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WHO GET THE JOBS--THE OLD OR THE EDUCATED?

EDUCATION AND EMPLOYMENT IN THE BICOL RIVER BASIN

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CONTENTS REVISED

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ABSTRACT. In April 1974 SSRU interviewers visited 3240 randomly chosen households in the 33 municipalities which constitute the Bicol River Basin in Camarines Sur. The data which they collected are 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 River Basin population of about 930,000. About two-thirds of the total are potential labor-force members (10 years of age or older). However, actual members of the labor force represent only 53 percent of the latter subpopulation. By far the highest percentage of employed workers are farmers (47 percent), with farm workers and nonfarm-agricultural occupations accounting for another 15 percent. The remaining 39 percent report nonagricultural jobs. The interrelations of education, age, employment, and occupation can be summarized in a single compound statement: the older you are, the more likely you are to have a job; the more educated you are, the more likely you are to have a well-paid job. It is concluded, however, that from a labor-force viewpoint, the mere multiplication of high schools would be harmful. Alternative suggestions are made.

In October 1973, eleven government programs were submitted to 600 rice farmers of the Bicol River Basin for their appraisal and ranking. Easily the favorite choice was water management, followed by land reform and nonfarm-employment

This research report is based mainly on selected findings of the SSRU's Annual Panel Survey 1 (April 1974). A technical summary of AP1 is found in SSRU Research Activity Summary, No. 13, which is available from the SSRU on request. The senior author manages the Naga District staff, while Frank Lynch is the SSRU's director.

opportunities. In fourth place, however, ahead of expanded credit facilities, roads, electricity, and farmers' organizations such as the Samahang Nayon, was free high schools (Lynch 1973: 11-13).

Farmers apparently place very high priority on their children's getting an education beyond grade school, and hope they will finish the four years of secondary training. From a multitude of earlier studies on the subject, it is well known that what average parents expect from this added education is a better life for their children. They believe that the more education they have the greater chance they will have of being employed, and the higher their incomes will be.

Two questions must certainly occur to those involved in the Bicol River Basin Development Program: first, to what extent does educational attainment affect one's chances of being employed? and second, what priority should be placed on making secondary education more easily available in the Bicol River Basin?

Answers will be suggested on grounds of data gathered in Bicol River Basin municipalities in April 1974. Before these answers are proposed we first briefly describe the survey in which the relevant data were collected and then summarize those findings most closely related to the questions at issue.

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

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.

¹Because 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 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 12.1-12.11; and Block 13 (Travel), items 13.1-13.12.

²The 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, Buhí, Balatan, Nabua).

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, include 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.

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 southeast 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 respondent population consists of household heads and their spouses living in the study area.
5. The respondent sample 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

³This population estimate supposes 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).

⁴The sampling procedure used in AP1 involved six steps. First, the study area was divided into six districts with four-seven municipalities in each, or 33 in all (see note 2, above). Second, within each district, every municipality was represented. Third, within each municipality respondents were drawn from every poblacion, and from as many randomly chosen barrios 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. Fourth, within each sample community (poblacion or barrio) the area

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

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.⁵
7. As a consequence of the large sample size, sampling error in findings about household members is small. It is estimated that the figures presented here would not differ by more than 1 or 2 percent (plus or minus) from figures based on a complete enumeration of households. The chances of the error exceeding 2 percent are also small--only once in 20 sample draws (in other words, the reliability level is 0.95).

CHARACTERISTICS OF THE STUDY POPULATION

In this section we present data descriptive of the household residents of the study area--a selection of the usual demographic measures by which one population is judged relative to another.⁶ Included among these statistics

was first blocked (25-30 dwelling units per block), and a varying number of blocks selected by chance. Fifth, within each of these blocks a household count was made, followed by systematic random selection of no more than nine households per block. Sixth, 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).

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

⁶Additional characteristics of the River Basin population will be presented in forthcoming reports on the data collected in AP1.

will be information on age, education, employment, and occupation, but only as absolute figures--the interrelationships among these four variables will be the subject of two later sections, below.

The General Population

8. Household size. The average (mean) household has 6.22 members, but poblacion HHs tend to be larger than those in the barrio (6.47 vs. 6.15).
9. Age. The population of the study area is very young, with a median age of only 16.0 years. Barrio residents are especially young, for among them the median age is 15.7, whereas among those living in the poblacion it is 17.4 (Table RSO8.01).

