THE UNEMPLOYED AND UNDEREMPLOYED

IN THE BICOL RIVER BASIN

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ABSTRACT. In April 1974 SSRU interviewers visited a
random sample of 3240 households in the 33 municipalities
which constitute the Bicol River Basin in Camarines Sur.
The data which they collected were many and varied, and
will be used as a baseline against which to measure the
progress of the Bicol River Basin Development Program.
Estimates based on the survey findings indicate a labor
force of 326,028, with 7.7 percent (24,843) of this sub-
population reported as unemployed. The problem of un-
employment is found to be relatively more severe among
high school drop-outs and teen-aged labor. In general,
poblaciones suffer from job shortages more than barrios,
but the districts of Milaor and Naga have especially high
unemployment rates. Aside from the unemployed, there are
others who are employed but want to take on an additional
job. These so-called underemployed comprise 20.6 percent
(67,334) of the River Basin labor force. Together then,
the unemployed and underemployed workers of the Basin
represent an untapped manpower source numbering at least
92,177 in all. Among the evident conclusions is the fact
that the middle educated form a disproportionately large
percentage of both the unemployed and underemployed.

One of the principal aims of the Bicol River Basin Development Program is to
generate employment opportunities for the Basin's available manpower. This
immediately raises the questions, How many people are in fact available for

employment, or for additional employment? and, a related query, What are they like? An earlier study in this series furnished general information on the population and labor force of the River Basin as of April 1974, and gave added special attention to those who were employed.[1] The present report addresses itself to the two questions just stated, and thus concerns the unemployed and underemployed.

THE UNEMPLOYED

According to SSRU survey findings, an estimated 929,000 people lived in the Bicol River Basin in April 1974.[2] About two-thirds were at least 10 years of age, and hence technically eligible for work. However, only 53 percent of those eligible were actually members of the labor force, and of this subpopulation 7.7 percent (about 25,000) reported themselves as unemployed. It is to these 25,000 or so Bicolanos that we first direct our attention.

But first, some definitions. A worker is here considered unemployed if (a) he did not work at all (and had no regular job), during the week that preceded the April date on which he was interviewed for AP1, but (b) he seriously wanted to work. The latter intention is usually manifested by actually looking for a job. However, one may still be considered a job seeker if his reason for not looking for work is that he is sick, or kept at home by bad weather, or that he firmly believes there is no work available (NCSO 1974).

Demographic Characteristics

1. Sex. Males represent about 68 percent of the labor force, and a slightly smaller precentage of the unemployed (Table RS10.01, section a). Thus the difference in unemployment rate by sex is not significant: 7.6 percent for males and 7.8 percent for females.

[1] Reference is to SSRU Research Report Series, No. 8 (Illo and Lynch 1974).

[2] Because of sampling error in this survey (SSRU's Annual Panel Survey 1, or AP1) the true population figure is between 915,065 and 942,935. Details on AP1, including the definition of the Bicol River Basin, are found in Appendix A. Estimated population parameters are presented in Table RS10.15, below.

Table RS10.01. Sample HH members belonging to the labor force, by selected characteristics and by labor-force status (Bicol River Basin, Camarines Sur, April 1974)

Selected characteristic	Employed	Unemployed	Total
a. Sex			
Male	68%[b]	66%	68%
✓ Female	32	34	32
Total sample	6498	555	7053
Sex ratio[a]	219	198	219
b. Age (in years)			
10 - 14	9%	18%	9%
15 - 24	29	55	29
25 - 34	21	14	20
35 - plus	41	13	42
Median age (in years)	32.2	20.4	30.0
c. Education			
None	5%	3%	5%
Some elementary	40	23	38
Elem. grad./some HS	38	49	39
HS grad./some college	11	18	11
College graduate	7	7	7
Median education (in years)	6.2	7.4	6.3

[a]By sex ratio is meant the number of males for every 100 females in the subpopulation (e.g., among the employed).

[b]The percentages given in this table and all others in the report have been adjusted to correct for the over-representation of poblacion residents in the sample. Appendix A, page 4.

Table RS10.01. (cont'd)

Selected characteristic	Employed	Unemployed	Total
d. Residence			
Poblacion	21%	24%	22%
Barrio	79	76	78
Total n	6498	555	7053
e. Civil status			
Never married	38%	78%	41%
Married	58	21	55
Widowed	4	1	3
Separated/divorced	*c	*	*
Total n	- 6498	555	7053

[c] Less than 0.50 percent

There is considerable range by district, however: males account for only 62 percent of the unemployed in Sipocot district, for instance, but 75 percent of the out-of-work in Magarao (Table RS10.02, section a).

2. Age. The median age of the unemployed is 20.4 years, a figure which contrasts sharply with the age of the employed, which is 32.2 years (Table RS10.01, section b). This age difference calls to mind the observation made elsewhere that "the older one is, the more likely he is to have a job" (Illo and Lynch 1974: 37).

Median age of the unemployed varies by district, but only Sipocot district differs significantly from the overall median. The unemployed there are significantly younger than those of all other districts (at the 0.005 level), the median being only 18.1 years (Table RS10.02, section b).

3. Education. The median educational attainment of the unemployed is higher than that of the employed (7.4 years vs. 6.2; Table RS10.01, section c).

Table RS10.02. Unemployed workers, by selected characteristics and by district (Bicol River Basin, Camarines Sur, April 1974)

Selected characteristic	Sipocot	Naga	Magarao	Milaor	Goa	Iriga	Total
a. Sex							
Male	62%[b]	66%	75%	74%	67%	63%	66%
Female	38	34	25	26	33	37	34
Total sample	79	112	86	125	65	88	555
Sex ratio[a]	164	190	298	279	199	169	198
b. Age (in years)							
10 – 14	29%	10%	17%	19%	21%	16%	18%
15 – 24	59	59	49	51	50	54	55
25 – 34	3	14	19	17	10	23	14
35 plus	10	16	15	14	19	6	13
Median age (in years)	18.1	21.2	21.2	20.7	20.3	20.7	20.4
c. Education							
None	4%	4%	6%	3%	0%	2%	3%
Some elementary	21	23	30	27	23	19	23
Elem. grad./some HS	57	39	43	57	58	46	49
HS grad./some college	15	21	17	11	14	22	18
College graduate	2	13	5	2	4	11	7
Medain education (in years)	7.2	7.9	6.8	6.9	7.4	8.0	7.4
d. Residence							
Poblacion	9%	17%	29%	35%	17%	39%	24%
Barrio	91	83	71	65	83	61	76
Total n	79	112	86	125	65	88	555

[a]See note a, Table RS10.01.   [b]See note b, Table RS10.01.

a fact which is related to the age differences mentioned in the preceding paragraph. For in the Philippines the median number of years of formal schooling has been increasing over time.

