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SMALL-SCALE INDUSTRY PROMOTION:
ECONOMIC AND SOCIAL IMPACT ANALYSIS

by

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I. INTRODUCTION

A salient feature in the development strategy for the decade of

the 70s was the emphasis on small-scale industry promotion. It became

widely recognized by the end of the 60s that the post-war industrialization

policy in many developing countries tended to aggravate their problems

of unemployment and inequitable distribution of income. A new ray of

hope was seen in small-scale industry in seeking solutions to these

problems.

The popularity of small-scale industry (SI)[1] for development

policy rests on three major premises: (a) SI is labor-intensive and is

therefore ideal for labor-abundant and capital scarce countries; (b) SI

increases the incomes of poor families, thus improving income distribution

among families; (c) SI helps promote rural and regional development to

the extent that it can make do without the advantages of agglomeration

and urbanization economies. Given these assumptions, a study of the

effects of SI promotion seems to have much policy relevance.

[1]SI subsumes several small-scale enterprises (SEs). Hence the
acronyms SI and SEs are used interchangeably.

The purpose of this paper is to examine the effects of small-scale enterprises (SEs) on economic and social development concerns. In particular, we are interested in the Philippine government's (GOP) effort to promote SEs and their consequent economic and social impacts. We present first a perspective on small-scale industry in the Philippines and on the government's SI program. Next, we review the relevant literature to lay the underpinnings for the conceptual framework. We then present our method of analysis including the data and statistical technique used. This is followed by a discussion of empirical results. The final section makes concluding remarks.

II. SMALL-SCALE INDUSTRY IN PERSPECTIVE

Based on employment size criterion, cottage enterprises (1-4 workers) accounted for a little over three-quarters of the total number of manufacturing establishments in the Philippines in 1975, and small enterprises (5-99 workers) made up over one-fifth of the total. The pattern was virtually the same in 1967. The two types of enterprises together constituted close to 99 percent of all establishments in both periods. Furthermore, over the eight-year period cottage types grew 69 percent and the small ones increased 84 percent (both together at 72 percent) -- overshadowing the growth rates of medium and large industries (Table A). Thus, small enterprises ("cottage" and "small" types combined) play quite a dominant role in the country's manufacturing

Table A. Number of Establishments, Employment and Value-Added in Small, Medium and Large Industries, Philippines 1967 and 1975

Establishment Size*	1967	(% Share)	1975	(% Share)	% Growth Rate
A. Number of Establishments					
Cottage	34,995	(77.8) } 98.6	59,251	(76.6) } 98.8	69.3 } 72.3
Small	9,343	(20.8)	17,153	(22.2)	83.6
Medium	278	(0.6)	401	(0.5)	44.2
Large	384	(0.8)	486	(0.6)	26.6
TOTAL	45,000	(100.0)	77,291	(100.0)	71.8
B. Employment					
Cottage	85,083	(16.4) } 41.0	121,832	(16.9) } 46.3	43.2 } 56.6
Small	127,529	(24.6)	211,186	(29.4)	65.6
Medium	38,407	(7.4)	56,371	(7.8)	46.8
Large	267,685	(51.6)	329,625	(45.9)	23.1
TOTAL	518,704	(100.0)	719,014	(100.0)	38.6
C. Census Value-Added (₱000 at 1965 prices)					
Cottage	111,870	(1.8) } 27.4	113,983	(1.8) } 15.0	1.9 } -77.0
Small	1,571,344	(25.6)	836,759	(13.2)	87.8
Medium	482,138	(7.8)	1,154,861	(18.3)	139.5
Large	3,978,858	(64.8)	4,219,054	(66.7)	6.0
TOTAL	6,144.210	(100.0)	6,324,657	(100.0)	2.9

*Cottage refers to establishments with 1-4 workers, small 5-99 workers, medium 100-199, and large 200+ workers. References to smal enterprises in the text concern cottage and small establishments combined.

Source: NCSO, Census of Establishments.

sector, and this is particularly true in the provinces.[2]

As regards employment, small enterprises (SEs -- referring to
cottage and small establishments henceforth) contributed some 41 per-
cent in 1967 and 46 percent in 1975. The contribution of medium enter-
prises (MEs) stood at about 7.5 percent during the interval while that
of large enterprises (LEs) fell from 52 to 46 percent. Over the
eight-year period SEs registered a growth rate in employment of around
57 percent compared to about 47 and 23 percent of MEs and LEs,
respectively. The average for all size classes was roughly 39 percent
(Table A).

When it comes to production, however, the picture becomes
pathetic for SEs. The share in value-added of SEs dropped from 27
percent in 1967 to 15 percent in 1975, reflecting an absolute decline
in output of 77 percent. By contrast, MEs registered an amazing out-
put growth of 139 percent, with output share rising from 8 to 18 percent.
LEs, on the other hand, exhibited a modest growth performance of 6
percent, with value-added share steady at around 66 percent during the
period (Table A).

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[2]The focus of the study is on small enterprises (technically
cottage and small) rather than on "small" and "medium" because
"medium" establishments are relatively insignificant, especially
outside big cities. For a discussion on how to define industries, see
Annex A.

In terms of labor intensity, small enterprises evidently use less capital per worker than do medium and large firms. Capital-labor ratio rises monotonically with size of establishment as shown in Table B. SEs use roughly ₱7,500 worth of capital per worker compared to ₱19,700 for MEs and ₱25,800 for LEs. Putting it differently, the capital intensity of SEs is only about 29 percent that of LEs while it is 76 percent for MEs.

Table B. Capital-Labor Ratios by Establishment Size, 1974

Establishment Size	Capital*/Labor (₱000/worker)	Relative Ratios (200+ = 100)
1 - 4	1.4 ⎫	5 ⎫
5 - 19	4.7 ⎬ 7.5	18 ⎪
20 - 49	8.7 ⎪	34 ⎬ 29
50 - 99	15.2 ⎭	59 ⎭
100 - 199	19.7	76
200+	25.8	100

*Based on book value of fixed assets.

Source: Anderson and Khambata (1981:154) from NCSO and NACIDA.

In light of the above considerations, namely, the dominance of SEs in terms of number of establishments and their significant contribution to employment but depressed output performance, the government has seen fit to provide assistance for the development of the small industry sub-sector. Another rationale for government intervention is the

potential of this sub-sector in helping promote regional and rural development as well as better income distribution.

III. OVERVIEW OF THE SI PROGRAM[3]

The Philippine government's effort to foster small-scale enterprises has revolved around the Ministry of Industry's Medium and Small Industries Coordinated Action Program (MASICAP) and Small Business Advisory Centers (SBAC).

The MASICAP was a brain child of the Development Academy of the Philippines (DAP) in late 1973. When the Department of Industry (now Ministry of Industry) was created in the middle of 1974, MASICAP was absorbed to become the functional arm in the promotion of small- and medium-scale industries. MASICAP was envisioned to bridge the gap between financial institutions (banks) and entrepreneurs. Financial institutions require entrepreneurs to present project feasibility studies before considering loan applications. Large firms do not find any difficulty in complying with this requirement since they have the financial resources for the preparation of feasibility studies. By contrast, rural and small entrepreneurs cannot afford to hire consultants to prepare project feasibility studies. This is where MASICAP services can be valuable. MASICAP personnel are to search

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[3]For a more detailed description of the program, see Annex B.

for these small entrepreneurs and assist them in preparing feasibility studies to be submitted to financial institutions.

There were about 50 MASICAP teams (150 field personnel) distributed all over the country, excluding Metro Manila, in 1980. Since 1973, MASICAP teams had assisted many and vaired enterprises, new as well as existing ones, for a cumulative total of 7,403 projects. Of this total, however, only 2,944 projects had been approved as of 30 June 1980. Industrial activities included a wide range, from "balut" and noodle processing, to guitar and furniture making, to machine shops, and to mining and quarrying.

The SBAC component of the SI project was initiated in July 1975 for the purpose of providing post-loan assistance to MASICAP-assisted projects as well as to other enterprises in need of technical assistance. It became apparent that the problems of small and medium businesses do not end with the availment of loans; these enterprises need a "follow-through" to full fruition. Thus, the output of the GOP's SI program can be gauged not just by the number of SEs assisted but, more importantly, by the degree to which they become established.

There is an SBAC in each of the 11 regions (located in the capital) outside Metro Manila, with 242 field staff in 1980. Advice and assistance are given on matters of finance, management, production, marketing, inventory, integrated plant survey, etc. As of mid-1980, a total of 1,578 small and medium enterprises had availed themselves

of referral, information service and consultation or what is called
RISC for short.

Project Inputs

The inputs of the SI program can be classified as direct and
indirect. Direct inputs are the technical assistance and financial
subsidies given to SI clients. Technical assistance is in the form of
free service given by the MASICAP in the preparation of project
feasibility studies. The clients likewise avail themselves of financial
subsidies from the Industrial Guarantee and Loan Fund (IGLF) of the
Central Bank and from the Development Bank of the Philippines (DBP).
IGLF and DBP loans, channeled through DBP branches, rural banks and
some commercial banks, carry interest rates appreciably lower than the
market rates -- about 14 percent versus 20 percent. Projects accepted
for IGLF or DBP funding have a considerably shorter waiting time before
approval and release of funds than through regular funding sources.
This time difference can be an intangible input from MASICAP's stand-
point or benefit on the part of the clients.

Additional direct inputs are furnished by the SBAC in the form of
post-loan advice and assistance to SI. Indirect inputs would be
the administrative and maintenance expenses at the head office and
in the field which are incurred for both MASICAP and SBAC.

Project Outputs

Direct outputs would be the new, expanded or improved business enterprises, as well as the training or entrepreneurial development of clients in preparing project feasibility studies and managing businesses. In addition to the direct outputs, the training on-the-job of MASICAP and SBAC personnel themselves may be considered an indirect output.

IV. REVIEW OF THE LITERATURE

The failure of large-scale manufacturing in generating the expected employment opportunities is quite widespread. For example, Morewetz (1974) shows for a number of countries in Latin America and Africa that, despite substantial investments in manufacturing, employment in the sector grew less rapidly than the labor force, and in some instances even declined in absolute terms. SI is generally believed to have a greater capacity to absorb labor than does large-scale industry (LI) (e.g., Rao 1965, Paine 1971, IBRD 1978a).[4] Theoretically, it would seem that LI has a better potential for promoting both direct and indirect employment through linkage effects. But it has been shown that LI has a high propensity to import its inputs, resulting in only a moderate increase in domestic production, not to mention the strain on foreign exchange (IBRD 1978a). In cases

[4]For a skeptical view on the ability of SI to generate a large number of jobs efficiently, see Ho (1980).

where the direct employment effects of SI are relatively small,

indirect employment can be significant as discussed theoretically by

Krishnamurty (1975) and empirically by Stewart (1975) with regard to

the manufacture of cement blocks in Kenya.

Apart from its labor-intensive character, SI is deemed

particularly desirable in LICs on account of its ability to employ

unskilled labor. Paine (1971) discovered that Japanese SI employed

a considerable proportion of unskilled labor to allow for greater

flexibility in production. Japanese producers found it easier to

adjust the amount of labor used than that of capital in times of

fluctuating demand. By contrast, LI tends to use skilled labor and

has to offer higher wages and benefits than does SI. The use of

unskilled labor, however, tends to contribute to the low productivity

(output/labor ratio) of SI. This low productivity of SI has also been

attributed to primitive tools, inefficient organization and supervision

in India (Rao 1965), or simply to insufficient capital equipment as

in the Philippines (Bautista 1974).

While SI has a low output/labor ratio, its output/capital ratio

is generally higher than that of medium- and large-scale industry

(MI and LI). To the extent that output/capital ratio reflects

efficiency in the use of capital, SI is especially suited to capital-

scarce LDCs. The Bolton Committee of Britain reports that "small

firms apparently have a slightly lower net output per person employed

than do large companies, but a slightly higher return on capital"

(Boswell 1973). Shinohara (1968) found that in Japan small-scale enterprises (SEs) had generally low capital valuation inasmuch as they used mostly second-hand machinery. Scattered data worldwide, though incomplete and not strictly comparable, strongly suggest that investment per worker in SI is considerably lower than in MI and LI (de Vries 1979, Marsden 1981). Likewise, the relatively low capital/ labor ratio of SI makes for a scale of plant appropriate for a small market such as exists in LDCs (Banerji 1976, 1977).

Apart from employment generation, another major objective in the promotion of SEs is to increase domestic productive or value-added that redounds as higher household incomes for the owners/entre-preneurs themselves as well as the employees (IBRD 1978b). This is expected to lead to an improvement in income distribution to the extent that the benefited households belong to the low-income segment of society. Studies on India (Fisher 1965) and Latin America (Nielson 1969) suggest such income-distribution effect. The nature of the effect, however, varies depending on the context being considered. Among areas (regions, provinces, or municipalities) the distribution may well improve, while within an area mong house-holds, it may worsen if the owners/entrepreneurs of SEs are the already better-off ("small-time capitalists") in the community. There is reason to believe that this type of distribution effect is taking place. [5] Hence, it is important to specify the context or the unit

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[5]This conjecture was supported by G. Piron, Consultant to the Ministry of Industry, in a personal communication.

of analysis in examining the impact of SEs on income distribution.

