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1962

PM-RE-004/62
1961-1962



**Industrial Development Division
Engineering Experiment Station
GEORGIA INSTITUTE OF TECHNOLOGY**

IDD Project No. A-1616
AID PIO/T No. 514-000-40040

EVALUATION OF COLOMBIAN INDUSTRIAL NEEDS
AND RESPONSE ORGANIZATIONS

Industrial Development Division
ENGINEERING EXPERIMENT STATION
Georgia Institute of Technology

April 1974



ENGINEERING EXPERIMENT STATION
GEORGIA INSTITUTE OF TECHNOLOGY • ATLANTA, GEORGIA 30332

April 30, 1974

Mr. William Mann, Jr.
Chief, Urban/Industrial Division
Agency for International Development
Department of State
Washington, D. C. 20523

Dear Mr. Mann:

The attached report results from a one-month project carried out in Colombia by Mr. Earl Logan of this Division, under USAID PIO/T #514-000-400-40.

The report indicates that there are substantial needs in Colombia which are presently not being adequately met by existing Colombian institutions. More effective program planning and implementation is needed, as well as strengthening of existing technical assistance, technology transfer, and training activities. The provision of support for these activities could enhance the USAID loan program and insure more and better results in stimulating and strengthening small and medium-scale industries in Colombia.

Recommendations for action programs to achieve the goals of USAID in Colombia are included in the report.

It has been a pleasure to serve the Agency for International Development in this matter.

Sincerely,

Ross W. Hammond

Ross W. Hammond, Chief
Industrial Development Division

Enclosure

1. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

The Republic of Colombia has a number of institutions and organizations whose aim is to serve industry with programs of various kinds. Hence, the organizational infrastructure exists to mount more extensive results-oriented loan programs, managerial and technical assistance services, and training courses. At the same time, there appears to exist a large and continuing demand for management and technical assistance and new technology on the part of industry, particularly in the small business sector. Mechanisms for improving the delivery of these services to industry in Colombia are badly needed.

The recommendations that are summarized below are based on a 30-day study of the demand for and supply of assistance services to Colombian industry, involving discussions and interviews with USAID personnel, representatives of various organizations and institutions, and with small businessmen and industrialists in Colombia.

USAID/Colombia (AID/C)

AID/C recognizes both the importance of technology transfer and management and technical assistance and the particular need of small and medium-scale industry in Colombia for these types of services. Unfortunately, however, AID/C presently is neither organized nor adequately staffed to carry out the technology transfer and technical assistance activities itself nor to coordinate and administer these functions effectively if the recommendations in this report are carried out by other institutions in Colombia.

It is recommended, therefore, that the function of technology transfer and management and technical assistance to small and medium-scale industry be recognized as a separate entity within AID/C. At a minimum, this will involve the creation of the position of Small Industry Technical Assistance Officer (or a similar descriptive title) within the Mission to provide a focal point for coordinating small industry assistance efforts in Colombia and to give visibility to AID/C's support of this function.

Corporación Financiera Popular (CFP)

CFP is generally making satisfactory progress, and its development plans are sound and well thought out. CFP also has many competent and dedicated people

from a banking point of view. However, there is a deficiency both in the number and qualifications of personnel in loan administration where technical assistance is required by potential small-industry borrowers from the point of loan application to the ultimate use of the money in meeting the manufacturing, manpower, material, and/or marketing needs of the small-industry loan recipient.

It is concluded that extensive outside assistance is needed to support and strengthen CFP's loan program, to develop an effective program of management and technical assistance and technology transfer for small and medium-scale industry, and eventually to train the CFP staff to provide these technical assistance services as a continuing function of the institution.

A program of this magnitude and importance would require a minimum investment of three years and \$600,000 of outside assistance before it could be a self-sustaining part of an expanded CFP operation. Implementation of the program would require the combined efforts of local expertise in partnership with experienced U. S. capabilities.

To meet some of CFP's more short-range problems -- particularly those relating to the often cumbersome process of loan application review and approval -- the following recommendations are offered for consideration:

1. That the limit of loan approval of both the regional credit committees and the central credit committee be raised to expedite the approval decision on CFP loans to industry.
2. That the development of the CFP loan guarantee program be encouraged and that the percentage of participation in bank loan guarantees be increased as soon as practical.
3. That since CFP is responsible for making loans to the small and medium-scale industrialist, more funds be made available to CFP to avoid rediscounting to the Fondo Financiero Industrial (FFI), even at the expense of FFI funding.

Fondo Financiero Industrial (FFI)

FFI was founded for the purpose of operating as a rediscount house for private banks throughout the country on industrial loans. The importance of an installation in Colombia to provide this rediscount function effectively cannot be overestimated. It is concluded, however, that there are a number of areas of policy and procedure relating to FFI that should be evaluated carefully.