Differences by district never exceed 0.6 of a year of schooling, Thus the unemployed of Magarao district average 6.8 years of training; those of Iriga, 8.0 years (Table RS10.02).

4. <u>Residence</u>. Labor-force members living in the poblacion represent a slightly larger portion of the total unemployed (24 percent) than they do of the labor force (22 percent; Table RS10.01, section d). Thus the unemployment rate in municipal centers is 11.3 percent, whereas the barrio figure is only 6.8 (average for both is 7.7 percent). See Table RS10.03.

Differences by district are marked. Poblacion residents report the highest unemployment rate in Milaor district, where it reaches 16.1 percent, and the lowest in Goa (6.9 percent). These and other rates are shown in Table RS10.03, but see also Table RS10.02, section d.

Overall, about 25 percent of the jobless reside in Naga district and another 20 percent in Iriga district. That these two relatively urbanized districts should account for 45 percent of the unemployed is probably a function of their population size and the number of nonfarm workers living there. See paragraph 6, below.[3]

5. <u>Civil status</u>. While never-married members of the labor force account for two-fifths of the currently employed, they represent twice that proportion of the unemployed (Table RS10.01, section e). Like education (see above, paragraph 3), the percentage married varies predictably with age in the Philippines; hence these figures can, once more, be taken as a function of the age structure of the labor force.

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[3]That the Naga and Iriga districts are more urbanized than others is concluded from the urbanization indices for the different municipalities of the Bicol Region, derived by Aganon (1973). To get the index for a district, we computed the mean of the indices for its constituent municipalities, with the following results: Sipocot, -0.2516; Naga, 1.4968; Magarao, 0.1652; Milaor -0.0680; Goa, -0.2085, and Iriga, 0.5026.

Table RS10.03. Unemployment rates by district and by residence (Bicol River Basin, Camarines Sur, April 1974)

District	Poblacion	Barrio	Total
Sipocot	7.9%	6.2%	6.3%
Naga	9.7	8.6	8.8
Magarao	8.5	7.3	7.6
Milaor	16.1	8.4	10.1
Goa	6.9	5.5	5.7
Iriga	15.2	5.5	7.3
Total	11.3%	6.8%	7.7%

The Active Job Seekers

We earlier defined an unemployed individual as one who did not work (and had no regular job) in the week before the AP1 interview—provided he seriously wanted work. A serious desire for work was considered present if the individual actually went looking for a job, or if he failed to do this, it was because of sickness, bad weather, or a conviction that there were simply no jobs to be had. Clearly, it is important to know what percentage of the unemployed actively search for jobs, and what percentage do not because they are firmly convinced that it would be in vain to do so.

6. Percentage of the unemployed. Of the unemployed, fewer than 42 percent actively search for work. About three-fifths of the jobless take no practical steps toward finding employment (Table RS10.04).

Differences occur by sex, age group, and education class. Thus 53 percent of the female unemployed actively seek work, compared with only 37 percent of males (ibid., section a). The younger middle-aged unemployed have a higher proportion of active job seekers (63 percent) than those younger or older than they are (ibid., section b). Further, there is a positive

Table RS10.04. Unemployed workers, by selected characteristics and by whether or not they looked for work during the reference week (Bicol River Basin, Camarines Sur, April 1974)

Selected characteristic	Whether looked for work		Total n
	Yes	No	
a. Sex			
Male	37%[a]	63%	376
Female	53	47	179
Total	42	58	555
b. Age			
10 - 14	7%	93%	101
15 - 24	39	61	298
25 - 34	63	37	82
35 plus	44	56	74
c. Education			
None	7%	93%	18
Some elementary	23	77	135
Elem. grad./some HS	31	69	272
HS grad./some college	62	38	93
College graduate	80	20	36
No information			1
d. Residence			
Poblacion	43%	57%	171
Barrio	42	58	384
e. District			
Sipocot	22%	78%	79
Naga	65	35	112
Magarao	41	59	86
Milaor	36	64	125
Goa	58	42	65
Iriga	22	78	88

[a] See note b, Table RS10.01.

linear relationship between education and the tendency to be a job hunter (from 7 percent for those with no formal education to 80 percent for college graduates; *ibid.*, section c).

Although there is no significant difference in the proportion of active job seekers by residence (*ibid.*, section d), variation does occur by district. While residents of Naga (65 percent) and Goa (58 percent) exceed the mean of 42 percent, and Magarao is at the mean (41 percent), all others are below it (*ibid.*, section c).

7. _Duration of the search._ Of those who make the rounds in search of employment, the average individual has been at it for 20 days (Table RS10.05).

Differences are notable by residence and by district. Work is harder to come by in the poblacion (54 days) than in the barrio (18 days; *ibid.*, section a). Moreover, the job seekers of Magarao report being at their quest for over two months (64 days), while those from Goa and Iriga have been looking for only 19 and 16 days, respectively (*ibid.*, section d).

✓ Differences are **not** significant by sex or age, but the middle educated spend less time than most in the search for employment (*ibid.*, sections a-c).

8. _Reasons for not looking._ Three-fifths of unemployed workers are not out searching for jobs. The decision not to make this effort is in 85 percent of cases reportedly because of the conviction that there is no work available in the vicinity (Table RS10.06). Only a minority say the weather prevented them (8 percent) or they were not feeling well enough to go out and look for work (6 percent).

Regardless of sex, age, education, residence, or district, at least 60 percent gave the futility of the search as their reason for not engaging in it. Those with the greatest tendency not to take active measures in this regard are the young (15-24 years old), the middle educated (elementary and high school graduates), poblacion residents, and those who live in the districts of Iriga, Milaor, and Sipocot (Table RS10.06).