Still another role that SI is supposed to play is the promotion of rural and regional development, i.e., lessening rural-urban and interregional disparities. Inasmuch as SEs by their nature can dispense with agglomeration and urbanization economies, they may readily locate anywhere in the periphery (if they are of the "footloose" type) or near the source of materials (if they are of the "resource-oriented"type). It is also increasingly recognized that SEs can become an important source of non-farm activities in rural areas. They can provide off-season employment to farm workers, thus increasing their incomes. Banerji (1976) points out that SEs can prosper in regions where resources are available and that the multiplier effect is enhanced to the degree that local raw materials are utilized. Further, Morawetz (1974) observes that SEs can thrive in far-flung places that entail high transportation costs to the urban center.

The location of SEs has an implication on population movement to the extent that migration occurs on account of differentials in employment opportunities and income across areas. Thus, it may be argued that it makes sense to promote SEs in areas with surplus labor and low incomes so that out-migration may be moderated. There is some indication that out-migration can become excessive, leading to the stagnation of certain rural areas (Pernia 1977).

An impact of SI that seems not yet widely appreciated is that on women's participation in the labor force. Certain types of SEs employ mostly female workers, such as garment making, food processing, and the majority of traditional handicrafts (Dhamija 1975).

A less perceptible effect is that on human fertility. The fertility effect can be conceived as an indirect one passing via female labor force participation and income. Concerning the former route, some authors find it useful to distinguish between factory and non-factory types of SEs. For instance, Staley and Morse (1965) report that in Japan non-factory types (industrial homeworks) tend to encourage larger families, but factory-type employment dampens the fertility rate. As regards the income route, fertility may rise or fall depending on whether household income is below or above some threshold value as hypothesized and empirically tested by Encarnación (1973, 1977) for the Philippines and other Southeast Asian countries.

Other conceivable direct impacts of SI are on energy use and the environment, which are two other concerns in Philippine develop-ment planning. Virtually nothing to our knowledge has been written on SI relative to these areas of concern. Nonetheless, it may be surmised that SEs have less of the deleterious effects of industrial activity on the environment while minimizing the use of conventional energy.

There are indirect impacts of SI that seem self-explanatory. Examples are education/training on-the-job, nutrition and health via

the income effect, as well as foreign exchange earnings from export-oriented SEs.

A final argument for giving more importance to SEs is based on the fact that in the Philippines, as in most LDCs, manufacturing activities are predominantly done on a small-scale basis, as discussed above. Bautista (1974) finds that ironically labor productivity has been declining sharply in the SEs while it has been increasing in the larger establishments, and attributes this trend to two causes: (a) limited use of capital equipment and machinery in SEs, and (b) rampant underemployment of workers in SEs. He recommends that since the promotion of SEs serves better the objectives of greater employment and income equality, scarce capital should no longer be lavished inordinately on capital-intensive industries; rather, a greater share of resources should be allocated to small-scale producers. Likewise, more effective forms of technical assistance and extension services should be provided them in order to raise their levels of output and productivity (see also Marsden 1981).

V. CONCEPTUAL FRAMEWORK

In the general conceptual framework for the analysis of economic and social impacts of development projects, project inputs are expected to generate outputs which, in turn, affect certain areas of concern. In the case of the small-scale industry (SI) promotion, direct inputs in the form of technical assistance and financial subsidies together with indirect

inputs (administrative expenses) bring forth new, expanded or improved small-scale enterprises (SEs) which influence various economic and social concerns. This process may be roughly sketched in Figure 1.

The box at the top represents the above-mentioned project inputs that lead to project outputs on SEs (new, expanded, improved). The remaining boxes below are the various development concerns. The three most directly affected areas are employment, production and productivity. The impacts on these areas are commonly assumed by both researchers and planners to be positive and substantial in terms of both direct and indirect effects.

Another area expected to be influenced by SI is income growth and distribution -- not directly but more logically via employement and production/productivity. The influence would also be positive, i.e., the aggregate income of the community rises and, therefore, the average income of households becomes higher than previously or without the SI program. Likewise, income distribution among households is often presumed to improve in the belief that the increase in demand for labor puts an upward pressure on wages, or, given steady wages, additional members of a household who want to work can now find work. This expectation is based on the premise of a closed-community labor market -- a premise that is probably wrong because of free spatial mobility of labor. On the production or sales side, income disparity among households is supposed to diminish because there can now be

Figure 1. A Simple Schema of the Links of the SI Development
Program to Areas of Concern
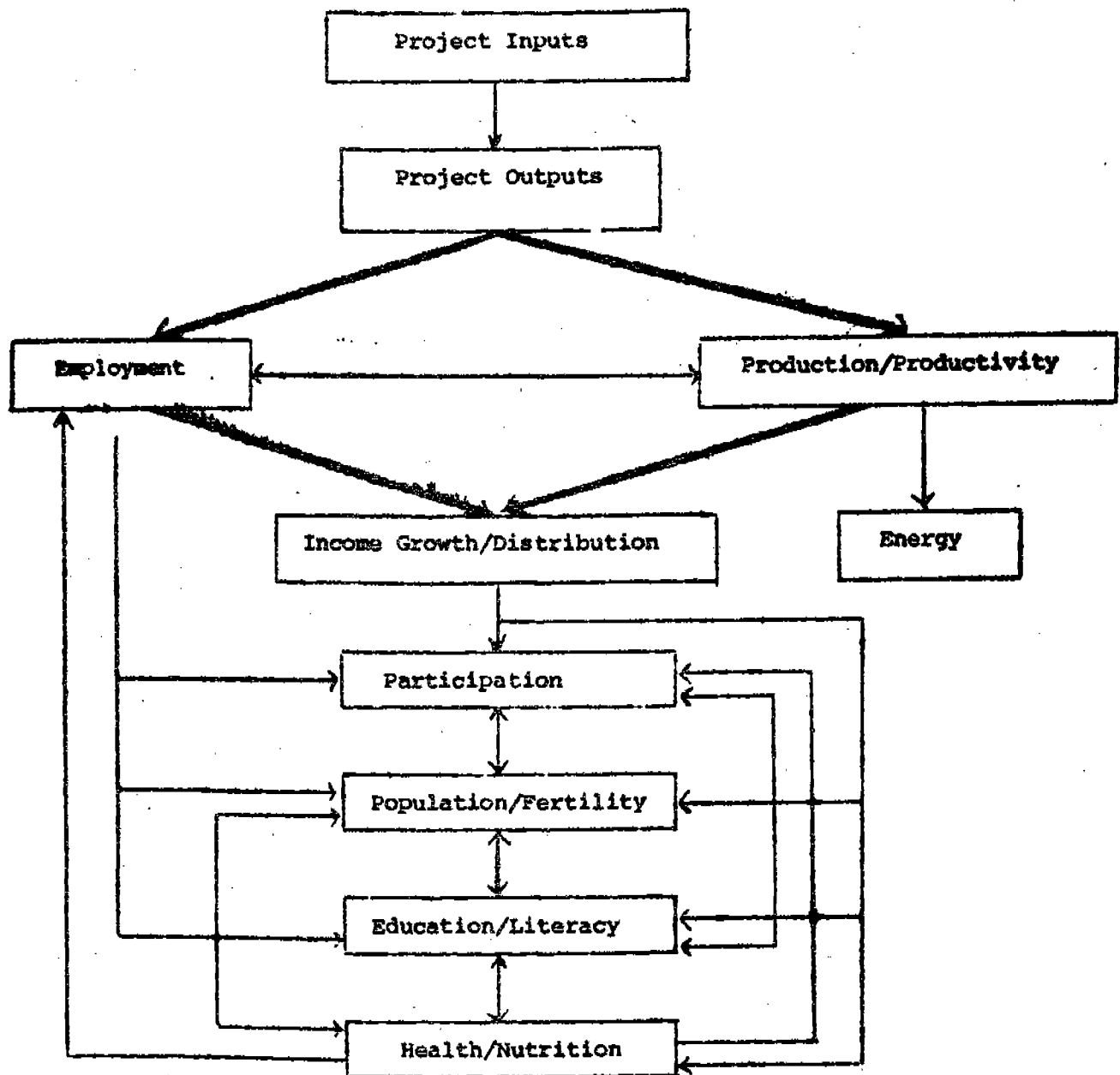
more small-time owners and entrepreneurs, i.e., "poor" people are now given the opportunity to own or run their own businesses. However, it may well happen that those who avail of the new opportunities are the middle- and upper-income households who would have the ready advantage in terms of information about, and access to, the SI program. Thus, while it is logical to expect that mean household income in the community would increase, it is not clear a priori what the net effect would be on income distribution.

The areas of concern discussed so far, scil., employment, production/productivity, and income growth/distribution, are essentially economic. They are the ones frequently alluded to as the justification for promoting SEs. The impacts on these concerns are relatively easy to perceive (although the direction of the net impacts may not be all that clear) and this is why the arrows going to them are made comparatively bold.

One more economic concern can be added (and can be easily appreciated nowadays) -- energy use, which would be improved as a result of higher productivity in SI, e.g., greater output per kilowatt hour compared with corresponding output ratios for MI and LI. The framework goes further by proposing second- and third-order impacts on other areas of concern which are social in nature. These concerns are: participation in development, population/fertility, education/literacy, and health/nutrition. Figure 1 shows arrows going from employment and income growth/distribution to these social concerns.

Employment opportunities created directly or indirectly by SEs would allow increased participation of women and persons belonging to previously less employable ages, such as younger children and older people. Participation in the labor market may also facilitate participation in such other activities as social, cultural and political, and this can be further reinforced by higher income.

Two aspects of the population concern would be affected by employment and income. One is the movement (temporary or permanent) into the community of workers and households who are attracted by job openings and better incomes, as well as the possible exit of those who may be displaced by migrant labor. The other aspect is fertility -- the opportunity cost of woman's time would go up, thereby reducing pregnancies and delaying marriage (lower proportion of married women); however, the effect of income may be positive or negative depending on whether the household is below or above some threshold.

The education/literacy effect of employment would be largely in the form of skills acquired on-the-job, which can also be transmitted to the workers' children. Likewise, with higher income more formal and vocational education can be attained by both the parents themselves (adult education) and their children. Finally, it is easy to conceive of better health and nutrition made possible by greater income. In turn, health and nutrition have a bearing on employability and participation, as indicated by the upward arrows to employment and participation.

Figure 1 also denotes two-way arrows between the four boxes of social concerns. Thus, participation can have a positive effect on population movement and a negative effect on fertility; in turn, spatial mobility and lower fertility facilitate participation. Participation and education/literacy can exert mutually positive influences. Education/literacy is understood to have a positive bearing on population mobility and a positive effect on fertility for the household below a threshold, negative for that above the threshold. At the same time, spatial mobility and lower fertility can be conducive to education/literacy. Health/nutrition and education/literacy are reciprocally beneficial. Also, health/nutrition can facilitate spatial mobility and enhance fertility (through fecundity) while lower infant and child mortality can serve as an incentive for a smaller number of children. Obversely, people tend to move to areas with better health and nutrition facilities while less pregnancies may be better for the health of both mother and children.

Figure 1 represents a simplified picture of a development process triggered by SI promotion in a community.[6] It merely highlights the more conceivable relationships and hypotheses, some of which may be tested with survey data. Other relationships are possible but less conceivable for our purpose, not to say harder to operationalize

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[6]Possible indicators for impact assessment are proposed in Annex C.

for testing. Examples are arrows from employment and participation

to health/nutrition and between energy and income growth/distribution.

One area of increasing social concern -- environment -- is not even

mentioned because of a presumably tenuous link with SEs. No neheless,

to the extent that SEs are intensive in the use of indigenous raw

materials, a relevant question is: how do their ratios of employment

and of output to raw materials compare with those in medium and large

enterprises?

VI. METHOD OF ANALYSIS

The Survey

The focus of the survey was Tagbilaran, the capital city of

Bohol province which is one of the Visayas Islands. The context of

small enterprises in Bohol can be seen in Table C. Distribution of

the number of enterprises in Bohol is not too different from the

national (Table A) except for the visible absence of a large industry.

As regards employment and production, SEs clearly predominate the

manufacturing scene in the province, with only 3.5 percent employment

and just over a quarter output share contributed by one ME. In terms

of female participation, female workers constitute about 32 and 25 per-

cent of "cottage" and "small" industry workers, respectively, but

virtually nil of medium industry employees.

Table C. Number of Establishments, Employment and Value-Added in
Small, Medium and Large Industries, Bohol 1975

Employment Size	Enterprises	%	Employment	%	Value-Added ₱000)	%
Cottage	689	(72.8)	1,614	(44.1)	2,938	(23.1)
Small	256	(27.1)	1,920	(52.4)	6,296	(49.5)
Medium	1	(0.1)	129	(3.5)	3,493	(27.4)
Large	0	(0.0)	0	(0.0)	0	(0.0)
TOTAL	946	(100.0)	3,663	(100.0)	12,727	(100.0)

Source: NCSO, Census of Establishments.

Tagbilaran is a typical small provincial city (41,270

population in 1975) where there has been some palpable government

intervention for small enterprises to speak of, i.e., where there

is a sufficient number of SEs that have received the types of MASICAP

and SBAC inputs described in section III. The site may be considered

one of the pioneer areas of the Ministry of Industry with MASICAP

intervention starting there in late 1974.[7]

The survey for this research project had enterprise and house-

hold components. The enterprise component was undertaken during the

period May-July 1980 while the household portion was carried out

during July-September 1980.