Another way of portraying the youthfulness of the population is in terms of percentages found in three age categories. In the preproductive category (0-14 years) are found 48 percent of the people; in the productive years (15-64), 49 percent; and in the postproductive period (65 and over), 3 percent. Differences exist by residence, however. For the barrios, the three figures (0-14, 15-64, 65 and over) are 48, 49, and 3 percent, respectively. For the poblaciones, the corresponding percentages are 46, 50, and 4 (ibid.).

10. Dependency ratio. Because of this youthful age structure, the study area has a high overall dependency ratio. For every 100 individuals in the productive, or working, ages (15-64 years), there are 101 dependents, or non-workers, in the very young (0-14) or old (65 and over) categories. The dependency ratio for the barrios is 102; for the poblaciones, 89 (ibid.).
11. Sex ratio. Overall, there is a slight preponderance of females in the study area: for every 100 females there are 99 males. This female dominance is pronounced in the poblaciones (100:93), but is reversed in the barrios, where males outnumber females 101 to 100 (ibid.).

12. Marital status. About two-thirds of the population (66 percent) have never married; another 31 percent are married at present, and about 3 percent, widowed. A small percentage (less than 1 percent) is separated or divorced (ibid.).
13. Education. For the entire population, regardless of age, the median educational attainment is 3.8 years (ibid.). A more meaningful fact is the corresponding figure for those who are 25 years of age or older and have presumably completed their schooling. For this subpopulation the median education is 5.6 years--4.6 years in the barrios and 7.7 years in the poblacion (see Table RSO8.14).
14. Housing and socioeconomic status. Gross distinctions in house construction are traditionally based on the materials used for walls, on the one hand, and the roof, on the other. The most common combinations, in descending order of frequency, are these: (1) walls of bamboo and/or nipa with a nipa or cogon-grass roof ("light" construction); (2) walls of wood, with a nipa or cogon-grass roof ("mixed" construction); (3) walls of wood, with a galvanized-iron or aluminum roof ("strong" construction); and (4) walls of concrete, with a galvanized-iron or aluminum roof (also "strong"). A further refinement may be introduced by observing as well the state of repair, good or poor, in which the house is currently found. On grounds of studies made earlier in Canaman, Camarines Sur (Lynch 1959) and very recently in Bula, Pili, and Minalabac (Ilo 1974: 11), it is legitimate to infer socioeconomic status from the combination of house construction and state of repair.⁷

Given the data presented in the following text table, we conclude that the study area population is more than three-fourths lower class and only 23 percent upper class, the top 5 percent being of elite status.

⁷Both of these studies find a significant correlation between house construction (including state of repair) and social class (Lynch) or income (Ilo).

Walls	Roof	Repair	Social class	Percentage in study area	
Concrete or wood	GI or alum.	Good	<u>Upper--elite</u>	5	23%
		Poor		7	
<u>Upper-marginal</u>					
Wood	Nipa or cogon	Good		11	
		Poor		21	
Nipa or bamboo	Nipa or cogon	Good	<u>Lower</u>	26	77%
		Poor		30	

The Labor Force

The so-called economically active portion of the population, also known as the labor force, includes all those household members of the study area who are 10 years of age or older and are either employed (at work, or have a job) or unemployed (have no job, but seriously want one).⁸ The reference week for AP1 respondents, that is, the period referred to when they were asked if they were working or not, was the week preceding the day on which they were interviewed, in April 1974.

In paragraphs 15-19 we describe the population 10 years old and over, from which the labor force is drawn. In the succeeding paragraphs (20-30) we restrict our attention to those who are classified as employed or unemployed--the economically active members of the River Basin population.

⁸ A serious desire for work is evidenced by looking for it. However, one may still be considered unemployed if his reason for not looking for work is the conviction that there is none to be had, or one's being prevented from doing so. For more detail on the subject of this definition and other related ones see the 1970 Census of population and housing (NCSO 1974: xv).