Table RS10.05. Median duration (in days) of job search by unemployed
workers who looked for work, by selected characteristics and residence
(Bicol River Basin, Camarines Sur, April 1974)

Selected characteristic	Median duration (in days)			Total n	DK
	Poblacion	Barrio	Total		
a. Sex					
Male	54	18	21	130	16
Female	56	18	20	78	13
Total	54	18	20	198	29
b. Age					
10 - 14	n.d.	32	40	7	1
15 - 24	50	18	20	110	18
25 - 34	67	20	36	52	4
35 plus	56	18	20	29	6
c. Education					
None	14	14	14	1	1
Some elementary	73	30	44	26	5
Elem. grad./some HS	50	18	19	86	18
HS grad./some college	47	19	20	55	2
College graduate	58	39	46	30	3
d. District					
Sipocot	21	38	38	17	1
Naga	69	19	20	62	10
Magarao	77	42	64	29	5
Milaor	48	13	20	38	7
Goa	38	18	19	34	5
Iriga	21	16	16	18	1

Table RS10.06. Unemployed workers who did not look for work, by selected characteristics and by reason given for not looking (Bicol River Basin, Camarines Sur, April 1974)

Selected characteristic	Reason for not looking for work				Total n
	No jobs available	Bad weather	Temporary illness	Others	
a. Sex					
Male	84%	9%	6%	1%	240
√ Female	87	5	5	3	88
Total	85	8	6	1	328
b. Age					
10 - 14	86%	14%	0%	0%	93
15 - 24	92	4	2	2	170
25 - 34	79	8	10	3	26
35 plus	60	10	27	3	39
c. Education					
None	75%	8%	17%	0%	16
Some elementary	79	13	7	1	104
Elem. grad./some HS	89	5	5	1	168
HS grad./some college	92	3	5	0	36
College graduate	64	20	16	0	3
d. Residence					
Poblacion	92%	6%	2%	0%	90
Barrio	84	8	6	2	238
e. District					
Sipocot	90%	5%	5%	0%	61
Naga	72	8	12	7	40
Magarao	86	10	4	0	52
Milaor	91	7	1	1	80
Goa	76	21	3	0	26
Iriga	92	6	2	0	69

The New and Experienced Unemployed

Among the unemployed, a distinction is made between experienced and new members of the labor force. The experienced are those who report having had a full-time job of at least two-weeks' duration sometime prior to their present unemployment.[4] New workers are those who have never had this kind of full-time employment and are, rather, new entrants into the labor market.

9. __Percentage of the unemployed.__ Most of the River Basin's unemployed have never held a job in their lives. For while 28 percent of the jobless report having some previous work experience, the other 72 percent do not (Table RS10.07).

Differences are not significant by residence (poblacion/barrio), but they are by district. In both the poblacion and barrio the highest concentrations of new workers are found in Sipocot and Iriga (ibid.).

The percentages of new and experienced workers also vary by sex. Whereas two-thirds of the male unemployed are new to the labor market, over four-fifths of women are in this category (Table RS10.08). Overall, however, because males dominate the labor market, there are 158 new male workers for every 100 females (ibid., section d). This sex ratio varies by district, with new males outnumbering females especially in Magarao, Milaor and Naga (ibid.).

Inexperienced workers are about 10 years younger, on the average, than experienced workers (18.8 vs. 28.3 years, respectively), with little difference by district (Table RS10.09, section a). There are only small differences by education, however, the largest being in Iriga district, where the experienced report a median of 8.3 years against 7.8 for new workers. The total figures (all districts combined) are 7.5 and 7.4 respectively (ibid., section b).

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[4]As asked of respondents in the survey, the question was this: "Did you (or the HH member on whom you are reporting) ever have an eight-hours-a-day job for two straight weeks at any time since you (he/she) were/was 10 years old?" An affirmative reply placed the individual in question among the experienced unemployed.

Table RS10.07. Unemployed workers by residence and job experience and by district (Bicol River Basin, Camarines Sur, April 1974)

Residence and experience	SIP	NAG	MAG	MIL	GOA	IRIGA	Total
a. Poblacion							
Experienced[a]	6%[b]	43%	44%	37%	35%	13%	28%
New	94	57	56	63	65	87	72
Total n	18	28	23	46	17	39	171
b. Barrio							
Experienced	10%	38%	25%	38%	33%	22%	28%
New	90	62	75	62	67	78	72
Total n	61	84	63	79	48	49	384
c. Total							
Experienced	9%	38%	31%	38%	34%	19%	28%
New	91	62	69	62	66	81	72
Total n	79	112	86	125	65	88	555

[a] By an experienced worker is meant one who had at least one full-time, two-week job prior to his present unemployment.

[b] See note b, Table RS10.01.

10. Past occupation. When the experienced unemployed speak of the kind of work they engaged in before their present unemployment, their replies can be classified as farm, off-farm, or nonfarm occupations.[5] From the percentage distribution of the answers one can judge that farmers are much less likely to be unemployed than nonfarmers, for whereas only 13 percent

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[5] A farm job is one involving work on a farm owned or assigned to be cultivated by the job-holder or his family as owner-cultivator, amortizing owner, lessee, or share tenant. Off-farm employment refers to work done on other farms neither owned nor assigned to be cultivated by the worker or his family. Nonfarm employment refers to activities not involving crop farming.

Table RS10.08. Unemployed workers by sex and job experience and by district (Bicol River Basin, Camarines Sur, April 1974)

Sex and experience	SIP	NAG	MAG	MIL	GOA	IRIGA	Total
a. Male							
Experienced[a]	13%[b]	38%	35%	41%	48%	28%	34%
New	87	62	65	59	52	72	66
Total	47	74	64	92	44	55	376
b. Female							
Experienced	4%	40%	18%	27%	5%	3%	17%
New	96	60	82	73	95	97	83
Total	32	38	22	33	21	33	179
c. Total							
Experienced	9%	37%	31%	38%	34%	19%	28%
New	91	63	69	62	66	81	72
Total	79	112	86	125	65	88	555
d. Sex ratio[c]							
Experienced	534	184	586	429	1847	1764	388
New	149	193	236	224	109	125	158
Total	164	190	298	279	199	169	198

[a]See note a, Table RS10.07.   [b]See note b, Table RS10.01.

[c]See note a, Table RS10.01.

Table RS10.09. Median age and education of unemployed workers, by job experience and by district (Bicol River Basin, Camarines Sur, April 1974).