To study in depth the entire FFI organization and its systems and procedures, it is recommended that a consultant experienced in development banking (SBA, IBD, IBRD, or similar loan institution) be retained for a period of six months at a cost of approximately \$25,000. The purpose of this study should be to provide AID/C with a comprehensive analysis and to recommend needed reforms to better attain the original objective of FFI. If time does not permit an in-depth study, then an experienced banker or industrialist fluent in Spanish and knowledgeable of South America should be retained for at least one month to analyze the FFI operation and to give AID/C a clear and precise report on what is or is not being done and why.

Servicio Nacional de Aprendizaje (SENA)

SENA's basic programs of apprenticeship training and management advisory services to industry have been supported by various national and international agencies from many parts of the world. AID/C's support of 25 accountants to assist the small and intermediate industrialists in the preparation of loan applications has been effective, but AID has received little or no recognition for this effort.

Despite the fact that SENA's apprentice training program needs modernizing and better equipment, it has the rather ambitious goal of doubling its output in the next two years, and management has expressed an interest in upgrading quality as well as quantity. The question of whether or not AID/C should become involved in this program is a very complex one.

Before a firm decision is made, it is recommended that AID/C retain for a period of at least six months an American training consultant at an approximate cost of \$25,000 to study the apprenticeship needs of the country, to define SENA's appropriate role in meeting these needs, to evaluate SENA's programs in relation to present and future national demand, to review existing programs in terms of modernization and equipment needs, to investigate the availability and cost of packaged and specially developed instructional systems, and to determine the total costs involved if AID/C is to make a meaningful contribution to the SENA apprenticeship program.

Asociación Colombiana Popular de Industriales (ACOPI)

ACOPI, a national association of industrialists, has been seeking for some time an effective means of supplying the services for which it was originally designed -- that of providing technical assistance and technology transfer services to its affiliated companies. ACOPI is proposing that AID/C provide financial assistance to develop these capabilities over a five-year period.

With adequate support, ACOPI could well become a primary vehicle in filling the existing void of effective technical assistance and technology transfer services for intermediate industry. However, AID/C support of this program must be weighed as an alternative to the support of a similar program with the Corporación Financiera Popular (CFP) (see above). An ACOPI expansion program, as outlined in the body of this report, would cost between \$750,000 and \$1,000,000 over a five-year period.

Even if it is decided to support the expansion of CFP to include the function of technology and management and technical assistance rather than support the development of this function within ACOPI, it is recommended that the ACOPI national headquarters be assisted over a three-year period so that the association can become a more effective lobbying group and can be a focal point for information dissemination and membership enrollment.

2. BACKGROUND

The primary objective of the study upon which this analysis is based was to investigate and recommend to the Agency for International Development ways to increase the effectiveness of existing Colombian institutions which seek to stimulate the growth and development of small and medium-scale industry in Colombia.

The study was carried out during a 30-day period in March and April 1974 by a Senior Research Scientist of the Industrial Development Division, Engineering Experiment Station, Georgia Institute of Technology. During this period there were numerous discussions and interviews with USAID personnel, various Colombian organizations and institutions, and with small businessmen and industrialists in Colombia.

The Republic of Colombia has a number of institutions and organizations whose aim is to serve industry with programs of various kinds. Hence, the organizational infrastructure exists to mount more extensive results-oriented loan programs, managerial and technical assistance services, and training courses. Several of these organizations are discussed in detail in the body of this report.

The majority of the business and industry problems in Colombia are similar to those found in developing countries throughout the world. These problems are being solved elsewhere, and they can be solved in Colombia provided the proper support for Colombian organizations can be generated.

A reiteration, however repetitious it may be, of some of the basic problems facing Colombian industry is appropriate as a preface to an analysis and evaluation of the services offered by existing Colombian institutions:

1. There are too few viable organizations in Colombia capable of providing technical assistance and meaningful transfer of technology to the large number of industries needing these services.
2. The existing agencies that perform in the areas of technical assistance and technology transfer have excellent people but are thinly staffed, and these lack the practical base of experience and knowledge which comes from long and varied activities in these fields.
3. There is a need to do more than transfer technology. Technological information must be adapted to the needs of the Colombian industrialist if it is to be used effectively to increase productivity and profitability.

4. The multitudinous daily operating decisions confronting the Colombian entrepreneur as he struggles to run a profitable operation make it difficult for him to stay abreast of changing market and price factors, and this compounds the need for continuing technical assistance to solve his daily operational problems.

5. Too few Colombian industrialists pay sufficient attention to basic financial controls and procedures. The lack of adequate financial management leads to problems of cost control, credit, taxation, and the like.

6. The larger Colombian companies have the staff personnel required to solve operating problems internally. The small and most of the medium-scale concerns lack these basic problem-solving capabilities and continually need managerial and technical assistance of various kinds.

7. There is a universal need for improved productivity, technology, and quality control if Colombia is to strengthen its competitive position in the world marketplace.

8. The traditional financing sources for industry seem relatively unresponsive to the urgent but high-risk money needs of small and intermediate industry.