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[7]A profile of the project site and the details of the survey
design are given as Annex D.

The enterprise survey tried to cover 60 out of 100 MASICAP- and SBAC-assisted firms, and about 120 partially assisted or completely unassisted enterprises drawn from a population of 180. As mentioned earlier, under the MASICAP and SBAC programs of the Ministry of Industry there had been three types of inputs, viz, pre-loan consultancy service, below-market-interest loans, and post-loan technical assistance. In practice, however, it is difficult to untangle one type of input from the other because MASICAP and SBAC services often complement each other. Apart from MASICAP/SBAC assistance, there is the regular (partial) type of service provided by the DBP. Consequently, the survey collected pertinent data from three SE categories: MASICAP/SBAC-assisted, other-assited, and unassisted.

The household survey was linked to the enterprise survey, according to the following scheme:

	Type of Household (HH)	Original Numbers in Sample	Actual Numbers Used in Analysis
a)	Owner HHs of MASICAP/SBAC (M/S) - assisted enterprises	60	29
b)	Owner HHs of M/S-unassisted enterprises	120	91
c)	Unrelated worker HHs in M/S-assisted enterprises	100	89
d)	Unrelated-worker HHs ir M/S-unassisted enterprises	100	90
e)	HHs engaged in other livelihood (retail trade, government service, landlords, etc.)	150	129
	Total	530	428

The scheme was designed to allow tracing of the hypothesized impacts of SE development on the households of owners/entrepreneurs and workers. Group (e) households were included for comparison purposes. The HH survey contained a total of 17 blocks of questions on various economic, social and demographic matters of interest.

To supplement the enterprise and household data, a survey of key informants was conducted during the summer of 1981. Key informants interviewed included the mayor, vice-mayor, parish priest, school heads, barangay leaders, bank managers, civic association presidents, etc. -- numbering 34 in all. The survey was designed to get a sense of the perceptions of "inside authoritative observers" about the role of small enterprises in socioeconomic development at the firm, household and community levels.

Shortcomings of the Data

Of the 180 enterprises targetted for the survey only about 156 could be reached by the interviewers. Due to the vicissitudes of field work and data processing, however, only 85 units of observation turned out with the requisite information. Of the 85, 34 were unassisted, 31 MASICAP/SBAC-assisted and 20 assisted by other programs. Before-assistance data could not be gathered for most establishments and the little information that was collected was not useful.

A technical problem that was raised time and again in the past had to do with probable non-randomness of government intervention which

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would then render any impact assessment invalid. That is to say, there
seemed a possibility that MASICAP/SBAC (M/S) assistance was systematically
extended to firms on the basis of certain characteristics. To test
for non-randomness we ran the following regression equation reflecting
the assistance decision:

$$G_g = f\ (L_i,\ K_i,\ V_i,\ W_i,\ I_k)$$

where G_g = 1 if enterprise received assistance type g, 0 otherwise;

  g = 1 if M/S assistance,

  g = 2 if other type of government assistance,

  g = 3 if no assistance received;

L_i = monthly man-hours of employment in enterprise i;

K_i = capital stock (fixed assets in pesos) in enterprise i;

V_i = monthly value-added (in pesos) in enterprise i;

W_i = hourly wage rate (in pesos) in enterprise i;

I_k = 1 if enterprise i belongs to industry class k, 0 otherwise;

  k = 1 food manufacturing

  k = 2 wearing apparel

  k = 3 wood products

  k = 4 furniture and fixtures

  k = 5 printing, publishing and allied

  k = 6 fabricated metal products

  k = 7 electrical machinery, apparatus and supplies

  k = 8 other non-metallic mineral products

k = 9 other manufacturing

k = 10 hotel and restaurant.

The equation was applied to data for two periods: November 1977 and February 1980. In both cases the results were statistically insignificant, i.e., none of the t-values (except possibly for V_1 and I_g) was statistically different from zero and the R^2s were all low (Table 1)[8]. Hence, the test results do not substantiate the problem of non-randomness of government intervention through either MASICAP/SBAC (G_1) or other assistance programs (G_2).

Concerning the household survey, of over 500 households interviewed only about 428 cases turned out to be valid after data "cleaning". The five household types mentioned earlier are nevertheless reasonably well represented among the 428 observations, as shown above.

Statistical Specification

Following the theoretical framework presented in section V, we formulate regression equations for assessing economic and social impacts of the small industry development program. We include in

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[8]Since the dependent variable is dichotomous, these statistical tests are technically not valid. However, it has been shown that the results of OLS are oftentimes similar to those of the more appropriate techniques like logit analysis (see Pernia 1979)

the RHS of each equation variables that are theoretically or empirically known to affect a particular area of concern in addition to the explanatory variable(s) of interest.

Enterprise Regressions:

$$(1) \quad L_i = f_1 \ (K_i, \ W_i, \ I_k, \ G_g, \ T_y)$$

$$(2) \quad V_i = f_2 \ (K_i, \ L_i, \ I_k, \ G_g, \ T_y)$$

$$(3) \quad \frac{V_i}{L_i} = f_3 \ (\frac{K_i}{L_i}, \ I_k, \ G_g, \ T_y)$$

$$(4) \quad \frac{V_i}{K_i} = f_4 \ (\frac{L_i}{K_i}, \ I_k, \ G_g, \ T_y)$$

$$(5) \quad \frac{V_i}{E_i} = f_5 \ (K_i, \ L_i, \ I_k, \ G_g, \ T_y)$$

where L_i, V_i, K_i, W_i, I_k, and G_g are as defined above; E_i = energy use (in pesos) in enterprise i; and T_y = 1 if enterprise received assistance in y, 0 otherwise, y = 1, 2, 3, 4, 5 for 1974-75, 1976, 1977, 1978, 1979-80, respectively.

Since we are interested in the question whether or not different types of government assistance make a difference, the focal explanatory variables are G_g as well as T_y.

Household Regressions:

(6) $\quad Y_{hh} = f_6 \; (L_{hh}, \; E_h, \; A_h, \; G_{hha})$

(7) $\quad N_{hh} = f_7 \; (\hat{Y}_{hh}, \; E_h)$

(8) $\quad H_{hh} = f_8 \; (\hat{Y}_{hh}, \; \hat{N}_{hh}, \; E_h)$

(9) $\quad M_{hh} = f_9 \; (\hat{Y}_{hh}, \; E_h, \; A_h)$

(10) $\quad F_w = f_{10} \; (\hat{YN}, \; \hat{YX}, \; E_{w1}, \; A_{wp}, \; AM)$

(11) $\quad P_w = f_{11} \; (\hat{Y}_{hh}, \; E_{w\underline{1}}, \; A_{wp})$

The endogenous variables are

Y_{hh} = annual income of household (in pesos);

N_{hh} = nutrition level -- average weekly expenditure (in pesos) on food per person;

H_{hh} = health -- 1 if any household member got sick during past 30 days, 0 otherwise;

M_{hh} = migration -- 1 if lived not in this poblacion/barrio, 0 otherwise;

F_w = fertility of housewife -- number of children born alive;

P_w = participation of housewife in community affairs -- 1 if member of any organization, 0 otherwise.

The exogenous variables are

L_{hh} = total annual number of hours worked by working household members;

E_h = education of household head in years;

A_h = age of household head in years;

G_{hha} = 1 if household belongs to category a, 0 otherwise --

a = 1 if owner HH of M/S-assisted enterprise, 2 if

owner HH of M/S-unassisted enterprise, 3 if

unrelated worker HH in M/S-assisted enterprise,

4 if unrelated worker HH in M/S-unassisted

enterprise, 5 if HH engaged in other livelihood;

HH_n = 1 if HH is type n, 0 otherwise -- n = 1 if owner HH

of M/S-assisted or unassisted enterprise, 2 if unrelated

worker HH in M/S-assisted or unassisted enterprise,

3 if HH engaged in other livelihood (used in lieu of

G_{hha});

YN = min $(0, Y_{hh} - 4000)$

YX = max $(0, Y_{hh} - 4000)$ -- ₱4000 represents roughly the

annual minimum wage for 1980 in the project site

(national was ₱2,500 in 1973 adjusted for annual

inflation rate of 13.1 percent and further adjusted

downward by about one-third to reflect income level

in Central Visayas relative to the national average);

E_{wl} = 1 if wife has education level $\underline{l}$, 0 otherwise -- 1 = 0

if no schooling, 1 if 1-4 years, 2 if 5-7 years, 3 if

8-10 years, 4 if 11-13 years, 5 if 14+ years;

A_{wp} = 1 if wife is in age group p, 0 otherwise -- p = 1

if 15-19, 2 if 20-24, 3 if 25-29, 4 if 30-34, 5 if 35-39,

6 if 40+;

AM = age at marriage of wife in years.

The equations are estimated by OLS; the household equations are estimated

recursively -- a ^ sign on an endogenous variable denotes that such

variable was estimated from a previous equation.[9] Equation (10)

follows Encarnación's specification of the threshold model of fertility.

The focal explanatory variables are G_{hha} and HH_n which are

designed to link the enterprise to the household. G_{hha} would show if

owning, or working in, and M/S-assisted enterprise makes a difference.

HH_n would indicate whether households owning assisted or unassisted

enterprises are better off than those merely working in those

enterprises and those engaged in other types of livelihood.

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[9] We also tried using 2-SLS but the results were not encouraging. The recursive specifications are in any case deemed appropriate for the purpose.

VII. EMPIRICAL RESULTS

The results of regression analysis are given in Tables 2-3 for estimated impacts at the enterprise level, and in Tables 4-6 for impacts at the household level.[10] Tables 4a-6b show the results of alternative, non-recursive specifications. A discussion of findings with respect to the areas of concern follows.

Employment

Government assistance to small enterprises (SEs) generally seems to have a favorable effect on employment in these enterprises. Especially noteworthy is the impact of the MASICAP/SBAC (M/S) program which is more significant than the ordinary type of assistance (e.g., through the usual channels of the DBP). M/S assistance (G_1) results in additional employment of close to three full-time equivalent workers per enterprise compared to two full-time equivalent workers generated by the ordinary type of assistance (G_2) (Table 2).

As expected, an increase in capital stock (K_i) has a strong positive effect on employment in SEs, while wage rate (W_i) has the usual negative sign. To the extent that SE assistance normally includes capital augmentation, the impacts of G_1 or G_2 may also be partially embodied in the K effect. Among the various industry classes $(I_k{}'s)$, the hotel and restaurant (I_{10}) industry seems to stand out in employment

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[10]The means of the variables are presented in Table 7.

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generation. The overall employment impact of SEs, particularly the M/S-assisted ones, at the community level was strongly affirmed by the key informants survey.

Production and Productivity

MASICAP/SBAC assistance also appears to make a difference insofar as production in SEs is concerned. On the average, M/S-assisted firms are ahead by some ₱335-391 of monthly value-added relative to other-assisted and unassisted SEs (Table 2). As expected, labor and capital are important in the production function of SEs. Establishments engaged in wood products and those in the hotel and restaurant business contribute relatively much value-added to the SI sector.

As regards labor productivity (V_i/L_i), M/S assistance shows the positive sign but is not significant. But an increase in capital per worker (K_i/L_i) which may result from assistance, as already noted, seems to have an appreciable impact on labor productivity -- supporting the common observation of capital scarcity in SEs. For instance, raising capital-labor ratio by ₱1000 results in roughly a ₱5.50 rise in productivity per man-hour (Table 2). Among the various SE types, those manufacturing wood products exhibit the highest labor productivity.

Concerning capital productivity (V_i/K_i), M/S assistance and other assistance exert positive impacts, with M/S the more significant of the two. Productivity per ₱1000 worth of capital is ₱65.00 and ₱44.00 higher in M/S-assisted and other-assisted firms, respectively,

compared to unassisted ones (Table 2). Likewise, increasing capital utilization ($^{L_i}/K_i$) (through, e.g., overtime work) following technical assistance appears to markedly improve capital productivity. In quantitative terms, doubling capital utilization raises capital productivity by about 90 percent -- lending additional support to earlier studies.

Energy

Firms benefiting from government aid also tend to be more energy-efficient, and this is especially true of M/S-supported establishments. The output-power ratio is 5.6 and 1.1 higher in M/S-assisted and other-assisted SEs, respectively, than in unassisted establishments (Table 2). Of the various SE categories, wood products and other manufacturing appear to be particularly energy-efficient.

Finally, it may be noted in Table 3 that M/S assistance maintains its overall superiority over other assistance programs after controlling for timing of assistance (T_y). The effect of year of assistance on the various areas of concern at the firm level is not clear, perhaps because the entire period (1974-80) of M/S operation is still too short.

Income

As may be expected, it appears that M/S-assisted enterprises tend to benefit primarily the owners of these SEs. For instance, an M/S-assisted firm results in about ₱10,991 average additional income during

the year for the owner household, <u>ceteris paribus</u>, relative to house-holds engaged in other livelihood (retail trade, government service, etc.) (Table 4). The effect on household incomes of assisted SE workers does not seem to be as favorable. However, it may be argued that if these workers were previously unemployed or were earning lower wages, then by definition they are relatively better off being employed in SEs. As expected, number of working family members, education and age of household head are all positive determinants of household income.