Source of the labor force

15. Of the total population of the study area, 67 percent are at least 10 years of age. They constitute the subpopulation which furnishes the area's workers. About 83 percent of this grouping live in the barrio, the remainder in the poblacion (Table RS08.01).
16. Overall, females 10 years old and over slightly outnumber males (100:97), a predominance which is pronounced in the poblacion, where there are only 90 males for every 100 females. There is also a higher percentage of single and widowed persons in the poblacion (51 and 5 percent vs. 48 and 4 for the barrio). See Table RS08.01.
17. Median age of this subpopulation is 22 years; the median educational attainment, 6.1 years (ibid.).
18. Of the total population 10 years old and over, about 326,000 (52.8 percent) are members of the labor force (ibid.). The participation rate, however, differs slightly by district, ranging from 51.4 percent in Magarao to 54.5 in Sipocot (Table RS08.08); by residence, participation being higher in the barrios (53.7 percent vs. 48.6 in the poblacion); by sex, there being more males than females (72.8 vs. 33.2 percent); by age, with lower participation rates reported for the very young and the very old age classes (10-14 and 65-plus with 22.6 and 37.5 percent, respectively), while the rates of the age groups in between range from 55.5 percent (15-24) to 69.6 percent (45-54); and by education, with college graduates most active (81 percent), though all the education classes have rates equal to about 50 percent.
19. Reasons for nonparticipation in the labor force also differ by district (Table RS08.08). The most common reason for males' not being economically active is that they are studying (70 percent); this reason is given for only 28 percent of the female nonparticipants. On the other hand,

while 66 percent of eligible females are not in the labor force because of housekeeping requirements, only 15 percent of males give this reason (Table RS08.02). Smaller percentages do not participate because they are retired or physically disabled (ibid.).

The labor force itself

20. The resultant labor force has twice as many males as females (68 vs. 32 percent, or 219 males for every 100 females; Table RS08.01). The imbalance is more pronounced in the barrio (sex ratio, 229), less pronounced in the poblacion (ratio is only 155; ibid.).
21. Married persons clearly outnumber the single and widowed members of the labor force (55 vs. 41 and 3 percent, respectively; Table RS08.01).
22. The median age of the labor force is 30 years (in the poblacion, 32; in the barrio, 29). The median educational attainment is 6.3 years (compare paragraph 13), but the difference between those living in the poblacion and those who live in the barrio is notable: fully 35 percent, more than a third, of the poblacion workers have finished at least a four-year high school course, while only 13 percent of the barrio-based labor force claim this (RS08.01).
23. The employment rate is the percentage of the labor force which is employed. Overall, the figure is 92.3 percent for the study area (unemployment rate, 7.7 percent; Table RS08.04).

Important differences occur by residence (employment rates are consistently lower in the poblacion); by sex (in the poblacion, women are relatively more often employed than men; in the barrio, men are favored); by age (in general, rate increases with age); by civil status (the married and widowed are more frequently employed than the single); and by district (ranging from 89.8 percent in Milaor to 94.3 in Goa). See Tables RS08.04 and 08.08.

Differences in employment rate by education are less easily summarized, and will be the subject of special study below. As the reader can see from Table RS08.04 (section c), however, the pattern that is suggested is U-shaped: very high employment rates for those with a complete college education or with no formal training at all, and high rates for those in between.⁹

24. In what kind of occupation do these employed workers engage? Respondents' replies were first classified as farm, off-farm, or nonfarm.¹⁰ Next, nonfarm occupations were further classified as belonging to one of the following five categories: nonfarm-agricultural or one of four kinds of nonfarm-nonagricultural jobs. The entire scheme, with added data from the study on which it was based in part (Bacol 1971), is shown in Table RS08.17.

The distribution of River Basin workers within this framework is presented in Table RS08.05. The importance of farming is evident in that about 62 percent of the labor force is engaged either in crop cultivation (farmers and farm workers, totaling 56.3 percent) or in related occupations (nonfarm-agricultural jobs, 5.7 percent). This emphasis is even more pronounced in the barrio, of course (68.3 percent vs. 27.1 for the poblacion). What Bacol refers to as the "middle class" (our low white-collar group) accounts for only 8.6 percent of the workers, while her "elite" (our high white-collar group) are even fewer--6.6 percent (see Bacol 1971: 196).

⁹In the poblacion this relationship is significant at the 0.05 level.