Hence, in Colombia, there appears to exist a large and continuing demand for management and technical assistance and new technology on the part of industry, particularly in the small business sector. There are elements in Colombia capable of supplying this demand, but they are not operating as broadly or as effectively as they are capable of doing. Mechanisms for improving the delivery of technical assistance and technology transfer are badly needed.

3. MAJOR AREAS OF INVESTIGATION

The major thrust of this analysis is to determine how selected institutions which seek to support industrial expansion of the Colombian economy can improve the delivery of services to the target industries. In each of the sections that follow, the institution's services to business and industry are analyzed and evaluated, and suggestions are made of methods of increasing the effectiveness of the institution's assistance efforts to small and medium-scale industry in Colombia.

USAID/Colombia (AID/C)

The Agency for International Development has given development assistance to Colombia for many years. Today Colombia is one of the largest AID recipients in the world of low-interest, long-term loans, together with a few grants.

In the 1960's, AID/C assisted in the financing of an industrial development program, and there is ample evidence that many accomplishments resulted from this effort. This program was largely oriented towards the larger industries and institutions. It was phased out in the late 60's as the need for assistance diminished.

Emphasis has shifted in recent years to the vast need for technical assistance to small and medium-scale industry (firms with fewer than 200 employees and capitalization under \$1 million). And greater emphasis than ever is being given to the need for transferring science and technology and managerial and technical skills to business and industry in developing countries. The Department of State's interest in this area of development is reflected in the following excerpts from Secretary Henry Kissinger's address to the General Assembly of the Organization of American States in Atlanta, Georgia, on April 20, 1974:

The transfer of science and technology may be an even more important bottleneck in the development effort than capital. The United States, as a technologically advanced nation, recognizes a special responsibility in this regard.

We (OAS) have set up a Working Group on Science and the Transfer of Technology to strengthen our cooperation in the process of industrialization. . . . Its tasks should encompass: Improving the dissemination of information on available technologies, including managerial and engineering skills; spurring the search for new technologies in such areas as . . . labor intensive industry; and identifying how to adapt technology most effectively to different national circumstances and industries.

AID/C recognizes both the importance of technology transfer and management and technical assistance and the particular need of small and medium-scale industry

in Colombia for these types of services. Unfortunately, however, AID/C presently is neither organized nor adequately staffed to carry out the technology transfer and technical assistance activities itself nor to coordinate and administer these functions effectively if the recommendations in the other sections of this report are carried out by other institutions in Colombia.

It is recommended, therefore, that the function of technology transfer and management and technical assistance to small and medium-scale industry be recognized as a separate entity within AID/C. At a minimum, this will involve the creation of the position of Small Industry Technical Assistance Officer (or a similar descriptive title) within the Mission to provide a focal point for coordinating small industry assistance efforts in Colombia and to give visibility to AID/C's support of this function. The importance of small and medium-scale industrial development and the broad scope and variety of problems involved in technology transfer and technical assistance merit full-time recognition and participation by AID/C.

Corporación Financiera Popular (CFP)

The Corporación Financiera Popular (CFP) was founded in 1968 as an outgrowth of a commercial bank "Banco Popular" to make loans to small and medium-scale industrial enterprises. It is governed by a Board of Directors, with a President, General Manager, Manager of the Executive Unit, and a Manager of Technical Services. The national office is located in Bogotá, with regional offices in Bogotá, Cali, Medellín, Barranquilla, Bucaramanga, Pereira, Cartagena, Manizales, Ibaqué, and Armenia.

CFP is currently funded by a low-interest AID/C loan of 60,000,000 pesos (US\$2,400,000), of which 25,000,000 pesos (US\$1,000,000) has been disbursed. The other source of funding is the Government of Colombia (GOC) through matching funds on a one-for-one basis.

Loans are made for from one to ten years. The loss rate is 3%, and 9% of the value of the outstanding loans are considered "slow pay." More than three-fourths (77.3%) of the loans in 1973 and 70.2% of the accumulated loans to date have been for working capital. In 1973, the 1,066 loans totaling 274,409,000 pesos (US\$10,976,360) contributed to the creation of an estimated 5,738 new jobs. In total, CFP has made 3,547 loans with a total value of 802,036,000 pesos

(US\$32,081,440), and it is estimated that these loans have contributed to the creation of 24,520 new jobs.

The CFP loans range from 8,000 pesos (US\$320) to presumably an unlimited amount, although 4,000,000 pesos (US\$160,000) is the largest loan actually processed to date. To be eligible for a loan, an industry should be capitalized below 35,000,000 pesos (US\$1,400,000). Although there is a sliding scale, the general rule of thumb is that the investment per employee should not exceed 100,000 pesos (US\$4,000).

The current interest rate ranges from 16% to 20% depending largely on the life of the loan, with the longer loans carrying the higher interest rates. (It should be noted that current inflation in Colombia is around 25% per year).

