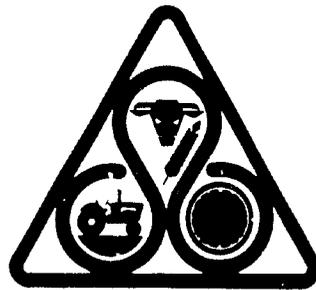
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The Rural Poor and the Recent
Performance of Formal Rural
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and

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February, 1978

* Arizona State University and Ohio State University, respectively. Initial work on this paper was financed by the Agency for International Development. The Agency, however, may choose to stand apart from our discussion and conclusions. The authors are grateful to Michael Duffy and an anonymous reviewer for their helpful comments on earlier drafts of the paper.

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**THE RURAL POOR AND THE RECENT PERFORMANCE
OF FORMAL RURAL FINANCIAL MARKETS
IN THE DOMINICAN REPUBLIC**

Jerry R. Ladman and Dale W. Adams*

During the past two decades, formal agricultural credit available in most Latin American countries has greatly increased. As shown in Table 1, in terms of 1973 U.S. dollars, the amount of formal agricultural credit in these countries jumped from 3.3 billion in 1960 to 8.8 billion in 1973. A number of countries including Bolivia, Brazil, the Dominican Republic, Ecuador, Honduras,

TABLE 1
Amount of Formal Agricultural Loans In 18 Latin American Countries,
1963, 1968 and 1973 (million 1973 U.S. dollars)

	1960	1968	1973
18 Country Totals	\$3,282	\$6,316	\$8,789
Argentina	556	802	824
Bolivia	3	21	52
Brazil	857	2,004	3,737
Chile	180	301	187
Colombia	327	346	559
Costa Rica	96	147	197
Dominican Republic	30	100	106
Ecuador	28	68	92
El Salvador	57	62	126
Guatemala	55	105	88
Honduras	10	48	79
Mexico	667	1,499	1,794
Nicaragua	45	127	149
Panama	8	34	95
Paraguay	14	44	89
Peru	164	232	276
Uruguay	83	59	105
Venezuela	101	139	236

SOURCE: Various Bank Publications in Latin America.

Nicaragua, Panama and Paraguay more than tripled the real amount of agricultural credit available during this period. In many countries loans from the World bank, the Inter-American Development Bank, and the Agency for International Development have made up a significant part of the expanded supply of credit for agriculture.

- * Arizona State University and Ohio State University respectively. Initial work on this paper was financed by the Agency for International Development. The Agency, however, may choose to stand apart from our discussion and conclusions. The authors are grateful to Michael Duffy and an anonymous reviewer for their helpful comments on earlier drafts of the paper.

In the past few years most aid agencies and some Latin American countries, in response to an increasing concern with questions of income distribution and poverty have attempted to direct more credit to a target group of small and typically poor farmers. In some countries, credit programs have replaced earlier attempts to assist the rural poor through extension activities and land reform [4], [12]. In virtually all cases concessional interest rates have been used to encourage borrowing by rendering new technology more profitable, encouraging farmers to shift borrowing from exploitive money lenders and marketing intermediaries to less-expensive formal credit institutions, as well as serving as an income transfer mechanism [5, pp. 101-103]. It is too early to evaluate completely the success of these recent credit efforts, but some preliminary evidence suggests that very little of this massive increase in formal credit has filtered down to the non-wealthy [2, 3, 5, 7].

We believe that an evaluation of agricultural credit flows over the ten-year period, 1965-1974, in the Dominican Republic provides some evidence why concessional interest rate policies do not result in more credit going to small farmers from formal credit institutions. We first present the Dominican data. Secondly we present arguments which might explain the trends observed. Finally we set forth several conclusions which may be of interest to policy makers in other low-income countries.

The Dominican Republic Experience

Since the 1965 Revolution to 1974, the Dominican economy experienced reasonable growth; real GDP increased 115 percent and, in spite of a high population growth rate, real per capita GDP increased 62 percent. Agriculture, however, contributed progressively less to economic expansion over the period. Its contribution to GDP fell from about 28 to 20 percent from 1965 to 1974. Total real agricultural output grew only 53 per cent and real agricultural output per person in the agricultural sector increased only 16 percent over the ten years [13, p. 57].