Median measure and experience	SIP	NAG	MAG	MIL	GOA	IRIGA	Total
a. _Median age_ (in years)							
Experienced[a]	32.8	28.0	28.8	27.1	28.3	28.9	28.3
New	17.5	19.4	19.2	18.2	18.5	19.5	18.8
Total	18.1	21.2	21.2	20.7	20.3	20.7	20.4
b. _Median education_ (in years)							
Experienced	7.2	7.9	6.6	6.9	7.6	8.3	7.5
New	7.2	7.9	6.9	6.9	7.2	7.8	7.4
Total	7.2	7.9	6.8	6.9	7.4	8.0	7.4

[a]See note a, Table RS10.07.

Table RS10.10. Experienced unemployed workers by type of past occupation and by district (Bicol River Basin, Camarines Sur, April 1974)

District	Type of occupation			Total n	Occup. not reported
	Farm	Off-farm	Nonfarm		
Sipocot	0%	50%	50%	4	3
Naga	8	21	71	30	14
Magarao	24	24	52	16	10
Milaor	28	37	35	36	11
Goa	0	27	73	5	17
Iriga	0	14	86	8	8
Total	13%	27%	61%	99	63

of the experienced unemployed formerly worked as farmers, 61 percent were in nonfarm occupations. Those who engaged in off-farm work are in between, with 27 percent of the total (Table RS10.10).

Differences by district are marked. The percentage of nonfarm workers is always at least 35 percent, but is especially high in Iriga, Goa, and Naga (86, 73, and 71 percent, respectively; ibid.).

THE PARTLY EMPLOYED

By the criterion we are using, a worker is considered unemployed if he or she did not work at all (and had no regular job) during the reference week. To be fully employed, the worker must have been at work for at least 40 hours in that week and not looking for an additional job.[6]

Here, it will be noted, we have introduced in addition to the hours-worked criterion, a second norm. It divides workers on grounds of their willingness to take a second or third job while still holding their present position(s).

If our categories are to cover all the variations discovered in the AP1 survey, we must also make provision for those who were not at work in the reference week, not because they had no job, but because they had one, generally full time, but were on vacation or sick leave. Because they enjoyed these benefits, the assumption is that they were full-time employees in a nonfarm occupation.

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[6]The number of hours per week one must work in order to be considered fully employed may vary from study to study. To give an example, the National Census and Statistics Office (formerly the Bureau of the Census and Statistics) used 40 hours in its May 1969 round of the household survey (NCSO 1971), but 44 hours in the 1970 census (NCSO 1974). Writing in a professional journal, Census Director Mijares and his co-author adopted 50 hours as the norm (Mijares and Ordinario 1973). There was good reason for the choice in each case.

We use 40 hours for several reasons. First, the five-day work week is followed by most government employees and those of many private enterprises. Second, we found that the average nonfarm worker of the Bicol River Basin reported working 36 hours in the reference week (farmers and farm laborers reported an average of only 30 hours, but this was during April, a slack period in the farming cycle). See Illo and Lynch (1974: 31) and the caution of Khrisna (1974) in note 7, below.

Willingness to take (added) job	Not at work last week		At work last week: hours worked	
	No job	On leave	Under 40	40 or more
A.0 Not willing	A.1 Not in labor force	A.2 Employed	A.3 Partly employed	A.4 Fully employed
B.0 Willing	B.1 Unemployed	B.2 U N D E R E M P L O Y E D (invisibly)	B.3 (visibly)	B.4 (invisibly)

Figure RS10.01. Distribution of surveyed workers by criteria of (a) willingness to take (added) job, (b) whether at work or not in reference week, and (c) if so, hours worked (Bicol River Basin, Camarines Sur, April 1974)

Our three criteria--at work or not, hours worked, and willingness to take an added job--may be used to define the eight categories of worker about whom we are concerned in this report or in an earlier paper on age, education, and employment (Illo and Lynch 1974). These categories, with references to the cell each occupies in Figure RS10.01, are as follows.

Labor force nonparticipants (cell A.1)

Labor force participants
    Unemployed (B.1)
    Partly employed (A.3)
    Underemployed
        Visibly (B.3)
        Invisibly (B.2, B.4)
    Employed (A.2, A.4)

In the first report (ibid.) we discussed the employed and those who were not members of the labor force. Earlier in the present report we spoke of the unemployed. The balance of this paper will be devoted to the remaining two categories, namely, the partly employed and the underemployed.

Table RS10.11. Employed workers at work classified as part time or full time, by residence and by district (Bicol River Basin, Camarines Sur, April 1974)[a]

Residence and worker's class	Sipocot	Naga	Magarao	Milaor	Goa	Iriga	All districts
a. Poblacion							
Part time	28%	35%	37%	40%	37%	51%	39%
Full time	72	65	63	60	63	49	61
Total n	181	252	234	225	204	195	1,291
b. Barrio							
Part time	55%	40%	59%	52%	45%	46%	48%
Full time	45	60	41	48	55	53	52
Total n	878	838	760	830	781	789	4,876
c. Total							
Part time	53%	39%	53	50%	44%	47%	47%
Full time	47	61	47	50	56	53	53
Total n	1,059	1,090	994	1,055	985	984	6,617

[a]Those working during the reference week fewer than 40 hours are classified as part-time workers. Full-time workers, on the other hand, are those reported to have worked 40 hours or more during the same period.

Full-time vs. Part-time Workers

However, we must first look briefly at what happens when the time criterion alone is applied, without any added considerations.

11. Percentage of the employed. Overall, almost one-half (47 percent) of employed workers who are at work report being so engaged for less than 40 hours per week. The other 53 percent qualify as full-time workers.

Differences in the percentage of part-time workers among the employed occur by residence (poblacion, 39 percent; barrio, 48 percent) and by district (Magarao has the highest percentage, with 53 percent, and Naga the lowest, with 39 percent; Table RS10.11).

Table RS10.12. Employed workers at work, classified by selected characteristics and by hours worked (Bicol River Basin, Camarines Sur, April 1974)

Selected characteristic	Part-time[a]	Full-time	Total n
a. Sex			
Male	49%	51%	4320
Female	52	48	1847
b. Age (in years)			
10 - 14	66%	34%	485
15 - 24	52	48	1716
25 - 34	47	53	1295
35 - 44	48	52	1023
45 - 54	50	50	870
55 - 64	49	51	550
65 and over	63	37	228
c. Education			
None	63%	37%	308
Some elementary	57	43	2467
Elem. grad./some HS	52	48	2343
HS grad./some college	40	60	617
College graduate	30	70	432

[a]See note a, Table RS10.11.