CFP is generally making satisfactory progress, and its development plans are sound and well thought out. However, there are a number of problem areas that merit immediate attention:

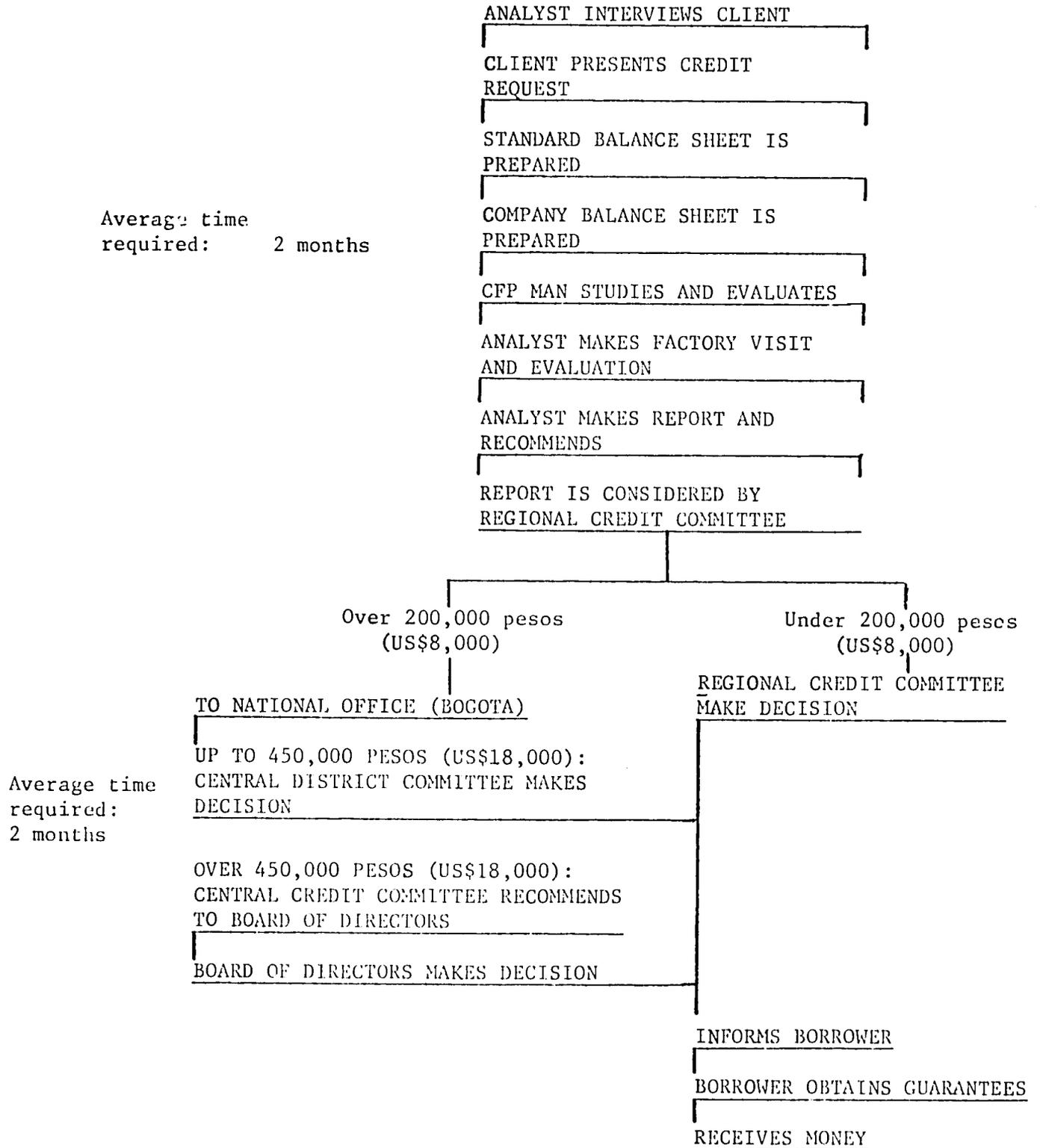
1. The processing of a loan application is unnecessarily cumbersome and time consuming. A large part of this can be attributed to the lack of adequate accounting records in most of the smaller industries. This problem is currently being approached on several fronts, including a grant of 10,000,000 pesos (US\$400,000) to Servicio Nacional de Aprendizaje (SENA) by AID/C to assist in loan preparations. However, the degree of regional authority and the existing systems and procedures can be revised to significantly expedite the processing of loans. (See Chart 1 for existing loan processing procedure.)

Loans are being decentralized to the regions, but the decision-making authority is not. In 1973, decisions on 35% of all loans processed and on 78% of the total value of loans were made in Bogotá. Yet the value of the loans in the regions exceeded the value of those in Bogotá by more than a 2-1 ratio (194 million to 80 million pesos).

Based on the conclusion that the regional limit of approval of 200,000 pesos (US\$8,000) is too low, it is recommended that the regional level be raised to at least 300,000 pesos (US\$12,000). Using 1973 figures, this would cover 81% of the loan decision and 33% of the value of loans processed. Consideration should be given to raising the regional approval limit to as much as 500,000 pesos (US\$20,000), which by 1973 figures would have covered 88% of the decisions and 45% of the value.