The nominal value of agricultural credit originating from formal sources increased substantially over the period. As shown in Table 2, the government's Agricultural Bank has historically been the major lender to the agricultural sector. The commercial banking system, however, became increasingly important after 1966 when the Investment Fund for Economic Development (FIDE) was established with foreign aid whereby the Central Bank holds a trust fund to discount commercial bank paper on loans to agriculture. Together these two sources have accounted for at least 95 percent of all formal agricultural credit in the country over the ten-year period.¹ Increases in agricultural credit have more or less kept up with increases in agricultural output. As shown in Table 3 the ratio between credit and agricultural GDP has remained fairly constant since 1969. In previous years the higher ratios are due to the heavy concentration of commercial bank lending in longer-term loans.

¹ The other sources in the formal market are three financieras, the Dominican Development Foundation and the Cooperative Credit and Development Institute.

TABLE 2

Amount of Formal Agricultural Credit in the Dominican Republic, 1965-1974 by Source^a

Year	Nominal Values (Million \$ RD)				Real Value ^c (1974 = 100)			
	Total	Agricultural	Commercial	Others ^d	Total	Agricultural	Commercial	Others
		Bank ^b	Banks ^e			Bank	Banks	
1965	62.0	56.6	5.4	0.0	94.6	86.4	8.2	0.0
1966	70.5	58.3	12.2	0.0	109.1	90.2	18.9	0.0
1967	71.7	57.8	13.3	0.6	108.8	87.9	20.2	0.7
1968	72.6	56.7	15.7	0.7	108.4	84.6	22.7	1.1
1969	71.2	57.8	12.7	0.7	108.4	88.0	19.3	1.1
1970	78.4	61.2	15.5	1.7	114.9	89.7	22.7	2.5
1971	81.6	62.7	16.2	2.7	114.6	88.1	22.8	3.7
1972	82.7	58.7	21.1	2.9	107.7	76.4	27.5	3.8
1973	102.5	64.0	34.5	4.0	115.9	72.4	39.0	4.5
1974	130.0	76.6	46.9	6.5	130.0	76.6	46.9	6.5

a Credit figures are outstanding balances at year end.

b Banco Agricola de la Republica Dominicana. Source: Banco Central de la Republica Dominicana, *Boletin Mensual*, Dic. 1971; Octubre-Diciembre 1974.

c Banco de Reservas, Banco de Credito y Ahorros, Royal Bank of Canada, Bank of Nova Scotia, Chase Manhattan, First National City Bank, Banco Popular Dominicano, Bank of America. Source: Banco Central de la Republica Dominicana, Dic. 1971; Octubre-Diciembre 1974.

d The other group is composed of three financieras, the Dominican Development Foundation and The Cooperative Credit and Development Institute. Information is not reported for la Oficina de Desarrollo de la Comunidad (ODC). This institution has loaned small amounts to agriculture. For the period 1970-1972, a total of 7.2 million was loaned to this sector by ODC.

e Based upon Consumer Price Index for Santo Domingo. See Table 3.

Virtual price stability reigned in the Dominican Republic from 1965 to 1969. However, as shown in Table 3, the country began to experience moderate inflation during 1970-1972, but by 1973-1974 prices were rising at the relatively high rates of 15.1 and 13.2 percent respectively. Whereas the nominal amount of agricultural credit in the formal market increased 109 percent over the 1965-1974 period the real value increased only 37 percent. As shown in Table 2 the Agricultural Bank experienced a decline in the real value of its portfolio and thus the increase in the real value of agricultural credit came largely from the commercial banks.

The Dominican government has stressed the importance of making more credit available to small farmers, especially those who are the beneficiaries of land reform. Foreign assistance programs in recent years have also been designed to direct credit to the small farmer. It appears, however, that the small-farmer target group did not gain increased access to formal agricultural credit over the 1965-1974 period. Although records are not available, the commercial bankers state they loaned very little to this target group and that they directed virtually all their funds to relatively large commercial farmers. The burden of lending to the small farmer thus fell largely on the Agricultural Bank. Yet, since 1966 the proportion of the Bank's portfolio directed to small

TABLE 3

Ratio of Agricultural Credit to Gross Domestic Product in Agriculture, Annual Percentage Change of Consumer Price Index, Livestock and Agricultural Loans as a Percentage of Commercial Banks' Total Loans To Private Sector and Small-Farmer Loans as a Percentage of Agricultural Bank Loans to Farmers^a