¹⁰A 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 RS08.01. Household members (total population, 10 years of age and older, and labor force members) by selected demographic characteristics and by residence (Picol River Basin, Camarines Sur, April 1974)

Demographic characteristic	Total population			10 years and older			Labor force ^a		
	Pobl.	Barrio	Total	Pobl.	Barrio	Total	Pobl.	Barrio	Total
a. Sex									
Male	48%	50%	50%	48%	50%	49%	61%	70%	68%
Female	52	50	50	52	50	51	39	30	32
Sex ratio (M/F) ^b	93	101	99	90	99	97	155	229	219
b. Age (in years)									
Under 10	31%	31%	33%	-	-	-	-	-	-
10 - 14}	15	15	15	21%	22%	22%	185	181	5%
15 - 24}	20	18	18	29	28	28	172	144	10%
25 - 34}	10	10	10	14	15	15	93	60	9%
35 - 44}	8	8	8	11	13	12	74	101	16%
45 - 54}	7	7	7	11	10	10	61	72	13%
55 - 64}	5	4	5	8	7	7	43	35	8%
65 and over	4	3	3	6	5	5	3	4	4%
DK (sample)	10	32	42	10	32	42	6	18	24
Depend. ratio ^c	89	102	101	-	-	-	-	-	-
c. Civil status									
Never married	66%	66%	66%	51%	48%	48%	40%	41%	41%
Married	30	32	31	43	48	47	56	55	55
Widowed	3	2	3	5	4	4	4	3	3
Separated/div.	-	-	-	-	-	-	-	-	-
DK (sample)	2	16	18	2	16	18	2	5	7

40.1
70.3
68.2

^aThose who are 10 years of age or older and classified as either employed or unemployed.

^bBy the sex ratio is here meant the number of males in the population or sub-population for every 100 females.

^cBy the dependency ratio is meant the number of nonproductive household members (0-14 and 65-plus years old) for every 100 members in the so-called productive years (15-64).

Table RS08.014 (cont'd)

Demographic characteristic	Total population			10 years and older			Labor force		
	Pobl.	Barrio	Total	Pobl.	Barrio	Total	Pobl.	Barrio	Total
d. Educational attainment									
None	22%	28%	27%	3%	4%	4%	3%	5%	5%
Some elem.	27	38	36	25	45	40	22	43	38
Elem. grad./ some HS	30	26	26	43	39	40	40	39	40
HS grad./some college	13	6	7	19	9	11	18	8	10
College grad.	7	2	3	10	3	5	17	5	7
DK (sample)	51	93	144	38	83	121	21	34	55
e. Total									
Sample (n)	4,660	20,155	3,229	13,448	1,566	7,053			
		15,495	10,219	5,487					
Popl (est.) ^d	153,592	929,900	510,950	51,678	326,028				
		776,308	106,557	617,507	274,350				

^dThe total population figures were derived by taking the 1970 Census figures as the base and assuming that the average annual growth rate 1970-74 for River Basin municipalities was the same as for 1960-70 (1.42 percent). The sampling fractions for poblacion (1/33) and barrio (1/50) were used to estimate the population 10 years of age and over and the population belonging to the labor force.

Table RS08.02. Household members 10 years of age or older who are not members of the labor force, by residence and sex and by reasons for nonparticipation (Bicol River Basin, Camarines Sur, April 1974)

Residence and sex	Studying	House-keeping	Retired	Physically disabled	Total n
a. <u>Poblacion</u>	52.5% ^a	37.8%	5.8%	3.9%	1,663
Male	78.4	8.1	7.0	6.5	582
Female	38.6	53.8	5.2	2.5	1,081
b. <u>Barrio</u>	36.9 ^a	54.4	6.2	2.5	4,732
Male	67.5	17.5	10.0	5.0	1,275
Female	25.7	68.0	4.7	1.6	3,457
c. <u>Total</u>	39.9	51.2	6.1	2.8	6,395
Male	70.0	15.3	9.3	5.4	1,857
Female	27.9	65.5	4.8	1.8	4,538

^aIn this column are the total numbers of household members in the AP1 sample who are 10 years of age or older and not economically active. The corresponding estimated populations are 54,879 for the poblacion, 236,600 for the barrio, and 291,479 overall. These estimates are derived by using the sampling fractions of 1/33 for the poblacion and 1/50 for the barrio

Table RS08.03. Work site of employed off-farm and nonfarm workers, by place of residence (Bicol River Basin, Camarines Sur, April 1974)

Work site	Poblacion	Barrio	Total
Within barrio of residence	57.2	69.8	66.9
Outside barrio of residence but inside municipality	27.8	18.3	20.5
Outside municipality	15.0	11.9	12.6
Total sample	1,115	2,365	3,480
Population (est.) ^a	36,795	118,250	155,045

^aFor the procedure used to arrive at population estimates, see note d, Table RS08.01.