Chart 1

CFP LOAN PROCESSING PROCEDURE



It also is recommended that the authority of the credit committee in Bogotá be raised from its current 450,000 pesos (US\$18,000) limit to at least twice the recommended regional limit, with a 600,000 pesos (US\$24,000) minimum.

2. CFP has many competent and dedicated people from a banking point of view. However -- and this is readily recognized internally -- there is a deficiency both in the number and qualifications of personnel in loan administration where technical assistance is required by potential small-industry borrowers from the point of loan application to the ultimate use of the money in meeting the manufacturing, manpower, material, and/or marketing needs of the small-industry loan recipient.

It is in this area that extensive outside assistance is needed to support and strengthen CFP's loan program, to develop an effective program of management and technical assistance and technology transfer for small and medium-scale industry, and eventually to train the CFP staff to provide these technical assistance services as a continuing function of the institution. Among other things, such a program should be expected to accomplish the following:

- a. Stimulate the expansion and growth of existing business and industrial enterprises that receive loans from CFP.
- b. Assist in the establishment of new, economically sound enterprises in order to enhance the chance for success on the part of individual entrepreneurs and small and medium-size industries.
- c. Assist ailing companies in overcoming managerial and technical problems in order to stabilize operations, save jobs, and assure the repayment of CFI loans.
- d. Provide pre-application management counsel to CFP and to applicants for CFP loans, as well as provide to CFP an objective evaluation of the motivation and capabilities of the applicants and the feasibility of the proposed ventures.
- e. Monitor and advise designated recipients of CFP loans during the period immediately following the disbursement of funds in order to assure that maximum benefit is derived from the use of such funds.
- f. Prepare and present training seminars and conferences related to the aims of CFP and provided for staff personnel of CFP or other agencies designated by CFP management.
- g. Assist CFP strengthen its economic and industrial information base and research efforts and capabilities.

It is anticipated that a program of this magnitude and importance would require a minimum investment of three years and \$600,000 of outside assistance before it could be a self-sustaining part of an expanded CFP operation. Implementation of the program would require the combined efforts of local expertise in partnership with experienced U.S. capabilities.

3. It is difficult to understand the logic behind CFP rediscounting loans (80% for industries in cities up to 350,000 population and 65% in larger cities) at a 3% interest rate to the Fondo Financiero Industrial (FFI) when both are being financed principally by long-term, low-interest loans from AID/C funds.

The role of FFI is clear and is described in detail in the next section. It is felt, however, that since CFP is responsible for making loans to the small and medium-scale industrialist, more funds should be made available to CFP to avoid rediscounting to FFI, even at the expense of FFI funding. Last year, CFP accounted for 51% of the number and 25% of the value of FFI's rediscounted loans.

4. One of the major delays in an industrialist receiving money from CFP after a loan is approved is in the applicant obtaining the required guarantees, based on an estimated value of machinery, land, buildings, and equipment. CFP has accepted and is currently developing a loan guarantee program. This should be encouraged.

The new CFP program will guarantee the individual personal guarantee required by the bank up to 100%. Bank loans to the individual will be guaranteed up to 65%. This is a positive step and it is hoped that in the near future the 65% can be increased. This program will allow more national funds to be employed, and at the same time it will expedite the guarantees of the small and medium-scale industrialists.

Fondo Financiero Industrial (FFI)

The Fondo Financiero Industrial (FFI) was founded in late 1968 with the objective of operating as a rediscount house for private banks throughout the country on industrial loans. In actual operation, FFI is a paper organization with 10 employees, all of whom are on the Bank of the Republic (BOR) payroll and are used freely for other BOR activities as required. In addition, FFI is more involved in establishing lines of credit through a rather complex system than in performing rediscount activities.

FFI was originally funded by a low-interest, long-term AID/C loan of 180,000,000 pesos (US\$7,200,000), with the Government of Colombia (GOC) matching this amount on a one-for-one basis through the sale of six-month bonds at 11% per annum interest. The original AID/C loan has been disbursed and represents the real effectiveness of FFI, since the sale of the bonds has been far below the original projection. To increase the capitalization and effectiveness of FFI, AID/C made another loan of 115,000,000 pesos (US\$4,600,000) under the same conditions as above, but these funds have not been disbursed pending the GOC meeting its financial commitment under the agreement.

In 1973, FFI made 954 rediscounts for a total of 531,530,000 pesos (US\$21,261,120) bringing the accumulated total to 4,127 rediscounts for a value of 1,040,587,000 pesos (US\$41,623,480). FFI is permitted to rediscount up to 80% to banks in cities up to 350,000 population and 65% to the remainder. The rejection rate for rediscount applications overall has been 18%. The money received by FFI from AID/C does not come directly from the lender. In the case of AID/C, the funds are given to the Treasury of the Republic (TOR), who disburses the funds to the Industrial Finance Institute (IFI) in the Bank of the Republic (BOR), who in turn lends the money to FFI in the BOR at 7% per annum. FFI then rediscounts loans to commercial banks at 16% to 18%.