Differences also occur by occupation: farmers and farm workers, about 57 percent; nonfarmers, 41 percent. The patterns by sex, age, and education are shown in Table RS10.12.

From this table it is clear that the tendency to be a part-time worker is inversely related to education. Or, to put it the other way around, the more formal training you have had, the more likely you are to be employed full time.

Further, although there is no appreciable difference by sex, there is a tendency for breadwinners (25-64 years old) to get full-time jobs and for dependents (very young and very old) to be employed only part time (Table RS10.12).

12. <u>Hours worked per week.</u> The median number of hours worked by <u>all</u> workers is 38.7; the figure for part-time workers is 20; that is, half of those who do not work full time, work half time. The distribution of <u>all</u> at-work workers by hours of work per week is as follows.

Classification	Hours worked	Percent
Part time	Under 10	18%
	10 - 19	10
	20 - 29	11
	30 - 39	11
Full time	40 - 49	37
	Over 49	13
Total		100
Median hours	38.7	-
Mean hours	33.0	-

The Partly Employed

The so-called partly employed are those who worked fewer than 40 hours in the reference week and are not interested in an additional job (cell A.3, Fig. RS10.01). We call them partly employed and not underemployed to distinguish them from other workers who are currently in the same time category but <u>are</u> willing to take on a second or third job (cell B.3). These individuals, in turn, will be referred to as the <u>visibly</u> underemployed to keep them distinct from the <u>invisibly</u> underemployed (cells B.2 and B.7), who seek an additional job even though they are now engaged 40 or more hours a week.[7]

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[7]The visible-invisible dichotomy is from the National Census and Statistics Office (NCSO 1971). Some approaches to the problem of classifying workers have fastened on the idea of <u>utilization</u>, distinguishing adequately and inadequately utilized workers on grounds of time worked, income, or the matching of education and occupation (see Domingo 1974). Combinations have also been used, involving the criteria of time worked, income, willingness to take an additional

13. <u>Percentage of the part-time workers.</u> All workers currently at work were asked if they had been looking for an additional job in the reference week. Part-time workers who answered <u>no</u> to this question were classified as the <u>partly employed</u> (cell A.3), and they represent 79 percent of all part-time workers (cells A.3 and B.3).

With the exception of Iriga and Goa, the percentage of part-time workers not interested in an additional source of salary or wages is remarkably uniform by residence and district (see Table RS10.13, the "Part-time-and-unwilling" column). Instead of the usual 79-80 percent of part-time workers who want no additional employment, Goa has significantly fewer (64 percent) while Iriga has a somewhat larger number (88 percent).

THE UNDEREMPLOYED

"Underemployed" is a supercategory which includes three of the eight categories in Figure RS10.01: two kinds of invisibly underemployed (B.2, B.4), and one considered visible (B.3). What all these workers have in common is that they are willing to take on an additional job. Those who are currently working full time <u>seem</u> to be <u>fully</u> employed, so their underemployment is labeled invisible. For those who have only part-time positions at present, the underemployment is quite apparent.

The Visibly Underemployed

Those who are part-time workers and are willing to take a second job are the visibly underemployed. Information about them is given in Tables RS10.12 (the "Part-time" column) and RS10.13 (the "Part-time-and-willing" column).

14. <u>Percentage of the part-time workers.</u> This subgroup is one of two which together make up the column category of at-work part-time workers in

job, and productivity (Krishna 1974). As Krishna cautioned, there is no one good criterion or set of criteria. The selection of the scheme to be used depends largely on the purpose of the research.

Table RS10.13. Part-time and full-time at-work workers, by residence and district and by willingness to take an added job (Bicol River Basin, Camarines Sur, April 1974)

Residence and district	Part time workers[a]			Full-time workers		
	Willing	Unwilling	Total n	Willing	Unwilling	Total n
a. Residence						
Poblacion	20%	80%	490	21%	79%	801
Barrio	21	79	2412	24	76	2464
Total	21	79	2902	23	77	3265
b. District						
Sipcoot	20%	80%	107	22%	78%	110
Naga	20	80	85	20	80	138
Magarao	21	79	110	23	77	105
Milaor	20	80	105	23	77	124
Goa	36	64	148	41	59	225
Iriga	12	88	57	11	89	58

[a] See note a, Table RS10.11.

Figure RS10.01. Since we learned in paragraph 13 that the partly employed represent, on the average, 79 percent of the total number of at-work part-time workers, this group accounts for the other 21 percent. Iriga and Goa stand out once more, this time because Goa has an exceptionally high percentage of visibly underemployed (36 percent) and Iriga a rather low one (12 percent; Table RS10.13).

15. Percentage of all underemployed. The at-work visibly underemployed constitute 44 percent of all those who are at work and looking for an additional job.

The Invisibly Underemployed

Two of the categories in Figure RS10.01 belong with the invisibly under-employed: those who were temporarily on leave from a full-time job but interested in a second position as well (cell B.2), and those who were at work full time and seeking another job (B.4). We shall speak only of the second category.

16. <u>Percentage of the full-time workers.</u> The invisibly underemployed repre-sent 23 percent of all at-work full-time workers. Note that this is almost exactly the same proportion as the visibly underemployed represent of all part-time employees (21 percent).

   The similarity is the more striking because Iriga and Goa show the same patterns here as they did earlier. Goa has a relatively high percentage of second-job seekers (41 percent); Iriga, a relatively low percentage (11 percent). See Table RS10.13, the "Full-time-and-willing" column.

17. <u>Percentage of all underemployed.</u> The at-work invisibly underemployed are 56 percent of all the underemployed. In other words, full-time workers seeking an additional job <u>outnumber</u> those who are currently working less than 40 hours a week.

The Underemployed in General

Some generalization about all those who would like a second job—whether they are currently working full time or not—may be instructive. For they may serve to clarify those findings which we made by looking separately at the two categories of underemployed.

18. <u>First</u>, underemployment of some kind is as characteristic of the barrios as it is of the poblacion (23 percent in both categories; Table RS10.13).

19. <u>Second</u>, it is as characteristic of the fully employed as it is of the partly employed (23 vs. 22 percent respectively; <u>ibid.</u>).