Income Distribution

From the preceding discussion on income it may be inferred that government assistance to SEs tends to worsen income distribution across households in the community. To begin with, SE owners whether assisted or unassisted have the highest average income relative to worker house-holds and households engaged in other types of livelihood -- the respective mean annual incomes are $14,303; $5,844; and $10,511. The advantage of SE owners over the other groups is also apparent from the household type dummy (HH_n in Table 5). This is actually not surprising since one has to be relatively affluent to start and own a business.

While promotion of SEs may lead to some deterioration of intra-community (or inter-household) income distribution (at least in the short run), as we conjectured earlier, the result may of course be different for income distribution across larger areal aggregates (e.g., municipalities, provinces, or regions). Moreover, it may be argued

that some worsening of intra-community income distribution is not all that bad if SI promotion results in additional employment which then raises in absolute terms the income of poor households. Our key informants feel that SEs have such an effect on the poor; hence, they favor SE promotion.

Nutrition and Health

As expected, higher incomes allow households to attain higher nutrition levels. For instance, a ⁣$1000 rise in annual family income results in about a ⁣$1.20 increase in weekly expenditure on food per household member (Tables 4-5). Education of household head has a non-linear effect on nutrition -- negative at low levels and positive at higher levels. The income effect on health has the wrong sign and is not significant, while the effect of nutrition has the correct sign but is not significant either[11] (Tables 4-5).

Migration and Fertility

The regression results for migration are obscure (Tables 4-5), but our key informants survey indicates that SE development in the area has attracted in-migrants from other towns in the province and even from other provinces. However, it also shows that SEs have not stemmed the out-migration tradition of the place.

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[11]This is probably due to the underreporting of illness incidence especially among low-income households -- partly because of differences in illness perception among different income groups.

As regards fertility, the results are in accord with the threshold model -- below threshold income the coefficient is positive though not significant; above the threshold it is negative and significant (Table 6). Education of the wife also has the expected non-linear effect on fertility. The coefficients of the control variables are as expected.

Participation

Women's participation in community affairs tends to appreciably rise with household income, and also with age (Table 6). The effect of education on participation is vague, however. Regarding women's participation in the labor force, since from one-fourth to one-third of employment in SEs are accounted for by female workers, it is safe to assume that SI promotion would tend to mop up the unemployed female population. This supposition is supported by our key informants survey.

Environment

We do not have statistical data for the environment concern, but our key informants favor SE development in the place because, in their view, SEs are comparatively non-pollutants. Also, they see SEs as occupying less space and as relatively less energy intensive. Although one might surmise that SI development would tend to deplete local raw materials, our key informants are as yet not sensitive to this possibility.

A Note on Project Cost

It would be misleading to talk only about the benefits of SI promotion. A brief note on project cost is, therefore, in order at this juncture.

From the start of MASICAP/SBAC operation in 1974 up to 1980, program expenditures on 100 SEs in our project site totaled some ₱668,302 in current prices (Table 8). In real (1972 prices) terms, though, the amount is about ₱297,493 -- implying that the real cost per assisted SE is around ₱2,975. Adding to this figure the real interest subsidy enjoyed by an SE, on the average, of about ₱3,198, the "full cost" per SE comes out to roughly ₱6,173.[12] The total "full cost" on the project site during the period 1974-1980 is approximately ₱482,976.

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[12]Interest subsidy arises from the fact that most assisted SEs pay only 14 percent annual interest on their loans instead of the market rate of 20 percent.

VIII. CONCLUDING REMARKS

The results of our analysis allow for some reasonable optimism about small-scale industry promotion as part of overall development policy. Although some of the popular claims about the contribution of small-scale enterprises to development gaols may be overstated, our study provides some indication that public policy support for small industry development in the provinces is worthwhile because it apparently makes a difference. Intuitively, the project cost does not seem excessive although, as with project benefits, it has to be compared with the most of other development projects.

On the whole, the small industry promotion program (MASICAP/SBAC) seems to have favorable impacts on employment, production/productivity, energy efficiency, and income. The effect on income distribution appears unfavorable at least in the short run, although employment generation would be expected to raise in absolute terms the incomes of poor households. Higher incomes, apparently, enable households to attain better nutrition and housewives to participate in community affairs.

Other impacts at the household level are either more difficult to discern or are more hypothetical, partly because they tend to operate via income and other intervening variables and partly because the period of gestation that we have allowed for this study is too short. Accordinly, we have to be much less conclusive with respect to health, fertility, migration, and the environment. We cannot say anything about an education

and literacy impact because it is even more remote, being largely an intergenerational effect.

Our survey of key informants seems to have served reasonably well its ancillary role in the analysis. In general, the authoritative views of community leaders are consistent with our analytical results. They also tend to affirm the likely positive externalities on the less discernible areas of concern.

Table 1. Government Assistance Decision as Influenced by Enterprise
Characteristics: Test for Randomness

Explanatory Variables	1977		1980	
	MASICAP/ SBAC (G_1)	Other Assistance (G_2)	MASICAP/ SBAC (G_1)	Other Assistance (G_2)
Constant	0.0467	0.2918	0.1721	0.1466
L_i	0.00002 (0.3948)	0.00004 (0.6094)	0.00001 (0.2080)	0.00006 (0.8461)
K_i	0.0000 (0.7366)	-0.0000 (-0.2275)	-0.0000 (-0.7307)	-0.0000 (-0.1726)
V_i	0.00005 (1.5785)	-0.00002 (-0.5241)	0.0001 (1.6764)	-0.00003 (-0.4747)
W_i	-0.0007 (-0.9974)	-0.0008 (-0.9163)	-0.0073 (-0.4811)	-0.0011 (-0.0729)
I_2	0.0272 (0.2217)	-0.0126 (-0.0895)	-0.0879 (-0.5196)	0.1875 (1.0987)
I_3	-0.7656 (-0.6153)	0.9082 (1.6705)	-0.2532 (-0.6147)	0.4313 (1.0373)
I_4	0.2625 (1.1030)	-0.1009 (-0.3697)	0.3321 (1.1211)	0.1248 (0.4175)
I_5	0.1415 (0.9671)	-0.1377 (-0.8204)	0.1292 (0.7045)	0.0602 (0.3252)
I_6	0.4100 (1.7500)	-0.2166 (-0.8062)	0.3822 (1.4678)	-0.1785 (-0.6797)
I_7	0.0593 (0.4564)	-0.0828 (-0.5550)	0.0110 (0.0649)	0.0953 (0.5580)
I_8	0.3938 (1.3447)	0.1996 (0.5941)	-0.1965 (-0.4156)	-0.1839 (-0.3858)
I_9	0.4022 (1,8352)	-0.0590 (-0.2347)	0.3602 (1.4916)	0.0318 (0.1306)
I_{10}			0.1037 (0.2880)	-0.1288 (-0.3545)
R^2	0.2824	0.0840	0.2516	0.0797
$\bar{R}^2$	0.1748	-0.0535	0.1146	-0.0888
F-Value	2.6236	0.6110	1.8359	0.4730
N	93	93	85	85

Note: t-values underneath regression coefficients.

Table 2.   Impact of Government Assistance on SEs: Type of Assistance

Explanatory Variables	Dependent Variables				
	L_i	V_i	V_i/L_i	V_i/K_i	V_i/E_i
Constant	1074.3337	550.0090	1.7046	-0.0271	2.1401
L_i		0.6156 (6.1380)			-0.0023 (-1.5884)
K_i	0.0010 (4.8660)	0.0021 (10.4280)			0.0000 (0.1662)
W_i	-66.1989 (-2.0478)				
K_i/L_i			0.0055 (4.4803)		
L_i/K_i				0.9002 (26.6515)	
G_1	550.4067 (2.0049)	390.7688 (1.5946)	0.3999 (0.9962)	0.0653 (1.9464)	5.6386 (1.5678)
G_2	409.8850 (1.4608)	56.6916 (0.2290)	-0.2695 (-0.6618)	0.0440 (1.2695)	1.0705 (0.2947)
I_2	-458.3652 (-1.2711)	-658.0754 (-2.0922)	-0.9682 (-1.8302)	-0.0541 (-1.2185)	2.9987 (0.6496)
I_3	168.8404 (0.2213)	3667.6873 (5.5287)	2.5058 (2.2523)	0.0478 (0.5080)	15.8982 (1.6329)
I_4	523.3980 (0.8078)	-825.8604 (-1.4625)	-1.0226 (-1.0831)	-0.0208 (-0.2601)	2.6456 (0.3192)
I_5	-407.5107 (-1.0292)	-551.9363 (-1.5932)	-1.2572 (-2.1733)	-0.0103 (-0.2104)	6.7534 (1.3283)
I_6	201.5635 (0.3484)	-336.4590 (-0.6682)	-0.7717 (-0.9153)	-0.0210 (-0.2937)	-1.0433 (-0.1412)
I_7	-447.9126 (-1.2316)	-489.9773 (-1.5357)	-1.2147 (-2.3120)	-0.0575 (-1.2689)	1.2816 (0.2737)
I_8	-300.9248 (-0.2907)	-920.0149 (-1.0236)	-1.7201 (-1.1431)	0.0139 (0.1091)	0.6923 (0.0525)
I_9	-481.6543 (-0.9047)	-582.0947 (-1.2510)	-0.3537 (-0.4529)	0.0058 (0.0878)	26.7249 (3.9133)
I_{10}	1739.8203 (2.3284)	1393.1047 (2.4435)	-0.7909 (-0.8120)	-0.0117 (-0.1475)	1.8353 (0.2193)
R^2	0.4461	0.8670	0.4351	0.9123	0.2982
$\bar{R}^2$	0.3447	0.8426	0.3409	0.8977	0.1697
F-Value	4.3987	35.5899	4.6210	62.4249	2.3210
N	85	85	85	85	85

Note: t-values underneath regression coefficients.

Table 3. Impact of Government Assistance on SEs: Type and Year of Assistance

Explanatory Variables	Dependent Variables				
	L_i	V_i	V_i/L_i	V_i/K_i	V_i/E_i
Constant	1166.5215	-222.2720	0.6747	-0.0365	4.0577
L_i		0.5602 (3.9599)			-0.0029 (-1.3394)
K_i	0.0011 (3.8293)	0.0023 (8.3169)			0.0000 (0.3496)
W_i	-0.4217 (-0.0028)				
K_i/L_i			0.0049 (3.1199)		
L_i/K_i				0.9754 (20.2811)	
T_1	709.5085 (1.1727)	692.9900 (1.3426)	1.1277 (1.4837)	0.0004 (0 0118)	3.1426 (0.4005)
T_2	631.3667 (0.8927)	1027.7109 (1.7273)	0.1791 (0.2007)	-0.0099 (-0.2826)	-8.6088 (-0.9517)
T_3	514.3875 (0.9453)	795.3018 (1.7274)	-0.1330 (-0.1939)	-0.0242 (-0.8958)	-2.2448 (-0.3207)
T_4	553.4758 (0.9886)	1117.4075 (2.3525)	0.5737 (0.8191)	-0.0056 (-0.2003)	3.4980 (0.4844)
G_1	-105.0345 (-0.2473)	321.5117 (0.9271)	0.9623 (1.7850)	0.0390 (1.8246)	4.3390 (0.8230)
I_2	-872.1411 (-1.1748)	-548.4817 (-0.8359)	-0.2579 (-0.2822)	0.0003 (0.0091)	1.5002 (0.1594)
I_3	207.6922 (0.1902)	4182.2461 (4.5752)	3.2198 (2.3429)	0.1032 (1.8804)	17.0973 (1.2303)
I_4	214.8292 (0.2391)	-736.1372 (-0.9798)	-0.8026 (-0.7125)	0.0311 (0.6906)	5.4973 (0.4813)
I_5	-622.4575 (-0.9075)	-379.8159 (-0.6653)	-1.1926 (-1.4072)	0.0080 (0.2312)	6.6985 (0.7718)
I_6	521.0647 (0.5629)	39.6230 (0.0509)	-0.2057 (-0.1769)	0.0164 (0.3534)	-1.4921 (-0.1262)
I_7	-502.8901 (-0.7523)	-136.6724 (-0.2434)	-0.9745 (-1.1734)	0.0115 (0.3483)	-1.1876 (-0.1391)
I_9	-557.9487 (-0.6717)	-479.9653 (-0.6995)	0.1988 (0.1927)	0.0874 (2.1348)	33.8753 (3.2472)
I_{10}	2018.6709 (1.8400)	1975.4714 (2.0729)	-1.3338 (-0.9782)	0.0118 (0.2163)	5.4089 (0.3733)
$\bar{R}^2$	0.4697	0.8862	0.4790	0.9360	0.3982
R^2	0.2424	0.8374	0.2763	0.9111	0.1402
F-value	2.0664	18.1703	2.3637	37.6122	1.5436
N	51	51	51	51	51

Note: t-values underneath regression coefficients.