The importance of an institution in Colombia that can rediscount commercial loans cannot be overestimated. However, there are a number of areas of policy and procedure relating to FFI that should be evaluated carefully, including the following:

- o The justification for FFI's existence as an entity since it consists of not much more than a paper organization operated by employees of the BOR.
- o The reason FFI does not operate more as a rediscount house than a line-of-credit activity.
- o The justification for IFI to charge 7% per annum for mere paper transactions, thus reducing AID/C loans to 93% at point of impact. If a CFP loan is rediscounted, it is cut another 3%, leaving 90% effectiveness.
- o The incentive to buy six-month GOC bonds at 11% per annum to provide matching funds for FFI, when money in the Colombian market earns from 20% to 36%.
- o The necessity for such a cumbersome, time-consuming rediscount approval process, starting with a 17-page questionnaire, much of which is a duplication if

it is a CFP loan. Chart 2 diagrams the approval process that can require from two week to several months, depending on circumstances and the demands of BOR on the FFI personnel involved.

In relation to the latter point, it is concluded that the approval limit of the Credit Committee is too low at 200,000 pesos (US\$8,000). Based on 1973 reports, 39.6% of all rediscount requests, or lines of credit, and 80% of the total value must go through the entire approval process. By raising the approval level of the Credit Committee to 500,000 pesos (US\$20,000), it would reduce the proportion requiring Managers Committee and Board approval to 17.2%, while still leaving 60% of the money to be disbursed under their control.

To study in depth the entire FFI organization and its systems and procedures, it is recommended that a consultant experienced in development banking (SBA, IBD, IBRD, or similar loan institution) be retained for a period of six months at a cost of approximately \$25,000. The purpose of this study should be to provide AID/C with a comprehensive analysis and to recommend needed reforms to better attain the original objective of FFI -- that of providing an efficient rediscount service to commercial banks, thereby releasing more capital for investment in small and medium-scale industries.

If time does not permit an in-depth study, then an experienced banker or industrialist fluent in Spanish and knowledgeable of South America should be retained for at least one month to analyze the FFI operation and to give AID/C a clear and precise report on what is or is not being done and why.

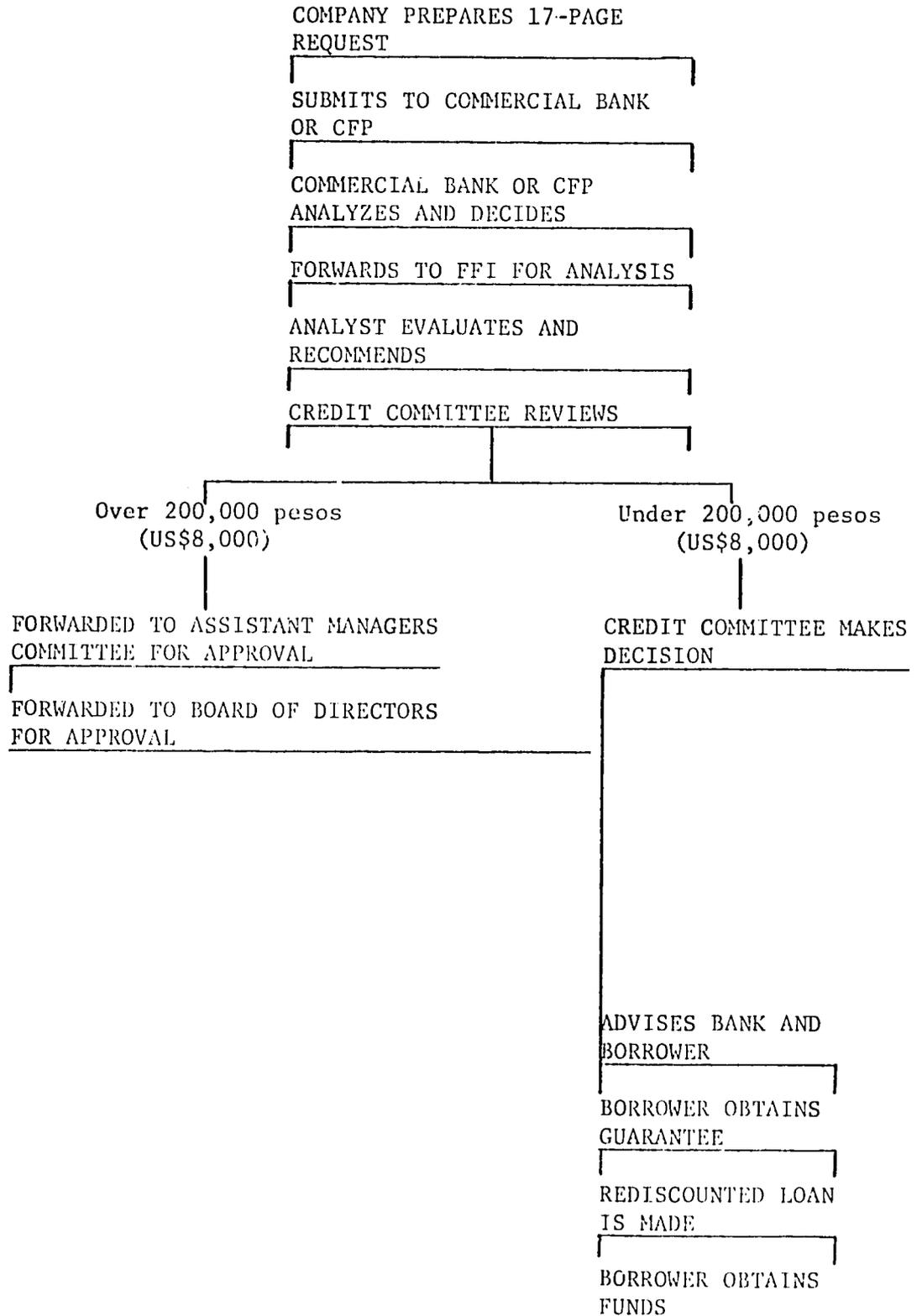
Servicio Nacional de Aprendizaje (SENA)