Table RS10.14. Employed at-work workers classified by selected characteristics and by willingness to take an added job (Bicol River Basin, Camarines Sur, April 1974)

Selected characteristic	Willing	Unwilling	Total n
a. Sex			
Male	26%	74%	4105
✓ Female	15	85	2062
Total	22%	78%	6167
b. Age			
10 - 14	12%	88%	485
15 - 24	20	80	1716
25 - 34	26	74	1295
35 - 44	28	72	1023
45 - 54	22	78	870
55 - 64	20	80	550
65 plus	11	89	228
c. Education			
None	19%	81%	308
Some elementary	23	77	2467
Elem. grad./some HS	23	77	2343
HS grad./some college	23	77	617
College graduate	12	88	432

20. ✓ <u>Third</u>, it is more characteristic of males than females, of the middle-aged rather than the very young or the very old, and of the middle educated rather than college graduates or those who have never gone to school (Table RS10.14).

21. <u>Fourth</u>, the desire for an added job almost always (95 percent of cases) springs from the feeling that the worker's present income is not sufficient to meet basic needs: he must have more money.[8] Only rarely is the willingness based on the perception of being underworked or under-utilized (2 percent).

[8] Those who do not seek additional work vary greatly in their currently reported income, but among <u>nonfarm</u> workers <u>no one</u> is looking for a second job

ESTIMATED LABOR-FORCE PARAMETERS

To this point in the study we have deliberately steered clear of any population estimates, speaking in percentage and showing only sample sizes in the tables. This was done in order to strengthen and simplify the presentation, for we are certain about the characteristics of our sample, and can speak easily of them. When it comes to the population from which the sample was drawn, however, we must necessarily make estimates involving a known level of error. We have reserved this exercise for this, the final section of findings.

Since we have categorized the various elements of the labor force (and its nonparticipants) in a scheme shown in Figure RS10.01 and expanded on in the text, we use the same division for the estimated parameters we now wish to present (see Table RS10.15).

To conclude this section on findings, then, we return to the questions we asked at the outset: How many people are available for employment, or additional employment? What are they like?

The second question has been answered in the paragraphs above, where we described in turn the various categories or worker distinguished in Figure RS10.01.

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if he is now receiving ₱400 per week in the poblacion or ₱250 per week in the barrio.

Abstracting from the poblacion-barrio dichotomy, willingness to work more appears to take an inverted U-shaped function. As income increases from less than ₱40 to ₱199 per week, willingness to work is heightened. This is seen in the increase in the proportion of willing workers from 19 percent among those earning less than ₱40 per week to 21 percent among those in the ₱150-199 income bracket. The proportion then declines to 7 percent among those receiving between ₱300 and ₱399 per week.

Table RS10.15. Estimated population of the Bicol River Basin, be selected labor-force categories (Camarines Sur, April 1974)

Selected category	Percentage of[a]			Population (est.)[b]	
	Total	PLF	LF	Subtotals	Total
TOTAL POPULATION	100.0				929,900
Male (50.0%)				464,533	
Female (50.0%)				465,367	
UNDER 10 YEARS OLD	33.3				312,393
Male (50.9%)				159,111	
Female (49.1%)				153,282	
10 YEARS OLD OR OVER	66.7	100.0			617,507
Male (49.4%)				305,422	
Female (50.6%)				312,085	
Labor force nonparticipants		47.2			291,479
Male (28.5%)				82,956	
Female (31.8%)				208,523	
Labor force participants		52.8	100.0		326,028
Male (68.2%)				222,466	
Female (31.8%)				103,562	
Unemployed			7.7		24,843
Male (66.4%)				16,811	
Female (33.6%)				8,032	

[a]Abbreviatioons are these: PLF - potential labor force (all those 10 years old or over); LF - labor force.

[b]The population figures were estimated by using the reciprocal of the sampling fractions 1/33 and 1/50 for poblacion and barrios, respectively, as multiplier of the sample figures. These estimates will not vary by more than 1 percent (plus or minus) from the actual population values.

Table RS10.15. (cont'd)

Selected category	Percentage of			Population (est.)	
	Total	PLF	LF	Subtotals	Total
Partly employed			33.1		107.904
Male (65.2%)					
Female (34.8%)				70,327	
				37,577	
Underemployed			20.6		67,334
Male (77.0%)					
Female (23.0%)				51,871	
				15,463	
Visibly underemployed			(8.8)		28,866
Male (75.7%)					
Female (24.3%)				21,861	
				7,005	
Invisibly underemployed[c]			(11.8)		38,468
Male (78.0%)					
Female (22.0%)				30,010	
				8,458	
Fully employed[d]			38.7		126,037
Male (66.3%)					
Female (33.7%)				83,523	
				42,514	

[c]Includes 23.4 percent of those who had full-time jobs but were on leave during the reference week. This figure is the percentage of the fully employed and at work who are known to want a second job. We assumed that full-time workers on leave (who were not asked about willingness to have a second job) would include the same proportion of invisibly underemployed as we found among those at work. The increment from this assumption is only 1.1 percent of the labor force.

[d]Includes 76.6 percent of those who had full-time jobs but were on leave during the reference week. For reasons given in note c we assumed this percentage would not be willing to take a second job, and hence were fully employed. By this assumption we increased the percentage of the fully employed by 3.5 percent.

The materials for a reply to the first question have also been presented (Table RS10.15). However, we can summarize the data by stating that the total manpower available for jobs as of April 1974 was divided as follows.

Category	N^a	Percent
Unemployed	24,843	27.0%
Underemployed	67,334	73.0
Visibly	(28,866)	(31.3)
Invisibly	(34,468)	(41.7)

[a]All population estimates are correct within 1 percent, plus or minus.

This pool of 92,177 willing workers represents 28.3 percent of the Bicol River Basin labor force (plus or minus 1 percent). If one added to this the 107,904 partly employed who express no willingness to take an added job, the percentage of the underutilized would be 61.4 percent of the labor force.

SELECTED CONCLUSIONS

We can now restate the questions we asked earlier: How many people are available for (additional) employment? What are they like?

A. Briefly, the minimum estimate of available manpower may be placed at 92,177; the maximum estimate, at 200,081. The first figure includes only the unemployed and the underemployed. The maximum estimate adds to these categories the partly employed as well.

While the unemployment rate is 7.7 percent, the underemployment figure is almost three times that (20.6 percent). In terms of the volume of labor involved, underemployment appears to be the more pressing problem. Employment policies for the Bicol River Basin should be formulated with these facts in mind.[9]

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[9]Solutions to unemployment and underemployment call for different approaches. While the unemployed are interested in full-time jobs, the

Now, to the second question. What are these workers like?