Table RSO8.04. Employment rates of household members, by selected demographic criteria and by residence (Bicol River Basin, Camarines Sur, April 1974)^a

Demographic criterion	Poblacion	Barrio	Total
a. Sex			
Male	87.7%	93.2%	92.4%
Female	91.2	92.5	92.2
b. Age (in years)			
10 - 14	66.3%	86.8%	84.9%
15 - 24	77.4	87.7	86.2
25 - 34	93.5	94.3	94.2
35 - 44	95.6	97.6	97.3
45 - 54	96.8	99.0	98.6
55 - 64	97.6	96.1	96.4
65 and over	98.0	98.0	98.0
c. Civil status			
Never married	76.9%	87.3%	85.7%
Married	96.9	97.1	97.0
Widowed/sep./div.	98.7	96.4	97.2
d. Educational attainment			
None	97.6%	94.2%	94.5%
Some elementary	89.8	95.6	95.1
Elem. grad./some HS	86.4	91.2	90.4
HS grad./some coll.	87.2	87.6	87.5
College graduate	94.2	91.5	92.5
e. Total			
Employment rate	88.9%	92.9%	92.3%
Sample (n)	1,566	5,487	7,053
Population (est.) ^b	51,678	274,350	326,028

^aBy employment rate is meant the percentage of the labor force which is employed.

^bThe population estimate is based on the AP1 sample, applying the sampling fractions 1/33 and 1/50 to the poblacion and barrio figures, respectively.

Table RS08.05. Employed workers, by type of occupation and by residence (Bicol River Basin, Camarines Sur, April 1974)

Type of occupation	Poblacion	Barrio	Total
Nonfarm-nonagricultural	<u>72.9%</u>	<u>31.7%</u>	<u>39.0%</u>
High white-collar	17.2	4.5	6.6
Low white-collar	17.5	6.7	8.6
High blue-collar	9.3	4.4	5.2
Low blue-collar	28.9	16.1	18.6
Nonfarm-agricultural	<u>4.4</u>	<u>6.0</u>	<u>5.7</u>
Farmers	<u>17.1</u>	<u>52.3</u>	<u>47.0</u>
Farm workers	<u>5.6</u>	<u>10.0</u>	<u>9.3</u>
Total (sample)	1,340	4,932	6,272
DK (sample)	55	171	226
Total pop. (estimate) ^a	44,220	246,600	290,820
DK (population)	1,815	8,550	10,365

^aThe estimated total labor force is 326,028 (Table RS08.01). Total employed is estimated to be 301,185 (92.3 percent). For the procedure used to arrive at population estimates, see note d, Table RS08.01.

Table RS08.06. Employment rate and percentage of white-collar workers among total employed, by education, residence, and sex (Bicol River Basin, Camarines Sur, April 1974)

Measure and education class	Poblacion		Barrio		Total	
	Male	Female	Male	Female	Male	Female
a. Employment rate (percentage of employed in total labor force)						
None	94.7%	100.0%	95.6%	91.8%	95.4%	92.8%
Some elementary	87.1	94.0	95.4	96.1	94.7	95.8
Elem. grad./some high school	85.1	88.9	91.6	90.3	90.5	90.1
High school grad./some college	88.1	85.4	87.9	86.9	87.9	86.4
College graduate	95.6	93.1	94.6	90.8	94.9	91.7
Total	87.7%	91.2%	93.2%	92.5%	92.4%	92.2%
b. Percentage of white-collar workers among total employed						
None	16.7%	22.7%	1.2%	10.2%	2.1%	11.4%
Some elementary	13.6	16.3	2.2	9.7	2.9	10.2
Elem. grad./some high school	13.2	26.3	4.0	13.6	5.1	15.0
High school grad./some college	41.3	46.0	21.2	42.2	26.3	40.2
College graduate	81.9	95.5	74.4	93.5	75.6	93.3
Total	28.5%	43.7%	7.0%	21.1%	9.3%	25.6%