Servicio Nacional de Aprendizaje (SENA) was formed as a result of a study conducted by the International Labor Organization (ILO) in 1955. It was actually established by a law in 1957 and became an operating entity in 1959. It consists of two basic operations: (1) training apprentices in practically every office or factory position from clerk to heavy machinery operators; (2) providing management advisory or consulting services to industry. The latter was initiated approximately four years ago.

The apprentice programs in 1973 had a total enrollment of 65,638 students with an accumulated total enrollment to date of 325,923. The management advisory or consulting service in 1973 undertook 1,235 assignments with a staff of

Chart 2

REDISCOUNT APPROVAL FLOW



approximately 150 consultants. In addition, they assisted 282 companies in credit application preparation and conducted 654 courses with an attendance of 13,820, a 35% increase over 1972. These services were performed by personnel of the 18 branch offices in Bogotá and throughout Colombia.

SENA is supported by a 2% surcharge on the payroll of all industries in the country with over 10 employees and/or 50,000 pesos (US\$2,000) capitalization. They have received further assistance from the ILO, United Nations, Great Britain, France, Canada, Holland, Switzerland, Germany, FAO, Ireland, CIME, Israel, Spain, U.S. Peace Corps, and AID/C. The majority of the donors have been concerned with the program of apprentice development. Great Britain was also concerned with the development of the management advisory or consulting service. AID assistance of 10,000,000 pesos (US\$400,000) was designated to finance 25 accountants to assist the small and intermediate industrialists in the preparation of loan applications.

Remaining from the various previous programs are two consultants from Great Britain, advising on a half-time basis the management advisory or consulting service that they assisted in developing, and one Frenchman, one Canadian, and one ILO advisor to the apprentice program.

The management advisory service will receive in 1974 from ILO nine consultants, six full time and three half time, to assist in program development and implementation. This should be ample to meet determinable needs and plans. The apprentice program has been promised an additional advisor from Belgium, bringing the total to four.

The apprentice training program has a rather ambitious goal of doubling its output in the next two years. The question that this program presents is very complex from the standpoint of AID/C's possible involvement. The existing apprentice programs were established by European and ILO advisors using the antiquated guild method as the basis of development and learning.

Most of the classroom instruction is carried out by an instructor using only a chalkboard and dedicated to the concept that it takes years to learn a skill. There are more effective, efficient, and modern techniques such as Master Training Concept (MTC), perfected by H. B. Maynard and others in 1957, that can produce well-trained operators in 10 to 20 weeks rather than the two to four years required under more antiquated systems; programmed instruction in lieu of the full-time teacher approach, which allows for better learning through pacing of the

participant; and the use of visual aids, models, cut-aways, projectors, and other related training equipment which are basic to the U. S. instructional approach.

In talking of doubling the capacity of the apprentice program, interest has been voiced by the management in upgrading quality as well as quantity.

Before AID/C considers entering the SENA apprentice program, it is recommended that they retain for a period of at least six months an American training consultant at an approximate cost of \$25,000 to perform the following functions:

1. Determine the needs of the country in the area of apprenticeship.
2. Estimate what part of the national needs will be, and should be, met by SENA.
3. Compare the programs presented by SENA with present and future national demands.
4. Review every viable program and determine exact needs as to revision, modernization, and supporting training aids and equipment.
5. Determine what instructional materials can be bought packaged and what will have to be developed and translated and estimate additional staffing or upgrading required.
6. Prepare a list of costs involved, including technical assistance required, and present to AID/C and the management of SENA.

From this type of analysis and evaluation, AID/C could determine if it should assist SENA and, if so, how this assistance should be provided and at what cost.