Year	Dominican Republic Agriculture		Annual Percentage Change Consumer Price Index City of San Domingo ^d	Percentage of Commercial Banks' Total Loans to Agricultural Sector ^e	Percentage of Small Farmer Loans (up to \$2,000 in 1974 U.S. Dollars) ^f of Approved Loan Volume of Agricultural Bank
	G.D.P. (Million SRD) (Current Prices)	Ag. Credit, GDP (Ratio) ^c			
1965	252	.246	- 0.9	7.8	41
1966	265	.266	- 1.4	16.5	44
1967	253	.283	1.9	15.0	38
1968	269	.270	1.7	12.8	36
1969	321	.222	- 1.9	8.6	32
1970	345	.227	3.8	8.9	37
1971	371	.220	4.3	7.7	40
1972	409	.202	7.8	7.7	41
1973	468 ^b	.219	15.1	9.3	31
1974	584 ^b	.223	13.2	8.4	39

a Sources—Banco Central de la República Dominicana and Banco Agrícola de la República Dominicana.

b Preliminary estimates.

c Column 1 of Table 2 divided by Column 1 of this table.

d Computed from index compiled by the Central Bank. The bank considered 1969 as base year. When 1969 is the base year, the index values for 1960 and 1974 are 95.0 and 152.1.

e Based on end-of-year outstanding balance.

f Figured on basis of exchange rate in 1974.

farmers has been quite constant.² Therefore, given the decline in the real value of the Bank's portfolio, the real value of credit flowing to this group declined considerably since 1970 in spite of government policy and strong foreign assistance efforts to direct more credit to small farmers over this period.

Analysis of Performance

A major limitation to the Agricultural Bank's increasing its real volume of loans was that it depended entirely upon its earnings and foreign aid as sources of additional loanable capital. Unfortunately the Bank experienced significant delinquency problems. In 1974 about ten percent of its portfolio was considered as uncollectable and another 20 percent as questionable. Thus, delinquency in combination with high operating expenses and relatively low interest rates have forced the Bank to rely extensively on external financing for new capital. In contrast the commercial banks have not experienced such severe delinquency and have had access to considerable financing under the FIDE rediscount program. Since 1969 they have maintained about 8.4 percent of their rapidly increasing portfolio in agricultural loans.

During the period under study Dominican monetary authorities followed a policy, prescribed by law, of imposing maximum interest rates on loans. Under this system concessional rates were established for agriculture. Over the 1972-1974 period the maximum rate for commercial bank loans was 12 percent, but maximum rates of nine and eight percent were established for commercial bank FIDE loans and Agricultural Bank loans respectively.

Recent theoretical contributions [1, 6, 7] have suggested that concessional interest rates, particularly in combination with inflation, are a major factor which directs credit away from small farmers. The arguments, based on how concessional interest rates affect both lender and borrower behavior, are summarized below.

On the lender side many commercial banks shun agricultural lending because of the relatively high loan transactions costs involved in making loans in rural areas, because of substantial loan default risks, and because commercial lenders prefer to make loans for shorter terms than farmers often require. When the banks must charge a lower concessional interest rate for agricultural loans the problem is worsened because the profit margin is reduced. To some extent a program such as FIDE can overcome the bank resistance to lend to agriculture because it reduces the loan commitment from the commercial lender's own resources, features loan guarantees and provides for wider interest spreads. These features plus strong encouragement from the Central Bank were apparently successful in increasing the flow of credit to agriculture in the Dominican Republic from these institutions. The theory would postulate, however, that the commercial banks had little incentive to direct this additional

² There are a number of ways to define a small farmer, none of which will satisfy all objectives. For purposes of this paper we accepted the Agricultural Bank's definition as a farmer with a loan of \$2,000 U.S. dollars or less. Note this procedure does not exclude the possibility of a single farmer having multiple loans of less than \$2,000 each, but which sum to more than that amount. This practice exists in the Dominican Republic. To the extent it exists, the figures in Table 3 overstate the percentage of loans to small farmers.

credit to small farmers, because the banks could reduce their average loan transaction cost and associated risks by working with larger farmers who have previous experience with formal loans. For reasons elucidated below there was an ample demand – perhaps even an excess demand – for credit by these larger farmers at the prevailing concessional interest rates.

Although the Agricultural Bank is technically a development bank, its internal operating criteria are similar to those of commercial banks, i.e. it is expected to earn sufficient income to cover operating costs and provide a return on capital in order to expand its lending capacity. Therefore, following the above line of reasoning, one would expect the Agricultural Bank to have responded adversely to the higher transactions costs and uncertainty associated with lending to small farmers. Another factor is that some loans are made on a political basis. Delinquency is often a problem for these loans which leads to an even greater concern by the Agricultural Bank for cost-reducing measures such as lending to larger farmers. The fact that the Bank continued the tendency to direct its loans mainly to larger farmers, in spite of an increase in government emphasis on lending to the rural poor, suggests that the institution behaved in this manner.