Table A -

Table RS08.07. Estimated population and subpopulation totals for Bicol River Basin districts as of April 1974, by residence and district (Bicol River Basin, Camarines Sur, April 1974)

Population or subpopulation	Sipocot	Naga	Magarao	Milnor	Goa	Iriga
a. Total population^a						
Poblacion	16,826	32,374	18,904	22,273	23,447	39,768
Barrio	172,578	179,124	51,954	80,712	140,385	151,555
Total	189,404	211,498	70,858	102,985	163,832	191,323
b. Population 10 years of age and older^b						
Poblacion	11,528	22,960	12,960	15,736	16,005	27,200
Barrio	112,384	123,213	34,503	50,910	92,796	102,672
Total	123,912	146,173	47,463	66,646	108,801	129,872
c. Population in the labor force						
Poblacion	4,994	11,440	6,480	7,952	8,019	12,800
Barrio	62,656	64,722	17,913	28,110	49,476	54,808
Total	67,650	76,162	24,393	36,062	57,495	67,608
d. Population employed						
Poblacion	4,598	10,320	5,928	6,664	7,458	10,850
Barrio	58,752	59,094	16,590	25,740	46,740	51,770
Total	63,350	69,414	22,518	32,404	54,198	62,620
e. Population unemployed						
Poblacion	396	1,120	552	1,288	561	1,950
Barrio	3,904	5,628	1,323	2,370	2,736	3,038
Total	4,300	6,748	1,875	3,658	3,297	4,988

^aTotal population estimates were derived by calculating the annual growth rate for each of the six Bicol River Basin districts during the intercensal period 1960-70 and assuming the same rate prevailed in the years 1970-74.

^bEstimates of all populations other than the total population were determined by first determining the AP1 sampling fraction for each district and residence and then applying these figures to the appropriate sample findings.

Table RS08.08. Labor force participation rates, reasons for nonparticipation in the labor force, and employment rates, by residence and district (Sicol River Basin, Camarines Sur, April 1974)^a

Measure and residence	Sipocot	Naga	Magarao	Milaor	Goa	Iriga
a. Labor force participation rate^b						
Poblacion	43.5%	49.3%	49.6%	50.4%	50.3%	47.2%
Barrio	55.9	52.4	52.2	55.2	53.3	53.7
Total	54.5	52.1	51.4	54.1	52.8	52.1
b. Reasons for nonparticipation in the labor force						
Poblacion						
Studying	63.6%	52.8%	51.1%	53.6%	38.8%	52.4%
Housekeeping	26.9	36.8	40.7	36.3	50.4	37.8
Disabled	4.7	6.9	5.6	6.5	7.5	4.2
Retired	4.8	3.5	2.6	3.6	3.3	5.6
Barrio						
Studying	38.1%	48.7%	33.5%	34.6%	30.0%	35.1%
Housekeeping	55.3	43.2	58.1	59.1	61.2	50.8
Disabled	5.7	5.4	6.0	4.3	6.8	8.9
Retired	0.9	2.7	2.4	2.0	2.0	5.2
Total						
Studying	41.1%	49.4%	38.5%	39.4%	31.4%	39.1%
Housekeeping	52.0	42.1	53.2	53.3	59.5	47.8
Disabled	5.6	5.6	5.8	4.9	6.9	7.8
Retired	1.3	2.9	2.5	2.4	2.2	5.3
c. Employment rate						
Poblacion	91.9% ^{8.1}	90.0% ^{10.0}	91.4% ^{8.6}	83.6% ^{16.4}	93.0% ^{7.0}	84.6% ^{15.4}
Barrio	93.8 ^{6.2}	91.1 ^{8.9}	92.7 ^{7.3}	92.7 ^{7.3}	94.4 ^{5.6}	92.9 ^{7.1}
Total	93.6%	91.1%	92.3%	89.8%	94.3%	92.6%

^a For the figures on which these percentages are based see Table RS08.07.

^b By labor force participation rate is meant the percentage of the total population 10 years and over which is classified as employed or unemployed.