B. <u>The unemployed are characteristically young, middle educated, and inexperienced.</u>

The average (median) age of the unemployed subpopulation is 20.4 years, that is, about 12 years younger than the employed (see Table RS10.01, section b). In fact, of the total unemployed, 50 percent are between the ages of 15 and 24 years; and about three-fourths (73 percent) are younger than 25 (<u>ibid.</u>).

Because the unemployed are much younger, they are also more educated than those presently working (see paragraph 13). This reflects the fact, mentioned earlier (Illo and Lynch 1974: 32), that average education is inversely related to age. While the employed are usually either noneducated or college graduates, the unemployed tend to have completed elementary school, but not college. While only about half of the laborforce are middle educated, 67 percent of the unemployed are middle educated (Table RS10.01, section c).

For the most part, the unemployed have never had a paying job before in their lives. Only 28 percent report having held a two-week full-time position before their present unemployment (Table RS10.07, section c).

The exuberance of youth appears not to extend to job-hunting. Whereas 63 percent of those 25-34 years old said they were looking for work, only 39 percent of their juniors were so engaged (Table RS10.04, section b).

C. <u>While the employed tend to be either noneducated or college graduates, the underemployed (like the unemployed) are more often middle educated.</u>

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underemployed are most probably desirous of <u>part-time</u> jobs. Those without any employment at all are usually looking for a basic livelihood which implies earning minimum subsistence in a full-time job. The underemployed, on their part, seek <u>additional</u> employment to supplement present earnings. More likely than not, they will opt for part-time activities. It is possible, of course, that a visibly underemployed worker may choose to work in a newly available full-time job instead of his current part-time employment.

Of those who finished grade school but not college, 23 percent are seeking additional work. The corresponding figure for those with no formal education is 19 percent; for those with a college degree, 12 percent (Table RS10.14, section c).

D. <u>Alternative explanations are available for the tendency of the middle educated to be more frequently underemployed than others.</u>

It is a fact (Illo and Lynch 1974: 31-32) that a significant positive relationship exists between level of income and level of education. Though the middle educated generally earn more than the noneducated, it is possible that large numbers of them consider their income too low for the education they have received. On the other hand (or at the same time), since the middle-educated underemployed tend also to be concentrated in the 25-44 year category, they are also those most in need of added income for their growing families (see below).

E. <u>Unemployed females show a greater tendency to seek work than unemployed males do; however, among the underemployed, males are more active in this regard</u> (compare Tables RS10.04, section a, and RS10.14, section a).

Since the middle-aged underemployed male is usually married and the bread-winner of a family growing in size, his search for added income is understandable. Females are overrepresented among the unemployed job-seekers probably because they are for the most part, fresh entrants into the labor market, and as yet undaunted in their search for work (Table RS10.08, sections a and b).

F. With the above considerations in mind, <u>the kinds of jobs to be generated must vary.</u> While more young females are interested in full-time jobs, middle-aged males are looking for additional (part-time) jobs. One conclusion however, is inevitable. This is the need for development strategies which are <u>labor intensive.</u> Somehow, we must find jobs for anywhere

from 93 to 200 thousand Bicolanos.[10]

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[10]Oshima (1974: 35), in a review article of the "Ranis Report," suggests that a labor-intensive strategy for the rural sector is needed. It is to be remembered, however, that sustained growth in the efficiency of small units of production is not automatically or easily achieved. Critical to the success of such a strategy will be the solving of the problems of lack of experience (among the entrepreneurs), technology, institutions, capital, and infrastructure. Oshima feels there must be a step-by-step procedure, in which first priority is given to the rural sector.

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Appendix A

THE FIRST ANNUAL PANEL SURVEY

One of the principal bases for evaluating the progress of the Bicol River Basin Development Program will be the information gathered in a series of projected large-sample surveys of the River Basin's households. Of special interest are three measures, namely, per-capita income, employment rate, and agricultural productivity. Nonetheless, a much broader spectrum of characteristics is being investigated, including many that relate to people's reactions to their own level of living—the so-called perceived-quality-of-life, or social-indicator, questions. In all, the survey instrument currently in use has 16 distinct sections, or blocks.[1]

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[1] Because the interview schedule is long, certain portions of it are intended for only one-third of the respondents. Three sets of interview schedules are distinguished, then, the difference being the inclusion of a particular two blocks (either 8-9, 10-11, or 12-13) in one set and not in the other two.

Common to all three sets are the following blocks and items: Block 1 (Background Information), items 1.1-1.13; Block 2 (Housing), items 2.1-2.11; Block 3 (Household and Labor Force), items 3.1-3.15; Block 4 (Employment and Income), items 4.1-4.16; Block 5 (Agricultural Productivity), items 5.1-5.9; Block 6 (Furniture and Appliances), items 6.1-6.9; Block 7 (Household Expenditures), items 7.1-7.5; Block 14 (Perceived Happiness), items 14.1-14.6; Block 15 (Future SSRU Contacts), items 15.1-15.5; and Block 16 (Interview Situation), 6 unnumbered items. Block 5 is only for farm HHs; Block 6, only for nonfarm HHs.

Set I (16 pages) has in addition Block 8 (Health), items 8.1-8.4; and Block 9 (Nutrition), items 9.1-9.2.

Set II (17 pages) has Block 10 (Community Rating), items 10.1-10.11; and Block 11 (Organizational Participation), items 11.1-11.20.

Set III (17 pages) has Block 12 (Social Status and Mobility), items 12.2-12.11; and Block 13 (Travel), items 13.1-13.12.

According to SSRU plans, this comprehensive survey is to be conducted periodically, perhaps annually, and will involve the same respondent households (HHs) every time, a research arrangement known as a panel survey. Because of the accuracy desired, it was decided to aim for a panel of 450 HHs in each of the six districts into which the River Basin area had been divided for administrative and research purposes.[2] However, as insurance against the inevitable dropping out of some sample HHs during the study years (1974-79), a 20-percent addition was made to the initial sample. Hence we planned on 540 HHs per district, a total of 3,240 HHs in all, of which 720 were to be taken from poblaciones and 2,520 from barrios.

The first annual panel survey (or AP1) was conducted in April 1974. What follows are facts about that study, selected for inclusion here because they are a necessary preparation for the sections on education and employment which follow.