Table 4.   Household Regression Results for Income, Nutrition
Health and Migration (A)

Explanatory Variables	Dependent Variables			
	Y_{hh}	N_{hh}	H_{hh}	M_{hh}
Constant	-5170.8594	13.2927	0.0527	0.3599
L_{hh}	1.8140 (6.7809)			
E_h	688.7581 (5.2680)	-1.1586 (-1.0512)	0.0210 (0.0964)	0.0058 (0.2189)
E_h^2		0.0716 (1.2205)	-0.0011 (-0.0803)	0.0003 (0.2268)
A_h	53.6320 (1.2965)			-0.0021 (-1.1169)
$\hat{Y}_{hh}$		0.0012 (6.2382)	0.0000 (0.0110)	-0.00001 (-1.5370)
$\hat{N}_{hh}$			-0.0031 (-0.0164)	
G_{hh1}	10991.3047 (5.2138)			
G_{hh2}	-1851.9314 (-1.3201)			
G_{hh3}	-2132.9067 (-1.4836)			
G_{hh4}	-2014.6531 (-1.4013)			
$\overline{R}^2$	0.3012	0.1564	0.0062	0.0152
R^2	0.2895	0.1504	-0.0032	0.0058
F-value	25.8601	26.1992	0.6579	1.6124
N	428	428	428	423

Note: t-values underneath regression coefficients.

Table 4a. Household Regression Results for Nutrition, Health and Migration (A)

Explanatory Variables	Dependent Variables		
	N_{hh}	H_{hh}	M_{hh}
Constant	12.9469	0.0614	0.4278
E_h	-0.3666	0.0186	-0.0098
	(-0.3429)	(1.1433)	(-0.3814)
E_h^2	0.0455	-0.0011	0.0006
	(0.7944)	(-1.2732)	(0.4456)
A_h			-0.0027
			(-1.4665)
Y_{hh}	0.0005	-0.000002	-0.000002
	(5.2760)	(-1.6794)	(-0.9385)
N_{hh}		0.00003	
		(0.0368)	
G_{hh1}	17.7795	0.0575	0.2087
	(4.2950)	(0.8947)	(2.1396)
G_{hh2}	9.3960	0.0386	0.0739
	(3.5948)	(0.9579)	(1.1963)
G_{hh3}	1.0123	0.0112	0.0693
	(0.3755)	(0.2743)	(1.0706)
G_{hh4}	-2.8244	-0.0854	-0.0964
	(-1.0377)	(-2.0636)	(-1.4925)
R^2	0.2299	0.0320	0.0380
$\bar{R}^2$	0.2170	0.0135	0.0194
F-value	17.9079	1.7295	2.0446
N	428	428	423

Note: t-values underneath regression coefficients.

Table 5. Household Regression Results for Income, Nutrition, Health and Migration (B)

Explanatory Variables	Dependent Variables			
	Y_{hh}	N_{hh}	H_{hh}	M_{hh}
Constant	-6471.9297	15.2021	0.0674	0.4090
L_{hh}	1.8130 (6.5312)			
E_h	780.0708 (5.7954)	-1.7506 (-1.5456)	0.0187 (0.0354)	-0.0065 (-0.2455)
E_h^2		0.1004 (1.6988)	-0.0010 (-0.0313)	0.0006 (0.4208)
A_h	61.9463 (1.4482)			-0.0030 (-1.5387)
$\hat{Y}_{hh}$		0.0013 (5.3070)	0.0000 (.0088)	0.0000 (0.1713)
$\hat{N}_{hh}$			-0.0038 (-0.0125)	
HH_1	1161.6118 (0.8548)			
HH_2	-1819.2261 (-1.4348)			
R^2	0.2423	0.1363	0.0062	0.0097
$\bar{R}^2$	0.2334	0.1302	-0.0032	0.0002
F-value	26.9950	22.3086	0.6543	1.0235
N	428	428	428	423

Note: t-values underneath regression coefficients.

Table 5a. Household Regression Results for Nutrition, Health
and Migration (B)

Explanatory Variables	Dependent Variables		
	N_{hh}	H_{hh}	M_{hh}
Constant	12.3620	0.0410	0.4202
E_h	-0.4143	0.0224	-0.0070
	(-0.3908)	(1.3914)	(-0.2766)
E_h^2	0.0507	-0.0013	0.0005
	(0.8922)	(-1.4841)	(0.3943)
A_h			0.0032
			(-1.6763)
Y_{hh}	0.0005	-0.000002	-0.000001
	(5.9285)	(-1.7282)	(-0.6376)
N_{hh}		0.0002	
		(0.2096)	
HH_1	11.2071	0.0409	0.1025
	(4.5687)	(1.0727)	(1.7661)
HH_2	-0.5912	-0.0355	-0.0093
	(-0.2568)	(-0.0169)	(-0.1685)
R^2	0.2194	0.0205	0.0201
$\overline{R}^2$	0.2102	0.0065	0.0060
F-value	23.7271	1.4673	1.4231
N	428	428	423

Note: t-values underneath regression coefficients.

Table 6. Household Regression Results for Fertility and Participation

Explanatory Variables	Dependent F_w	Explanatory Variables	Dependent P_w
Constant	4.4489		-0.01710
YN_{hh}	0.00005 (0.4673)	$\hat{Y}_{hh}$	0.00002 (5.3012)
YX_{hh}	-0.00001 (-1.6069)	E_w	0.0041 (0.1083)
E_w	0.2466 (1.5786)	E_w^2	-0.0003 (-0.1495)
E_w^2	-0.0114 (-1.4377)	A_w	0.0095 (3.3184)
A_{w2}	2.1333 (2.2595)		
A_{w3}	3.1270 (3.5265)		
A_{w4}	4.4133 (5.0394)		
A_{w5}	5.6249 (6.4388)		
A_{w6}	7.2411 (8.4103)		
AM	-0.2950 (-13.1952)		
R^2	0.5433		0.1590
$\bar{R}^2$	0.5293		0.1488
F-value	38.7884		15.6861
N	337		337

Note: t-values underneath regression coefficients.

Table 6a. Household Regression Results for Fertility and Participation (A)

Explanatory Variables	Dependent F_w	Explanatory Variables	Dependent P_w
Constant	4.7520		-0.1288
YN_{hh}	0.00005 (0.4671)	Y_{hh}	0.000001 (0.5530)
YX_{hh}	-0.00001 (-1.4431)	E_w	0.0173 (0.4506)
E_w	0.2378 (1.5187)	E_w^2	-0.0004 (-0.2026)
E_w^2	-0.0113 (-1.4230)	A_w	0.0120 (4.2481)
A_{w2}	2.1575 (2.2870)	G_{hh1}	0.3469 (2.9809)
A_{w3}	3.1593 (3.5674)	G_{hh2}	-0.0742 (-1.0119)
A_{w4}	4.4922 (5.1371)	G_{hh3}	-0.0796 (-1.0804)
A_{w5}	5.6968 (6.5246)	G_{hh4}	-0.1617 (-2.1950)
A_{w6}	7.3023 (8.4908)		
AM	-0.2960 (-13.1620)		
G_{hh1}	-0.4014 (-0.8440)		
G_{hh2}	-0.3637 (-1.2442)		
G_{hh3}	-0.1068 (-0.3564)		
G_{hh4}	-0.6433 (-2.1636)		
R^2	0.5516		0.1456
$\bar{R}^2$	0.5321		0.1248
F-value	28.2934		6.9869
N	337		337

Note: t-values underneath regression coefficients.

Table 6b. Household Regression Results for Fertility and Participation (B)

Explanatory Variables	Dependent F_w	Explanatory Variables	Dependent P_w
Constant	4.6603		-0.1485
YN_{hh}	0.00005 (0.4587)	Y_{hh}	0.000004 (1.6666)
YX_{hh}	-0.00001 (-1.5596)	E_w	0.0106 (0.2736)
E_w	0.2555 (1.6348)	E_w^2	-0.00005 (-0.0244)
E_w^2	-0.0121 (-1.5220)	A_w	0.0125 (4.3777)
A_{w2}	2.2058 (2.3355)	HH_1	0.0166 (0.2382)
A_{w3}	3.2004 (3.6091)	HH_2	-0.1070 (-1.6739)
A_{w4}	4.4873 (5.1231)		
A_{w5}	5.6702 (6.4917)		
A_{w6}	7.2847 (8.4612)		
AM	-0.2953 (-13.1137)		
HH_1	-0.3788 (-1.3568)		
HH_2	-0.3796 (-1.4846)		
R^2	0.5473		0.1103
$\bar{R}^2$	0.5306		0.0941
F-value	32.6455		6.8179
N	337		337

Note: t-values underneath regression coefficients

Table 7.   Means and Standard Deviations of the Variables

Enterprise			Household		
Variable	Mean	Standard Deviation	Variable	Mean	Standard Deviation
L_i	1,137	1,218	Y_{hh}	9,623	11,931
K_i	127,814	556,297	L_{hh}	3,570	1,928
V_i	1,344	2,162	N_{hh}	21.602	21.532
W_i	1.938	4.044	H_{hh}	0.093	0.291
E_i	9,032	65,718	M_{hh}	0.286	0.452
G_1	0.341	0.477	E_h	9.437	4.192
G_2	0.247	0.434	A_h	43.528	12.294
G_3	0.400	0.493	F_w	4.205	2.696
I_1	0.141	0.350	P_w	0.415	0.494
I_2	0.259	0.441	E_w	9.785	4.165
I_3	0.024	0.152	A_w	37.766	9.118
I_4	0.035	0.186	AM	23.050	4.862
I_5	0.153	0.362	G_{hh1}	0.068	0.252
I_6	0.047	0.213	G_{hh2}	0 213	0.410
I_7	0.235	0.427	G_{hh3}	0.208	0.406
I_8	0.012	0.108	G_{hh4}	0.210	0.408
I_9	0.059	0.237	G_{hh5}	0.301	0.459
I_{10}	0.035	0.186	HH_1	0.280	0.450
T_1	0.176	0.385	HH_2	0.418	0.494
T_2	0.118	0.325	HH_3	0.301	0.459
T_3	0.235	0.428			
T_4	0.216	0.415			
T_5	0.255	0.440			

Table 8. MASICAP/SBAC Program Expenditures and Interest Subsidy to SEs in Tagbilaran,
1974-1980
(in pesos)

A. Program Expenditures

Year	Expenditures				Number of Projects[b]		Real Cost/Project		
	Current		Constant 1972 Prices[a]						
	MASICAP	SBAC	MASICAP	SBAC	MASICAP	SBAC	MASICAP	SBAC	MASICAP-SBAC
1974-75	₱38,205	-	₱ 23,561	-	4	-	₱ 5,890	-	₱ 5,890
1976	79,475	₱11,734	43,311	₱ 6,394	13	6	3,332	₱ 1,066	2,616
1977	97,721	9,808	48,281	4,846	23	2	2,099	2,423	2,125
1978	81,477	56,205	37,547	25,901	19	4	1,976	6,475	2,759
1979	92,830	40,845	36,823	16,202	18	1	2,046	16,202	2,791
1980	118,971	41,031	40,618	14,009	6	4	6.770	3,502	5,463
	₱ 508,679	₱ 159,623	₱ 230,141	₱ 67,352	83	17	₱ 2,773	₱ 3,962	₱ 2,975

B. Interest Subsidy to MASICAP Projects[c]

Year	Current	Constant 1972 Prices[a]	Number of Projects	Real Cost/Project
1974-75	₱ 19,096	₱ 11,777	3	₱ 3,926
1976	62,042	33,810	9	3,757
1977	109,781	54,240	16	3,390
1978	90,686	41,791	13	3,215
1979	85,931	34,086	13	2,622
1980	28,644	9,779	4	2,445
	₱ 396,180	₱ 185,483	58	3,198

[a] CPI for areas outside Metro Manila.

[b] Refers to number of small enterprises assisted.

[c] Interest subsidy on 58 projects (information on which is given for the entire 1974-80 period) were allocated among the individual years using the percentage distribution of the 83 MASICAP projects over the period.

Source: Bureau of Small and Medium Industries, Ministry of Trade and Industry.

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ANNEX A

ON THE DEFINITION OF SMALL-SCALE INDUSTRY

There are two general approaches to the definition of small-scale industry. One approach is to define SI by such quantitative measures as employment size, employment-power ratio, horse-power capacity, sales or revenue, and capital equipment with some convenient valuation. The other approach used by the Stanford Research Institute is a functional definition based on certain qualitative characteristics.

Regarding the second approach, Stepaneck (1970) characterizes an SE as one with (a) little or no specialization in management, (b) close personal contact of the manager (often a manager-proprietor) with all those involved in the business, (c) lack of access to capital through the organized securities market, (d) no dominant position in a market, and (e) close integration with the local community by reasons of local ownership, management, raw materials sources and markets.

Most studies, however, define SI according to the first approach using quantitative measures. This seems to be the more convenient way since value judgements are minimized and a comparison between countries becomes easier and more meaningful. The implicit assumption is, of course, that the quantitative definition captures most, if not all, of the qualitative features of SI.

Countries at different levels of development use different threshold values of either capital valuation or employment size to delineate between SI and MI. In England, the definition is essentially based on capital valuation with some variant using power capacity or horsepower capacity. This is also true of India. The Japanese, on the other hand, combine capital valuation and employment size in determining a threshold.

In the Philippines, there are two definitions based on two different criteria. One criterion is employment size of the enterprise which is adopted by the University of the Philippines Institute of Small-Scale Industries (UP-SSI).[1] An enterprise with more than five but less than 100 workers is considered small-scale. The other criterion is capital valuation which stipulates that an enterprise with capital assets of between ₱100 thousand and ₱1 million is considered an SE.[2] Recently, the Inter-Agency Committee on Industrial Statistics through its Sub-Committee on Manufacturing decided that in the categorization of enterprises as cottage, small, medium and large, total assets (inclusive of land and building) should be used instead

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[1]The UP-SSI is entrusted to do research, train entrepreneurs, and provide assistance to small-scale industry in the Philippines.