RS08.09. Significance in differences in employment rates (percentage of employed among total workers) between education classes, by sex and residence (Bicol River Basin, Camarines Sur, April 1974)^a

Sex and education class ^b	Poblacion				Barrio				Overall			
	2	3	4	5	2	3	4	5	2	3	4	5
1. <u>All workers</u> (see Table RS08.04)												
1	.01 (1)	.001 (1)	.001 (1)	n.s.	n.s.	.05 (1)	.001 (1)	n.s.	.001 (1)	.001 (1)	.001 (1)	.001 (1)
2		n.s.	n.s.	.05 (5)		.001 (2)	.001 (2)	.10 (2)		.001 (2)	.001 (2)	.001 (2)
3			n.s.	.001 (5)			.05 (3)	n.s.			.05 (3)	.01 (5)
4				.01 (5)				.05 (5)				.001 (5)
2. <u>Male workers</u> (see Table RS08.06)												
1	n.s.	.05 (1)	n.s.	n.s.	n.s.	.01 (1)	.01 (1)	n.s.	.005 (1)	.001 (1)	.001 (1)	.001 (1)
2		n.s.	n.s.	.01 (2)		.001 (2)	.001 (2)	n.s.		.001 (2)	.001 (2)	n.s.
3			n.s.	.01 (5)			.05 (3)	n.s.			.001 (3)	.001 (5)
4				.01 (5)				.01 (5)				.001 (5)
3. <u>Female workers</u> (see Table RS08.06)												
1	.005 (1)	.001 (1)	.001 (1)	.001 (1)	n.s.	n.s.	n.s.	n.s.	.001 (2)	.001 (1)	.001 (1)	.01 (1)
2		.05 (2)	.05 (2)	n.s.		.001 (2)	.001 (2)	.05 (2)		.001 (2)	.001 (2)	.001 (2)
3			n.s.	n.s.			n.s.	n.s.			.001 (3)	.001 (5)
4				n.s.				n.s.				.001 (5)

^a Difference-of-proportions test was used throughout. Figure in parentheses below the significance level (e.g., .01) is the code for the education class (see note b) which has the higher employment rate.

^b Symbols for education classes are these: 1 - None; 2 - Some elementary; 3 - Elem. grad./some HS; 4 - HS grad./some college; 5 - College graduate.

RS08.10. Significance of differences between education classes in percentages of white-collar workers among total employed, by sex and residence (Bicol River Basin, Camarines Sur, April 1974)^a

Sex and education class ^b	Poblacion				Barrio				Total			
	2	3	4	5	2	3	4	5	2	3	4	5
1. All workers												
1	n.s.	n.s.	.001 (4)	.001 (5)	n.s.	.05 (3)	.001 (4)	.001 (5)	.001 (1)	.001 (3)	.001 (4)	.001 (5)
2		n.s.	.001 (4)	.001 (5)		.001 (3)	.001 (4)	.001 (5)		.001 (3)	.001 (4)	.001 (5)
3			.001 (4)	.001 (5)			.001 (4)	.001 (5)			.001 (4)	.001 (5)
4				.001 (5)				.001 (5)				.001 (5)
2. Male workers (see Table RS08.06)												
1	n.s.	n.s.	.005 (4)	.001 (5)	n.s.	.005 (3)	.001 (4)	.001 (5)	.001 (2)	.001 (3)	.001 (4)	.001 (5)
2		n.s.	.001 (4)	.001 (5)		.001 (3)	.001 (4)	.001 (5)		.001 (3)	.001 (4)	.001 (5)
3			.001 (4)	.001 (5)			.001 (4)	.001 (5)			.001 (4)	.001 (5)
4				n.s.				.001 (5)				.001 (5)
3. Female workers (see Table RS08.06)												
1	n.s.	n.s.	.05 (4)	.001 (5)	n.s.	n.s.	.001 (4)	.001 (5)	.01 (1)	.001 (3)	.001 (4)	.001 (5)
2		.05 (3)	.001 (4)	.001 (5)		.05 (3)	.001 (4)	.001 (5)		.001 (3)	.001 (4)	.001 (5)
3			.005 (4)	.001 (5)			.001 (4)	.001 (5)			.001 (4)	.001 (5)
4				.001 (5)				.001 (5)				.001 (5)

^{a, b} See notes a and b, Table RS08.09.