As for the continuation of financing the accountants to assist in preparing loan applications, it is generally felt that the loan applications prepared by SENA moved quickly to completion. However, AID/C is getting little or no recognition for this contribution. This service is considered a SFNA operation, and AID/C's 10,000,000 pesos (US\$400,000), according to the 1973 SENA annual report, came from the National Planning Department.

Asociación Colombiana Popular de Industriales (ACOPT)

Asociación Colombiana Popular de Industriales (ACOPT), which was founded in 1951, is an association of industrialists similar to the National Association of Manufacturers in the U. S. Current membership is reported to be approximately 5,000 out of the estimated 15,000 to 20,000 industries in Colombia.

The association is governed by a national board of directors consisting of a salaried president who is appointed to a two-year term and 14 non-salaried elected regional presidents, one from each of the designated regions of the country. The board of directors meets once a year to formulate policy and evaluate progress. Each board member has a voice and a vote. The regional presidents are assisted at these meetings by their regional directors who have a voice, but not a vote.

The president's office is located in Bogotá and is staffed by a full-time secretary and 12 part-time assistants, consisting of three lawyers, four economists, and five business administrators.

The regional staff normally consists of a full or part-time regional director, one or more secretaries or receptionists, a very limited staff of normally part-time business administrators, economists, or engineers, and professors and graduate students from nearby universities on an assignment basis.

The basic functions of ACOPI in the past have been to offer some sort of concerted voice for the intermediate industrialist -- in many cases against the legal or regulatory advantages of the large industries, cartels and monopolies. It also has championed such causes as the CFP and loan guarantee programs. It helped host the Inter-American conference on small and medium-scale industries in Bogotá in November 1973. Much of its direct technical assistance has been relegated to a mutual concern and paperwork support due to constant shortages of funds and resources.

Funds are obtained by a sliding scale of subscription fees depending upon the capitalization of the member firms. At the present level, these funds are insufficient for growth. The president and others feel that there is little hope of any significant increases either in number or income until the association can start providing the services for which it was originally designed -- that of providing technical assistance and technology transfer services to its affiliates.

In Colombia there is a "no-man's" land of industries between those that are served free by such organizations as SEMA and those well established firms that can afford the services of the established management advisory firms (INCOLDA, ANDI, FICITEC, and others). This intermediate group, which constitutes the majority of the ACOPI membership, is distrustful of free services, can pay a moderate fee, and needs faster and improved technology transfer, technical information

services, and assistance in financial control, accounting, industrial engineering, marketing, materials management, and general management.

ACOPI is proposing, with the assistance of AID/C, to revise, strengthen, and expand its existing organization and provide the technical assistance required to meet the aforementioned needs. ACOPI is seeking financial assistance over a five-year period to develop the capabilities to perform the services for which it was intended. To accomplish this task the general outline of resources that would be needed are as follows:

- o The services of an experienced professional consultant who for a period of six months would, with the president and board approval, delineate precisely the scope of activities and services to be performed, initiate membership drives, develop the plans for the implementation of five pilot regional development programs, and determine staffing requirements at a national and regional level.

- o The same or a similar experienced professional consultant would work for a period of approximately two and one-half more years assisting in the implementation of development programs, recruiting and training of additional staff, and expanding the technical assistance and technology transfer activities nationally and in the pilot regional development programs.

During this period of time major emphasis would be placed on the national office and one large, two intermediate, and two small regional offices.

It is felt to accomplish the foregoing the staff would have to be increased significantly. The national office should have, in addition to the president and secretary, two national coordinators, an experienced public accountant, economist, industrial engineers, a business administrator, and a librarian. The large regional offices would require, in addition to the director and secretary, two industrial engineers, two business administrators, three accountants (one primarily internal), and an economist. Medium-size regions would require, in addition to the director and secretary, three accountants (one primarily internal), two business administrators, and two engineers. Smaller regions, in addition to the director and secretary, would require two accountants (one primarily internal), an industrial engineer, and a business administrator.

Additional services, such as seminars, publications, journals, and data collection, would be provided from a national and regional basis.

o At or near the end of the third year, the program should be very thoroughly evaluated by AID/C to determine:

1. If the experienced professional consultant is still needed, for how long and for what services?
2. Have the services provided by the regional staff resulted in increased membership and income?
3. How much must membership fees be increased to allow AID/C assistance to end at the conclusion of the five-year period?
4. Will the ongoing program continue to progress at a rate that will permit ACOPI to assist in the acceleration of the development of the remaining nine regions?

This program would cost between \$750,000 and \$1,000,000 over a five-year period, with years one and five as periods of least outlay, around \$100,000 a year, and years two and three the heaviest, around \$300,000 a year.

Even if it is decided to support the expansion of the Corporación Financiera Popular (CFP) to include the function of technology transfer and management and technical assistance rather than support the development of this function within ACOPI, it is recommended that the ACOPI national headquarters be assisted over a three-year period in providing for more presentable quarters and a full-time staff including an economist, accountant, engineer, and lawyer, so that the association can become a more effective lobbying group and can be a focal point for information dissemination and membership enrollment.