[2]Capital asset in this case is an accounting concept rather than an economic one. Valuation is set at a definite point in time instead of over a period of time.

of capital assets or capitalization. This is to avoid having to

make a choice of precisely what capitalization to use -- authorized,

subscribed, or paid-up. It is this latter criterion which was used by

the Ministry of Industry in defining an SE until recently.

The capital valuation criterion does have its advantages and

disadvantages. One of the problems encountered in capital valuation

has to do with changes in the price of capital. This is especially

true when capital equipment is not discounted over time. For instance,

a plant in 1970 classified as small-scale may become medium- or large-

scale after several years due to increases in the price of capital

assets. The employment size criterion can help solve this difficulty.

With the increase in the price of capital, employment size should

remain constant, given the same technique of production. A difficulty

arises, however, when the entrepreneur's price elasticity of substitution

between labor and capital is high. The increase in the price of

capital may induce an entrepreneur to substitute labor for capital to

an extent that his firm graduates de facto to the medium- or large-scale

category. A solution may be to define SI using the ratio of capital

valuation to employment (or number of workers). In India a method used

is the ratio of employment size to horsepower. In the Philippines, it

is conveniently assumed that SEs are labor-intensive. Under Presidential

Decree 1123 en enterprise with a capital-labor ratio of no more than

P30,000 is considered labor-intensive.

SEs in LDCs can be further categorized into small non-factory
enterprise and small factory enterprise. Shinohara (1968) defines
a small non-factory enterprise by the following attributes: (a) strong
characteristics of an individual enterprise, (b) pre-modern labor-
management relationships, (c) inferior labor conditions, (d) subordination
in some measure to big enterprises, (e) old-fashioned equipment and
techniques, (f) pre-modern management of business, (g) inseparability
of household and business, and (h) a high dependence on family labor.

In the Philippines, an enterprise with capital assets of
less than ₱100,000 is considered cottage industry. There is no
distinction between non-factory and factory SEs but cottage enter-
prises correspond to the Shinohara definition of small non-factory
enterprises for Japan. For the purpose of this study, the nomen-
clature SI or SEs includes cottage industry. Operationally, then
SI refers to enterprises with capital assets of ₱1.0 million or less.

ANNEX B

THE MASICAP AND SBAC PROGRAMS

by

*Zoila B. Pedro**

History

In response to a presidential call, the Development Academy of

the Philippines in 1973 designed the Medium and Small Industries

Coordinated Action Program (MASICAP). At that time, development

programs for small-scale industry were limited and fragmented. Technical

expertise was provided mainly by the University of the Philippines

Institute for Small-Scale Industries (UPISSI) and funding, by the

Development Bank of the Philippines and the Industrial Guarantee Loan

Fund (IGLF) of Central Bank. Entrepreneurs had difficulty in availing

themselves of technical experts who are largely concentrated in Manila

and in a few other urban centers.

A bridge was thought necessary to link the experts and the

financiers, on the one hand, and the entrepreneurs, on the other.

MASICAP was conceived to be such a link. The basic assumptions of the

MASICAP were: (a) that the potential of small industry development

was substantial and the main problem was access to credit; (b) that

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the delivery system of financial institution can be expected to improve if enough pressure are exerted from the outside; (c) that students can be used to staff the organization and are particularly suitable for the job because of such qualities as freshness of outlook, eagerness for involvement, trainability and flexibility; and (d) that MASICAP was to be temporary only and would be phased out when other institutions could take over its functions.

On June 21, 1974, the Department of Industry was created by Presidential Decree No. 488. Shortly afterwards, the new Department absorbed MASICAP and expanded it to three times its experimental size. One-hundred fifty (150) personnel divided into 50 teams were fielded throughout the country. MASICAP continued under the Department of Industry without major changes from its original concept until July 1, 1980 when it was integrated with the SBAC Program.

By the end of FY 1975, the MASICAP had generated 500 new or expansion projects. In time, however, it becamse neces sary to extend assistance beyond loan availment in order to carry projects to full fruition. As a supplement to the MASICAP program, therefore, the Ministry of Industry (then Department of Industry) proposed to establish the Small Business Advisory Centers (SBAC) to extend post-loan assistance to MASICAP-assisted projects as well as to other enterprises in need of technical assistance. A proposal for this program was submitted to the World Bank for funding. On July 1, 1975, the first

four SBAC offices were launched. By February 1978, SBAC centers

were set up in all 12 regions of the country, as shown in Table 1.

Table 1. Location of SBAC Offices, January 1981

Region	Location	Start of Operations
I	San Fernando, La Union	July 1975
II	Tuguegarao, Cagayan	October 1977
III	San Fernando, Pampanga	August 1977
IV	Pasig, Metro Manila	July 1976
V	Legaspi, Albay	July 1975
VI	Iloilo City	July 1976
VII	Cebu City	July 1976
VIII	Tacloban, Leyte	July 1975
IX	Zamboanga City	July 1975
X	Cagayan de Oro City	July 1976
XI	Davao City	July 1976
XII	Cotabato City	February 1978

Note: The MASICAP although having a national coverage did not have
offices. Field teams were normally stationed in boarding houses.

Staffing

Recruitment into the MASICAP was simple but a high premium was

placed on motivation. Every year, two weeks after the start of the

school year, recruitment officers - usually senior MASICAP staff -

go to the various selected colleges and universities all over the

country to recruit possible MASICAP field workers. Senior business

students were the main target for recruitment. Students were pre-

selected based on academic records and recommendation of the dean.

Those who qualified were then called for interview by a panel

of MASICAP senior staff. Qualities such as maturity of outlook, sense

of responsibility, ability to relate to people, decision-making capability,

leadership and positive attitude towards work were the basic characteristics

by which applicants were screened.

Newly recruited students were allowed to work for one year and at

the same time earn credits required for graduation. Their grades for

the senior year were prepared by the Ministry of Industry and submitted

to their respective schools. In most cases, they enjoyed free tuition

for the year and a modest stipend from the Ministry of Industry.

MASICAP fieldworkers can stay with the program for a maximum of

two years: the first year as a senior student and the last year as a

young professional. However, a few selected MASICAP staff were asked to

stay with the Ministry to become part of the senior technical staff of

the program. This corps of MASICAP staff was responsible for training,

recruitment and general technical supervision of new recruits every year.

The MASICAP recruitment policies and procedures were unique

features of the program. However, these were abolished when MASICAP was

integrated into the SBAC program on July 1, 1980. Students were no longer recruited and recruitment policies followed that of the Ministry of Industry.

The level of expertise needed by the SBAC program has to be more specialized than MASICAP. The task of providing the climate for growth and survival became more of an SBAC responsibility; consequently, a greater degree of maturity and specialization among the staff is considered a prerequisite.

In its initial stage, each SBAC office was started with 5 or 6 key personnel and one clerical personnel. The staff was composed of one Center Manager and 4 to 5 small business consultants. Basic staff qualifications were: (a) at least a bachelor's degree in any of the following fields: business, economics, engineering, agri-business and related fields; (b) familiarity with small business operations; (c) ability to communicate well; (d) willingness to work in rur 1 areas; and (e) good analytical ability.

Applicants to the SBAC program must pass the technical examination given by the Ministry, after which successful candidates were interviewed by the Center Manager and the Program Executive Director.

Unlike the MASICAP, SBAC personnel are given government positions and can stay with the program on a permanent basis. The combined staff complement of the SBAC and MASICAP after integration was 192 as of January 1981, an increase from 66 in September 1978. Forty-one

percent (41%) of the integrated technical staff have previous exposure to the MASICAP, as shown in Table 2.

Table 2. SBAC Staffing, January 1981

Center	With MASICAP Experience	Without MASICAP Experience	Total Technical Staff
1. SFLU	6	6	12
2. Tuguegarao	3	13	16
3. San Fernando Pampanga	8	6	14
4. Manila	10	13	23
5. Legaspi	6	8	14
6. Iloilo	7	13	20
7. Cebu	11	10	21
8. Tacloban	6	6	12
9. Zamboanga	6	9	15
10. Cagayan de Oro	3	15	18
11. Davao	4	12	16
12. Cotabato	8	3	11
Total	78	114	192
Percent	40.6	59.4	100%

Types of Assistance

MASICAP

The specific types of assistance rendered under the MASICAP program were tailored to the perceived primary needs of the target clientele. The following types of assistance were deemed important for their needs: (a) assistance in packaging a project into a bankable form, e.g., project feasibility studies for loan and licensing purposes; (b) advice in potential sources of funding and assistance in gaining access to them; (c) explanation of government regulations, specifically lending procedures and requirements; and (d) assistance in negotiating with the bank for the approval of the loan.

The MASICAP project cycle included the identification of the proponent, data gathering, preparation of the project feasibility study, submission of study to the financier, follow-up of the loan application until funds are released, and, if necessary, assistance during the initial implementation of the project.

SBAC

The Small Business Advisory Centers offered a wider range of assistance than did MASICAP. The focus, however, is on increasing the productivity and efficiency of the small business. In general, SBAC rendered the following types of assistance: (a) assistance in all aspects of management in work organization and product design,

with particular emphasis on price calculations, bookkeeping and
financial planning and management; (b) assistance in materials
procurement; (c) assistance in the choice of technology and in the
solution of technical problems including skills, equipment require-
ments and procurement methods; (d) identification of training require-
ments for workers and owners/managers and identification of potential
training sources; (e) assistance in information dissemination of
government regulations including incorporation of enterprises, registra-
tion and licensing, grants, incentives, etc; and (f) assistance in
marketing.

The diversity of these tasks required a much more complex and
sophisticated extension services program. SBAC is not expected to
perform all these by itself; rather, a strong coordinating mechanism
with other government agencies is considered vital. Institutional
linkages were forged with government agencies, industry associations
and other private organizations for effective coordination in the
delivery of technical assistance to SMI.

Program Accomplishments

MASICAP, 1973-80

During its experimental stage at the DAP (November 1973 to
June 1974), MASICAP assisted only 45 projects, counted in terms of
the number of feasibility studied completed and accepted by the financing

institutions for evaluation. Thereafter, the productivity of MASICAP increased considerably. This was due partly to a revision in policy whereby MASICAP could assist any small industry, whether agriculture-related or manufacturing with an initial project investment of as low as ₱15,000 to ₱4 million as against the experimental policy of assisting only industrial projects with a minimum investment of ₱100,000 to ₱4 million.

Another innovation in the Program was the policy of assisting projects other than those for financing. For instance, some agencies required project feasibility studies for securing permits and licenses to operate. In response to this, MASICAP was made to assist those projects which did not require credit.

As of June 1980, prior to its integration with SBAC, MASICAP had assisted a total of 6,618 projects (Table 3).

SBAC, 1975-80

A measurement of performance for the SBAC program is more complex than that for the MASICAP because of its wider range of assistance. Put simply, SBAC output may be measured by the number of cases halded by the SBAC staff. A case is defined as any issue identified by a staff consultant in his/her client's business that needs decision and, therefore, requires diagnosis, analysis and

Table 3. MASICAP-Assisted Projects, by Type of Assistance Rendered
and Loan Size, June 30, 1980

Types of Assistance	No. of Projects*	% Distribution
For Financing	5,886	89
For Licensing/Permits	583	9
Other Assistance	149	2
Total	6,618	100

Loan Size (₱1000)		
0 - 50	2,098	32
51 - 100	804	12
101 - 150	720	11
151 - 200	190	3
201 - 300	252	4
301 - 400	171	2
401 - 500	229	3
501 - 1 M	284	4
1,001 - 2 M	122	2
2,001 - above	60	1
Withdrawn projects	1,688	26
Total	6,618	100

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*These include project feasibility studies prepared for proponents'
use only and not for submission to financing institutions or other agencies.

Source: BSMI Second Quarterly Report, 1980.

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recommendations. Each case is properly documented into a case report and is considered concluded upon submission of such report to the client for implementation. One client firm can have more than one case. A client is maintained in the SBAC staff client portfolio as long as there is a need for SBAC services, or until such time when the client decides to be dropped from the SBAC roster. As of June 1980, SBAC had assisted 1,428 firms with a total number of 1,567 concluded cases (Tables 4 and 5).

Table 4. SBAC Clients Handled and Concluded Cases, June 30, 1980

Center	Clients Handled	Concluded Cases
SFLU	83	124
Tuguegarao	124	92
Pampanga	63	65
Manila	79	58
Legaspi	143	138
Iloilo	177	210
Cebu	112	136
Tacloban	223	245
Zamboanga	108	140
Cagayan de Oro	140	185
Davao	108	125
Cotabato	68	49
Total	1,428	1,567

Source: BSMI Second Quarterly Report, 1980.

Table 5.   SBAC Cases Handled by Problem Area, June 30, 1980

Problem Area	Number	Percent
Financial	584	37.3
Management	241	15.4
Technical/Production	272	17.4
Marketing	165	10.5
Integrated Plant Survey	99	6.3
Others	206	13.1
Total	1,567	100.0

Source: BSMI Second Quarterly Report, 1980.

Financial cases turned out to be the most common problem handled by SBAC. Some examples of these are bookkeeping system design, cost accounting methods, restructuring of loans, etc. As the program gained maturity, other problem areas were tackled by SBAC staff consultants. Other aspects like production problems, setting-up of systems, marketing, etc., were also looked into. The Integrated Plant Survey was one major diagnosic tool, mainly an exploratory diagnosis of the firm's problems, which was often resorted to by the SBAC personnel for clients whose problems were not easily identifiable and whose operations needed a more thorough analysis. After integration, however, SBAC changed its program thrusts to include industry-level consulting and the usual MASICAP functions.