On the side of borrowers concessional interest rates for agricultural loans encourage individuals who have access to credit from formal institutions to borrow more than the social opportunity cost of the credit would justify. Unless an effective non-price rationing technique is employed this results in an intersectoral and interpersonal misallocation of resources in the economy as some fortunate borrowers take advantage of the inherent interest rate subsidy [6, 9]. Moreover, because credit is fungible, it is only reasonable to expect that some credit which is ostensibly directed to agriculture is actually employed in other activities. Where inflation is present, the real rate of interest is below the nominal rate and the implied subsidy is increased. When the rate of inflation exceeds the nominal interest rate, as in 1973 and 1974 in the Dominican Republic, the borrower will receive an implied income transfer. The large farmer is in a better position to take advantage of such a subsidy than the small farmer because of his greater access to credit as well as his knowledge about and access to alternate investment and consumption opportunities.

Thus it is argued that when concessional interest rates are employed in agriculture, a combination of lender and borrower behavior will work against lending to small farmers and that inflation exacerbates this tendency. In the Dominican case it appears that under a policy of concessional interest rates for agriculture the small farmers have not benefited from larger real amounts of credit nor from larger portions of the total agricultural credit portfolios of formal credit institutions. It is our contention that perhaps the low-interest policy is an important explanation of this result.

Policy Implications

Substantial increases in the real flows of agricultural credit in less-developed countries have been observed over the last two decades. Most of the country credit programs featured concessional interest rates for agriculture. There is little evidence, however, that the increases in credit have gone to the poor,

small farmer, in spite of the fact that many countries have developed policies such as rationing, administrative fiat and loan guarantees, in addition to the supply increases, to direct more financial resources to the rural poor [5, pp. 92–108]. The data from the Dominican Republic also show that small farmers have not received more credit under a concessional interest rate policy. We suggest that the Dominican experience provides additional evidence that the concessional policy should be reexamined with a view towards developing alternative policy means for directing more credit to the small farmer.

Inconsistent with the conventional wisdom as it may appear, a policy of higher and more flexible interest rates may not only result in directing more credit to small farmers, but may also improve the overall functioning of rural financial markets. The higher interest rates would eliminate or reduce the implied subsidy and thus reduce the quantities of credit demanded by large farmers [9]. Simultaneously, banks would be more willing to lend to small farmers since these institutions would be receiving larger revenues to cover the higher costs of administering small-farmer loans. Thus, the reduction in the quantity of credit demanded by large farmers could be channeled through the banking system to considerably larger numbers of small farmers. The large numbers of farmers who borrow from informal market lenders at high interest rates suggests that the relevant range of the credit demand schedule for small farmers is relatively inelastic and therefore the quantity of credit demanded by individual small farmers would not decline substantially if the interest rates were higher [10]. Thus both lender and borrower behavior should interact to cause more credit to flow to small farmers if the interest rates were raised.

If the level of interest rates were raised across-the-board, stronger rural savings mobilization programs among the poor would be possible. Evidence from Taiwan [11] and Korea [8], suggest that even poor farmers are willing to save if they have the financial incentive and accessibility to savings institutions. Institutions, such as the Dominican Agricultural Bank, which now depend entirely upon earnings, collection of bad debts and infusions from external sources could appropriately look to this means as a source of augmenting their loanable funds. There is a good deal of evidence that the Dominicans have a high marginal propensity to save. The real amounts of savings in commercial banks and savings and loan institutions, mostly in urban areas, increased six-fold over the 1965–1974 period.

If interest rates were flexible, monetary authorities could make adjustments in the interest rate for inflation and thereby eliminate the implied subsidy due to the difference between real and nominal interest rates. Such action should provide for a more rational allocation of resources as well as tend to direct more credit to small farmers.

We do not suggest, however, that higher and flexible interest rate policies will be a panacea for the financial needs of the rural poor in the Dominican Republic or in other less-developed countries. Additional measures designed to reduce borrower and lender risk, to increase lender and borrower management ability, and to reduce lender as well as borrower cost are also needed. Programs to obtain these objectives in combination with a more flexible interest rate policy should, however, provide another policy alternative for increasing the flow of credit to the small farmer and creating conditions for a more

rapid and broad-based economic development in low income countries. Undoubtedly such a policy would be politically unpopular and moreover goes against the current of the conventional wisdom surrounding concessional interest rates. We believe, however, that it offers sufficient potential to warrant considerable study. Our examination of the Dominican Republic provides some evidence that is consistent with the emerging theory upon which such a policy is founded.

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