1. The study area of AP1, that is, the land area covered by the survey, is that portion of the Bicol River Basin which is located in the province of Camarines Sur. Included are 33 of the province's 37 municipalities —all except the four which constitute the Caramoan peninsula, east of Mt. Isarog.

   The Bicol River Basin (BRB) strictly so called, that is, insofar as it is an area drained by the Bicol River and its tributaries, includes about 312,000 hectares. Two-thirds of this land are in Camarines Sur, but the Basin extends to both Camarines Norte and Albay as well.

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[2] The six districts, with their constituent municipalities, are the following: Sipocot (Sipocot, Cabusao, Del Gallego, Libmanan, Lupi, and Ragay); Naga (Naga City, Baao, Bula, Ocampo, Pili); Magarao (Magarao, Bombon, Calabanga, Canaman); Milaor (Milaor, Camaligan, Gainza, Minalabac, Pamplona, Pasacao, San Fernando); Goa (Goa, Lagonoy, Sangay, San Jose, Tigaon, Tinambac); and Iriga (Iriga City, Bato, Buhi, Balatan, Nabua).

Considered part of the BRB in the broader sense of a target area of the BRB Development Program, are several areas which are not drained by the Bicol River system. Among them are certain portions of the AP1 study area, especially those municipalities east and north of Mt. Isarog (Partido district) and others along Ragay Gulf north and west of Lupi. They are included in the scope of the Development Program--and in AP1's coverage--because they are systemically linked to municipalities in the Basin proper and are therefore, in a functional sense, part of the Basin.

2. The dominant and economically most important geographical features of the study area are, of course, the Bicol River and the moist lowland plain which it drains. This alluvial plain extends about 90 kilometers south-east from San Miguel Bay to Lake Bato and Mt. Mayon (in Albay); it is 8-10 kilometers wide, broadening locally along tributary streams of the Bicol River. Lying very close to sea level, the Bicol Plain has the compact soil and water supply suitable especially for the cultivation of wet rice.

Less important features of the study area are its coastal swamp and marsh lands, its dry open lowlands and slopes (especially the upper Sipocot River valley, Camarines Sur), its rough and hilly uplands (the Ragay Gulf coast hills that border the Bicol Plain on the west), and the rough mountain lands that extend from Mt. Isarog, south through Mt. Iriga, Camarines Sur, to Mt. Mayon, Albay.

3. The topic population, the people about whom reports on AP1 are written, are household residents of the study area, especially those who are 10 years of age and over.

As of May 6, 1970 (Census of the Philippines), the total population of the Bicol River Basin was reported to number 878,905, living in about 141,758 households. In April 1974, at the time AP1 was conducted, the estimated population of the study area was 929,900, living in about

150,000 households.[3]

4. The <u>respondent population</u> consists of household heads and their spouses living in the study area.

5. The <u>respondent sample</u> came from 3,240 randomly selected households found in 33 poblaciones and 87 barrios. Respondents were selected by means of a multistage sampling procedure.[4]

Of the households included in the sample, about 23 percent (720) are from poblaciones, 77 percent (2520) from barrios. This implies that poblacion households are overrepresented in the sample, since according to estimates based on the 1970 Census they are only about 16 percent of the area total, not 23 percent.[5]

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[3]This population estimate assumes that the BRB had an annual growth rate 1970-74 of 1.42 percent, the rate observed during the 1960-70 intercensal period. The number of households (149,502) is derived by dividing the estimated 1974 population (929,900) by the average household size (6.22) in the study sample (n = 3240).

[4]The sampling procedure used in AP1 involved six steps. <u>First</u>, the study area was **divided into six districts** with four-seven municipalities in each, or 33 in all (see note 2, above). <u>Second</u>, within each district, every municipality was represented. <u>Third</u>, within each municipality respondents were **drawn** from every poblacion, and from as many randomly chosen barrios as were needed to assure the presence in the sample of that number of households that had been allotted as the barrio quota for the particular municipality. <u>Fourth</u>, within each sample community (poblacion or barrio) the area was first blocked (25-30 dwelling units per block), and a varying number of blocks selected by chance. <u>Fifth</u>, within each of these blocks a household count was made, followed by systematic random selection of no more than nine households per block. <u>Sixth</u>, in each sample household, both the household head and his wife were interviewed (one for some sections of the lengthy schedule, and the other for the rest).

[5]The sampling fractions for poblacion and barrios are 1/33 and 1/50, respectively.

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6. Living in the sample households are 20,155 individuals about whom demographic data were gathered; they are 2.2 percent of the area's estimated topic population (929,900) as of April 1974. The poblacion residents in the sample (4,660) are a little over 3 percent of the River Basin's poblacion dwellers, while those living in sample barrio households are a 2.0 percent sample of the corresponding area total.

7. As a consequence of the large sample size, <u>sampling error</u> in findings about household members is small. It is estimated that the figures presented here would not differ by more than 1 (.68) percent (plus or minus) from figures based on a complete enumeration of households. The chances of the error exceeding 1 percent are also small--only once in 20 sample draws (in other words, the reliability level is 0.95).

8. SSRU reports on education and employment (RS08) and on unemployment and underemployment (RS10) use data derived from the entire AP1 sample (n = 3240; HH members = 20,155). The overall sampling error, at 0.95 reliability, is 1 percent (plus or minus). Hence estimates of population values must be understood as correct with these limits.

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4. The proposed Balongay fishpond estate: How do the taga-Balongay feel about it? (by J.V. Barrameda, Jr., S.S. Roco, Jr. and F. Lynch)

5. Pakikiiba and pakikidamay: Two modes of group cooperation in Camarines Sur (by J.V. Barrameda, Jr.)

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13. Patterns of income distribution and household spending in the Bicol River Basin (by J.F.I. Illo and F. Lynch)

15. SSRU municipal inventory of the Bicol River Basin as of January 1974 (by Agapito M. Tria II)

16. SSRU transportation inventory of the Bicol River Basin as of January 1974 (by Agapito M. Tria II)

Note: Revised versions of Reports 7, 12, and 14 will be ready in FY 1976.

Announcements Series: 1. SSRU research plans for February-June 1974; 2. SSRU research plans for February-June 1975.

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Consolidated Progress Reports: 1. July 1, 1973, to April 30, 1974; 2. July 1, 1973, to June 30, 1974; 3. July 1, 1974 to December 31, 1974.

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