Profile of MASICAP and SBAC Clients

Geographical Distribution of Clients

The geographical distribution of MASICAP and SBAC clients are shown in Table 6.

Table 6. MASICAP and SBAC Clients by Region, June 30 1980

Region	MASICAP		SBAC	
	Number	Percent	Number	Percent
I. Northwestern Luzon	536	8.1	83	5.8
II. Northeastern Luzon	411	6.2	124	8.7
III. Central Luzon	748	11.3	63	4.4
IV. Southern Luzon	677	10.2	79	5.5
V. Southwestern Visayas	519	7.9	143	10.0
VI. Western Visayas	815	12.3	177	12.4
VII. Central Visayas	443	6.7	112	7.8
VIII. Eastern Visayas	331	5.0	223	15.6
IX. Southwestern Mindanao	450	6.8	108	7.6
X. Northern Mindanao	701	10.6	140	9.8
XI. Southeastern Mindanao	511	7.7	108	7.6
XII. Central Mindanao	476	7.2	68	4.8
Total	6,618*	100.0	1,428	100.0

*Excluding 1,688 projects withdrawn, the total drops to 4,930.

Source: BSMI Quarterly Report.

MASICAP was particularly productive in Regions III, VI and X.
SBAC had a different distribution pattern with regions V, VI and VIII
standing out. The main reason for this was the staggered establish-
ment of SBAC offices.

Distribution by Investment Size

One classification of clients being used by the Ministry of
Industry is investment size. Based on this category, MASICAP and
SBAC were distributed as shown in Table 7. It may be noted that

Table 7. MASICAP and SBAC Clients by Investment Size, June 30, 1980.

Investment Size $\not{P}$'000)	MASICAP		SBAC	
	Number	Percent	Number	Percent
Cottage				
0 - 20	512	10.4	101	7.1
21 - 50	766	15.5	213	14.9
51 - 100	947	19.2	209	14.6
Small-Scale				
101 - 500	1,851	37.5	432	30.2
501 - 1 M	486	10.0	111	7.8
Medium-Scale				
1,001 - 4 M	342	6.9	114	7.9
Large-Scale				
Above 4 M	26	0.5	12	1.0
Uncategorized[a]	-	-	236	16.5
Total[b]	4,930	100.0	1,428	100.0

[a] Uncategorized clients under SBAC include clients handled in the
first years of operations of SBAC.

[b] Excludes 1,688 projects withdrawn.

Source: BSMI Second Quarterly Report, 1980.

assistance had been extended to all industry size categories. Cottage industries were the predominant clientele of MASICAP and SBAC services. Size categories were useful only for financing purposes since banking institutions have a specific loan window for each size category.

Distribution by Employment Size

The distribution of MASICAP and SBAC clients by employment size is shown in Table 8. Once again cottage enterprises are prominent

Table 8. MASICAP and SBAC Clients by Employment Size, June 30, 1980.

Employment Size	MASICAP		SBAC	
	Number	Percent	Number	Percent
Cottage				
Below 20	3,370	68.4	876	61.3
Small-Scale				
20 - 99	584	11.9	269	19.0
Medium-Scale				
100 - 199	35	0.7	24	1.6
Large-Scale				
200 - 499	7	0.10	10	0.7
500 - above	1	0.02	3	0.2
Uncategorized*	933	19.9	246	17.2
Total	4,930	100.0	1,428	100.0

*Lack of available data and records.

Source: BSMI Second Quarterly Report, 1980.

in both MASICAP and SBAC distributions by employment size. Firms belonging to the cottage sector exhibit more problems than the more organized sectors of higher employment size. They are more vulnerable to fluctuations in the market while bigger-scale firms can easily afford technical personnel to handle operational problems.

Distribution by Industry Type

MASICAP and SBAC services are not limited to the manufacturing sector. Non-manufacturing industries were also extended technical assistance. The distribution of clients by type of activity is shown in Table 9.

Table 9. MASICAP and SBAC Clients by Major Industry Type, June 30, 1980

Industry Type	MASICAP		SBAC	
	Number	Percent	Number	Percent
Agriculture, Fishing and Forestry	1,111	22.5	163	11.4
Mining and Quarrying	28	0.6	7	0.5
Manufacturing	3,195	64.8	931	65.2
Non-Manufacturing				
Construction	3	0.1	7	0.5
Electricity, Water and Sanitary Services	1	0.02	5	0.4
Commerce	46	0.9	53	3.7
Transport, Warehousing and Communication	276	5.6	30	2.1
Services	237	4.8	153	10.7
Others	33	0.7	19	1.3
Uncategorized	-	-	60	4.2
Total	4,930	100.0	1,428	100.0

Source: BSMI Second Quarterly Report, 1980.

Perception about the Program

Unlike financial assistance programs, industrial extension service programs like the MASICAP and SBAC are difficult to evaluate. The SBAC program alone covers a wide spectrum of assistance activities. Non-quantifiable benefits from the program, its demonstration effects in the community and its catalytic function pose difficulties in the determination and measurement of benefits.

The MASICAP program has conducted two monitoring surveys of all its assisted clients in 1977 and 1979. Although the major objectives of these exercises were to look into the loan repayment and current operational statuses of assisted enterprises some feed-back was also gathered concerning the impact of the program on its clients. As expected, positive reactions and responses were elicited especially among entrepreneurs who were able to receive financing for their projects. The major focus of the monitoring surveys, however, was on the operational problems faced by entrepreneurs in the course of their business. Apart from these problems, certain issues were brought to light regarding the MASICAP and SBAC programs which could be helpful in planning and implementation. Some of these are:

Favorable Responses

MASICAP and SBAC as "agents of change". To a large degree, extension workers of the programs had been successful in stimulating

greater awareness and participation in the community towards the

development of small enterprises. MASICAP was able to do a significant

job in influencing people's attitudes towards credit as evidenced

by the number of projects that were set up with their assistance.

Entrepreneurs began to emerge in the countryside to try their luck

in business. Funds in the banks were channeled to more productive

ventures other than for the usual housing and real estate loans.

However, the usual conservative attitude of some Filipino entrepreneurs

towards borrowing still seems prevalent in some regions, such as

Regions I and II.

The concepts of quality control, productivity and efficiency,

which are too technical and would have otherwise been incomprehensible,

were translated into a language they could understand.

Youthful idealism. The two programs were distinguished from

other government programs by their relatively young staff. Their

youthful enthusiasm and idealism made up for their lack of experience.

A large segment of those who received assistance from MASICAP and SBAC

registered positive responses to these new breed of extension workers.

Perhaps the more significant effect could be the increased participation

of young people in the economic development process in the community

to which they were assigned.

Unfavorable Responses

Quality of services. The financing institutions to which
project feasibility studies were submitted observed that most of these
studies had the tendency to be very optimistic and did not really
reflect the true situation of the business; consequently, the banks
required revisions of the studies. MASICAP project feasibility
studies were primarily done to comply with bank requirements and only
secondarily to assist proponents in their planning. The tendency
to come up with overly optimistic studies became a natural consequence
of the desire to have the project approved by the financing institution.

Likewise, there were some unfavorable comments on the SBAC.
Some of the SBAC staff recommendations were a little too technical or
theoretical to be understood and implemented by small business
entrepreneurs in the rural areas. This was especially true in the
first years of SBAC operation when most of the staff were fresh from
college and were relatively inexperienced about the realities of
fieldwork.

Credibility of the young staff. People tended to equate
credibility with maturity and experience. Despite their enthusiasm
and idealism, the young staff of the MASICAP and SBAC sometimes had
to contend with people who question their competence and judgement.
As the program gained maturity a certain degree of confidence
in their capabilities was acquired among the staff, and the question
of credibility became less of an obstacle to the program's implementation.

Competition with private sector. The nature of the services rendered by the MASICAP and SBAC programs was similar to that provided by private consultancy groups. Since MASICAP and SBAC services were rendered free of charge, the private groups felt threatened. This fear, however, was unfounded because it had been the operating principle of the Ministry of Industry not to compete with the private sector. In all its programs, the Ministry's role has been to stimulate, encourage and promote industrial development. Programs which had similar objectives as that of the private agencies were only initiated to be spun off later to the private sector. In addition, programs like the MASICAP and SBAC were designed to perform the specific task of industrial development in the countryside where private consultancy groups are scarce.

MASICAP and SBAC Projects in Bohol Provinces

MASICAP/SBAC assistance programs for the Province of Bohol are based in Tagbilaran City. The majority of assisted enterprises are located within the city although MASICAP/SBAC teams have also extended services to small establishments in remote towns. Tables 10-12 provide data on some aspects of small industry promotion in Bohol, particularly in Tagbilaran.

Table 10. · MASICAP Projects in Bohol, 1974-80

A. By Financing Institutions

Banks	Number of Projects	Amount of Loan (₱'000)
DBP	48	₱ 5,518
IGLF		
Rural Banks	9	649
Commercial Banks	1	436
Others	-	-
Direct Loans		
CB-IBRD	8	497
Commercial Banks	3	625
Rural Banks	4	278
Self-Financed	2	79
For NGA Licensing	8	-
Total	83	₱ 7,959

B. Distribution of MASICAP Projects by Type of Industry and Number of Employees

Type of Industry	Number of Projects	Number of Employees
1. Agriculture, Fishing, Forestry	12	183
2. Manufacturing:		
Food Manufacturing	11	110
Furniture & Fixtures	8	105
Grain Processing	14	55
Wearing Apparel	5	86
Printing/Publishing	4	24
Electrical, Machinery, Appliances, Supplies	7	75
Non-metallic Products	6	91
Miscellaneous Manufacturing Industries	2	25
3. Commerce	2	10
4. Transport, Warehousing, Communication	7	71
5. Services	5	147
Total	83	982

Source: Bureau of Small and Medium Industries, Ministry of Trade and Industry.

Table 11. Interest Savings for MASICAP Projects in Bohol, 1974-80

Bank	Loan Amount	Subsidized Interest Rate (14%)	Market Interest Rate (20%)[a]	Savings
DBP	₱ 5,518,000	₱ 772,520	₱ 1,103,600	₱ 331,080
IGLF				
Rural Banks	649,000	90,860	129,800	38,940
Commercial Banks	436,000	61,040	87,200	26,160
Direct Loans[b]		Rate (20%)	Rate (20%)	
CB-IBRD	497,000	99,400	99,400	–
Commercial Banks	625,000	125,000	125,000	–
Rural Banks	278,000	55,600	55,600	–
Self-Financed	79,000	15,800	15,800	–
Total	₱ 8,082,000	₱1,131,480	₱ 1,616,400	₱ 396,180

[a]Rates of interest used was the prevailing rate during 1974-1980.

[b]Direct loans had no interest savings, but MASICAP contribution on this type of loan was in the form of technical assistance in terms of PFS preparation, follow-up with the bank up to money release, and subsequent post-loan assistance by SBAC.

Source: Bureau of Small and Medium Industries, Ministry of Trade and Industry.

Table 12. SBAC Projects in Bohol, 1976-80

Type of Industry	No. of Projects
1. Agriculture, Fishing and Forestry	7
2. Manufacturing:	
Food Manufacturing	3
Wearing Apparel	2
Chemical Products	1
Metal Products	2
Elec. Machinery, Apparatus, Appliances	2
Furniture and Fixtures	2
Miscellaneous Manufacturing Industries	5
3. Commerce	1
4. Transport, Warehousing, Communication	1
5. Services	3
Total	29

Type of Assistance	
1. Project Feasibility Study (PFS) Preparation	13
2. Integrated Plant Survey (IPS)	2
3. Pre-Investment Study (PIS)	3
4. Consultancy Cases	
a. Management	2
b. Financial	3
c. Marketing	4
d. Production/Technical	2
Total	29

Assistance Status	
Implemented	9
Fully Implemented	1
Not Implemented	2
In-Process	16
Unknown	1
Total	29

Source: Bureau of Small and Medium Industries, Ministry of Trade and Industry.

ANNEX C

POSSIBLE INDICATORS FOR ESIA OF SMALL-SCALE INDUSTRY

The indicators below are designed to reflect actual as well as "perceived" changes in the area(s) of project influence.

Output Indicators

1. Number of new small-scale enterprises (SEs) in the community, by type of activity, employment size and capitalization.

2. Number of expanded SEs in the community, by type of activity, by extent of expansion in employment size and capitalization.

3. Number of improved SEs in the community, by type of activity, by degree of improvement in management, operations and efficiency (or simply profitability).

Impact Indicators

A. Employment

1. Number of persons employed in SEs by SE type, age, sex and type of worker.

2. Person-hours of employment in SEs by SE type, age, sex, and type of worker.

3. Person-hours of employment in non-SEs by age, sex and type of worker.

4. Person-hours of employment in SEs by household broad income category, age, sex and type of worker.

5. Total person-hours of employment relative to person-hours available (50-hour basis).

B. Production and Productivity

1. Value of total production/sales by SE type.

2. Value of production by SE type for domestic sale:

   a) intra-community

   b) extra-community

3. Value of production by SE type for foreign sale: foreign exchange earnings.

4. Value of production in non-SE activities.

5. Output-labor ratio, by type of labor in an SE and SE type.

6. Output-capital ratio, by SE type.

C. Income Growth

1. Entrepreneurial income by type of SE.

2. Wage income by type of SE and type of worker.

3. Aggregate and average household income.

D. **Income/Wealth Distribution**

1. Relative income of households (three income categories: high, medium, and low).

2. Proportion of families who own properties by type and value of property: land, house, vehicle (car, bicycle), appliances, stocks, premyo savings bonds, etc.

E. **Participation**

1. Proportion of small-time and big-time entrepreneurs, by age, sex, and marital status.

2. Breakdown by age, sex and marital status of indicators in other areas of concern, as appropriate.

3. Ratios of participation rates of at least two income classes.

F. **Energy**

1. SE output per kilowatt hour of energy use, by SE type, relative to output ratios for ME and LE.

2. Change in other areas of concern per unit of energy use.

G. **Population/Fertility**

1. Proportion of in-migrant workers in SEs by age, sex and type of worker.

2. Proportion of commuting workers in SEs by age, sex and type of worker.

3. In-migration rate.

4. Out-migration rate.

5. Number of pregnancies per woman per year.

6. Proportion of women married.

H. Education/Literacy

1. Skills acquired on-the-job, by SE type, age, sex and type of worker.

2. Age/sex-specific educational attainment rates by parents' income and occupation.

I. Health and Nutrition

1. Infant and child mortality rates.

2. Expectation of life at birth.

3. Work-loss and school-loss days due to illness

4. Proportion of malnourished (underweight) children under 7 years old.

ANNEX D

A PROFILE OF THE PROJECT SITE

Tagbilaran is one of 60 or so chartered cities in the Philippines.[1]

As the provincial capital of Bohol province, it functions as a trading

center, and increasingly also as a sub-regional administrative center

of Central Visayas (Region VII). Tagbilaran's development has been

very sluggish in the past. It does not have the citified ambience of

other cities in the region like Cebu, but it seems to have potential

for becoming a thriving commercial center. With recent financial

assistance for infrastructure from the national government and the

consequent greater ease in transportation and communications, more

economic activities are expected to crop up in the area.

Tagbilaran is about an hour-and-a-half flying time from Manila

via Cebu. By sea, it can be reached in approximately two days by inter-

island ships plying the Manila-Cebu-Tagbilaran route.

Tagbilaran has a total land area of 3,030 hectares, mostly

planted to corn, root crops and rice. It has fine, white sandy beaches

and narrow coastal plains lined with mangroves which provide ample raw

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[1]A chartered city is a municipality that is made a city by decree,
i.e., de jure and not necessarily de facto. Casual inspection of some
chartered cities would show that these are not fully urban (or urbanized)
in the strict sense.

materials for local handicraft industries, such as mat- and hat-weaving and basket-making. A fine variety of buri palm abounds in the area which goes into the local manufacture of hats.

Population

As of the 1975 Census, Tagbilaran had a total population of 41,270 and a population density of 1,362 persons per square kilometer. Population by broad age group reveals that 40 percent is in the 0-14 age category, 55.8 percent in the 15-64, and 4.2 percent in the 65-and-over age group. From this age structure, it can be seen that Tagbilaran has a young population and a high total dependency ratio of about 44.2 percent.

Number of Enterprises

Census data for 11975 indicate some 1,039 enterprises (or establishments) in Tagbilaran, a dominant proportion of which are trading firms (72.8 percent). Service firms constitute 11.8 percent and manufacturing firms only 10.4 percent of all enterprises.

There is a preponderance of cottage and small enterprises in the area, with cottage enterprises accounting for 86.6 percent of the total number of enterprises and small enterprises 13.1 percent. Together, cottage and small enterprises capture an overwhelming share of 99.7 percent.

Infrastructure and Utilities

Transportation and Communication

In 1977, provincial barangay road kilometrage per hundred square kilometers of land was estimated at 481.2. Jeepneys, (unmetered) taxi-cabs and tricycles are the usual passenger vehicles for short routes while buses are available for long routes.

Tagbilaran has a concrete airport which functions as a secondary airport. Manila-Cebu-Tagbilaran flights and vice versa are maintained by the Philippine Airlines. For sea transport, domestic and foreign vessels call regularly at the port of Tagbilaran.

Telephone connections in 1976 posted a total of 766, giving a ratio of 20.5 telephone per 1,000 population. Serving the other communication needs of the area are six telegraph offices, two telex offices, and one post office. Telegraph service is made available by government and private telegraph stations.

Water and Power

Out of 5,226 households, 65.1 percent of the households were serviced by the local waterworks system in 1970. Some 29.7 percent drew their water supply from artesian wells and pumps while the rest depended on open wells, spring and rain water.

Eletrification had not fully covered the city of Tagbilaran as of 1970. Around 48.7 percent of the households enjoyed the benefits of electricity while 49.8 percent utilized kerosenes as source of lighting. Available power supply from local plants was 0.63 kilowatt-hour per person.

Social Services

Health

Tagbilaran has five hospitals with a total capacity of 322 beds as well as 17 nutrition centers.

In 1976, there were 19.3 physicians and 26.0 nurses per 10,000 population. These ratios are high compared with other areas. The ratios for midwives and dentists are much lower, however, with only 3.7 midwives and 0.5 dentist per 10,000 population.

Education

In 1977, Tagbilaran had sixteen elementary schools, five secondary schools and four tertiary schools.

School attendance reached a total of 9,607, with the 6-12 age group comprising 43.2 percent of the school population. This is followed by the 17-and-over age group at 33.4 percent and the 13-16 age group at 23.4 percent. Thus, there are more elementary and college students than high school students.

Housing

The household-to-dwelling unit ratio was estimated at 1:1 in 1975. Out of 5,226 households, 82.3 percent were in single dwelling units and 9 percent in duplex units. Only 2.2 percent of the household lived in makeshift dwellings. At present, housing congestion does not seem to be a major problem in Tagbilaran.

Table 1.   Key Statistics on Tagbilaran City

	Number	Percent
Demographic Data, 1975		
1. Total population	41,270	100.0
Urban population	41,270	100.0
Rural population	0	0
2. Population density (persons per square kilometers)	1,362	
3. Population by broad age-groups		
0-14 years old	14,492	40.0
15-64 years old	20,843	55.8
65 years old and over	1,550	4.2
Physical Data, 1975		
Total land area	3,030 hectares	
Number of enterprises by sector, 1975		
1. Agriculture, forestry and fishery	2	0.2
2. Mining and quarrying	–	–
3. Manufacturing	108	10.4
4. Electricity, gas and water	2	0.2
5. Construction	1	0.1
6. Commerce	754	72.6
7. Transport, storage & communication	49	4.7
8. Services	123	11.8
Total	1,039	100.0
Number of enterprises by employment size, 1975		
Cottage enterprises (with employment size of 1-4)	900	86.6
Small enterprises (with employment size of 5-99)	136	13.1
Medium enterprises (with employment size of 100-199)	3	0.3
Large enterprises (with employment size of 200 and over)	–	–
Total	1,039	100.0

	Number	Percent

Infrastructure and Utilities

1. Transportation facilities

Barangay road kilometrage per hundred square kilometers of land (1977 provincial average)	481.2	
Presence of airports (1976)	1 secondary	
Types of ports (1976)	1 tertiary	

2. Communication facilities, 1976

Telephone connections	766	
Telegraph offices	6	
Telex offices	2	
Post Office	1	
Telephones per 1,000 urban population	?0.5	

3. Water sector, 1970

Sources of domestic water supply:

	Number of Households	Percent
Piped water	3,454	66.1
Artesian well	1,076	20.6
Pump	469	9.0
Open well	180	3.5
Spring	10	0.2
Rain water	33	0.6
Lake, rivers, streams	0	0
Total, all sources	5,226	100.0

4. Power sector, 1970

Available supply from local power plants	0.63 KWH per person	

Sources of lighting:

	Number	Percent
Electricity	2,554	48.7
Kerosene	2,602	49.8
Oil	5	1.4
Others	35	1.4
Total, all sources	5,226	100.0

	Number	Percent

Social Services

1. **Health, 1976**

Hospitals	5
Total bed capacity	322
Nutrition centers	17
Community hospitals and health centers	no data
Physicians/10,000 population	19.3
Nurses/10,000 population	26.0
Midwives/10,000 population	3.7
Dentists/10,000 population	0.5
Hospital beds/10,000 population	8.6

2. **Education, 1977**

Schools by level:

Elementary schools	16
Secondary schools	5
Tertiary schools	4

Schools attendance by age group:

	Number	Percent
6-12 years old	4,148	43.2
13-16 years old	2,249	23.4
17 years old and over	3,210	33.4
Total	9,607	100.0

3. **Housing, 1975**

	Number	Percent
Households-to-dwelling unit ratio	1:1	
Type of dwelling unit:		
Single	4,465	82.6
Duplex	487	9.0
Barong-barong	120	2.2
Other types	356	6.5
Total, all types	5,428	100.0
Number of households	5,226	

Table 2. MASICAP- and SBAC-Assisted Enterprises in Tagbilaran
(As of December 31, 1978)

	MASICAP	SBAC	MASICAP-cum-SBAC
Number of enterprises assisted, by year of assistance:			
1974	5	-	-
1975	7	-	-
1976	15	5	2
1977	16	1	1
1978	8	4	3
Total	51	10	6
Enterprises assisted, by sector:			
Manufacturing	37	10	6
Agriculture	6	-	-
Transport and storage	4	-	-
Social and related services	2	-	-
Hotel and Restaurant	2	-	-
Total	51	10	6

Enterprises assisted by SBAC, by type of assistance:	Number of Enterprises
Production/technical	3
Marketing	2
Management	1
Financial/Bookkeeping	2
Integrated plant survey	2
Total	10

Business status of SBAC-assisted enterprises:	
With serious business problems	2
With expansion prospects	5
With a need for pre-business, prospective entrepreneurial counselling	3
Total	10

Table 3. MASICAP- and SBAC-Assisted Enterprises in Tagbilaran, by Type of Industry (As of December 31, 1978)

ISIC Code	Type of Industry	MASICAP-Assisted Enterprises	SBAC Assisted Enterprises	MASICAP cum-SBAC Assisted Enterprises	TOTAL Number of Assisted Enterprises*	Percent of Total (by Major Sector)
311	Food manufacturing					
3116	Rice mill	1	–	–	1	
3117	Bakery	2	1	–	3	
31175	Noodle processing	1	1	1	1	
31151	Coconut central	1	–	–	1	
3117	Chicharon-making	1	–	–	1	
31192	Candy manufacturing	1	–	–	1	
31215	Ice-making	1	–	–	1	
	Sub-total	8	2	1	9	
312	Other food manufacturing					
	Feed mill	–	1	–	1	
322	Manufacturing of wearing apparel					
32204	Garments	2	1	1	2	
32201	Tailoring	1	–	–	1	
32209	Miscellaneous apparel	2	–	–	2	
	Sub-total	5	1	1	5	
331	Manufacture of wood products					
33192	Woodcraft	1	–	–	1	
33191	Charcoal-making	–	1	–	1	
	Sub-total	1	1	0	2	
332	Manufacture of furniture and fixtures					
33201	Wooden and upholstered furniture	5	2	2	5	
342	Printing, publishing and allied industries	4	–	–	4	

ISIC Code	Type of Industry	MASICAP-Assisted Enter-prises	SBAC Assisted Enter-prises	MASICAP cum-SBAC Assisted Enter-prises	TOTAL Number of Assisted Enter-prises*	Percent of Total (by Major Sector)
369	Manufacture of other non-metallic mineral products					
36991	Hollow blocks	2	-	-	2	
381	Manufacture of fabricated metal products	2	-	-	2	
382	Manufacture of machinery and equipment					
38221	Farm implements	1	-	-	1	
38291	Machine shop	1	2	1	2	
	Sub-total	2	2	1	3	
383	Manufacture of electrical machinery, apparatus and supplies	1	-	-	1	
384	Manufacture of transport equipment					
38433	Vehicle body	2	-	-	2	
38432	Manufacture of parts of motor vehicles	2	-	-	2	
	Sub-total	4	0	0	4	
390	Other manufacturing industries					
39013	Goldsmithing	1	-	-	1	
39022	Guitar-making	1	1	1	1	
39099	Miscellaneous manufacturing	1	-	-	1	
	Sub-total	3	1	1	3	
	Total: Manufacturing	37	10	6	41	74.6

Type of Industry	MASICAP-Assisted Enterprises	SBAC Assisted Enterprises	MASICAP-cum-SBAC-Assisted Enterprises	TOTAL Number of Assisted Enterprises*	Percent of Total (by Major Sector)
Poultry	3	-	-	3	
Fishery	3	-	-	3	
Total: Agriculture	6	0	0	6	10.9
Transport	2	-	-	2	
Hauling	1	-	-	1	
Storage	1	-	-	1	
Total: Transport and Storage	4	0	0	4	7.3
Hospital	2	-	-	-	
Total: Social and Related Services	2	0	0	2	3.6
Hotel-restaurant	1	-	-		
Dormitory	1	-	-		
Total: Hotel and Restaurant	2	0	0	2	3.6
TOTAL: ALL SECTORS	51	10	6	55	100.0

*Excludes MASICAP-cum-SBAC-assisted enterprises to avoid double-counting.