Table R808.11. Significance of differences in employment rates between age classes, and in percentages of white-collar workers among total employed between age classes--poblacion labor force only (Bicol River Basin, Camarines Sur, April 1974)

Measure and age class	Age Class					
	15-24	25-34	35-44	45-54	55-64	65-plus
a. Employment rate (percentage of employed in total labor force)						
10 - 14 yrs.	.05 (15-24)	.001 (25-34)	.001 (35-44)	.001 (45-54)	.001 (55-64)	.001 (65-plus)
15 - 24		.001 (25-34)	.001 (35-44)	.001 (45-54)	.001 (55-64)	.001 (65-plus)
25 - 34			n.s.	.05 (45-54)	.05 (55-64)	.05 (65-plus)
35 - 44				n.s.	n.s.	n.s.
45 - 54					n.s.	n.s.
55 - 64						n.s.
b. Percentage of white-collar workers among total employed						
10 - 14 yrs.	(No white-collar workers in the 10-14 age class)					
15 - 24		.001 (25-34)	.001 (35-44)	.001 (45-54)	.001 (55-64)	.001 (65-plus)
25 - 34			n.s.	.05 (45-54)	n.s.	n.s.
35 - 44				n.s.	n.s.	n.s.
45 - 54					.025 (55-64)	n.s.
55 - 64						n.s.

^aDifference-of-proportions test was used throughout. Figure in parentheses below the significance level is the age class which has the higher percentage.

Table RS08.12. Significance of differences between age classes in employment rates and in percentages of white-collar workers among total employed--barrio and total labor force only (Bicol River Basin, Camarines Sur, April 1974)^a

Measure and age class	Barrio						Total					
	15-24	25-34	35-44	45-54	55-64	65 plus	15-24	25-34	35-44	45-54	55-64	65 plus
a. <u>Employment rate</u> (see Table RS08.04)												
10-14 yrs.	n.s.	.001 (25-34)	.001 (35-44)	.001 (45-54)	.001 (55-64)	.001 (65-plus)	.001 (15-24)	.001 (25-34)	.001 (35-44)	.001 (45-54)	.001 (55-64)	.001 (65-plus)
15-24		.001 (25-34)	.001 (35-44)	.001 (45-54)	.001 (55-64)	.001 (65-plus)		.001 (25-34)	.001 (35-44)	.001 (45-54)	.001 (55-64)	.001 (65-plus)
25-34			.001 (35-44)	.001 (45-54)	n.s.	.01 (65-plus)			.001 (35-44)	.001 (45-54)	.001 (55-64)	.001 (65-plus)
35-44				.025 (45-54)	n.s.	n.s.			.001 (45-54)	.001 (55-64)	.001 (65-plus)	
45-54					.01 (45-54)	n.s.					.001 (45-54)	.001 (65-plus)
55-64						n.s.						.001 (65-plus)

^a(as in RS08.11)

Table RS08.12. (cont'd)

Measure and age class	B a r r i o						T o t a l					
	15-24	25-34	35-44	45-54	55-64	65-plus	15-24	25-34	35-44	45-54	55-64	65-plus
b. Percentage of white-collar workers among total employed (see Table RS08.16)												
10-14		.001 (25-34)	.001 (35-44)	.001 (45-54)	.001 (55-64)	.001 (65-plus)	.001 (15-24)	.001 (25-34)	.001 (35-44)	.001 (45-54)	.001 (55-64)	.001 (65-plus)
15-24		.001 (25-34)	.001 (35-44)	.001 (45-54)	.001 (55-64)	.01 (65-plus)		.001 (25-34)	.001 (35-44)	.001 (45-54)	.001 (55-64)	.001 (65-plus)
25-34			.05 (25-34)	.001 (25-34)	.001 (25-34)	.01 (25-34)			.001 (25-34)	.001 (25-34)	.001 (25-34)	.001 (25-34)
35-44				n.s.	n.s.	n.s.			.001 (35-44)	.001 (35-44)	.001 (35-44)	
45-54					n.s.	n.s.				.001 (45-54)	.001 (45-54)	
55-64						n.s.						.001 (55-64)

Table RS08.13. Significance of differences in employment rates between age classes, stratified by educational attainment--population labor force only (Ilocos River Basin, Camarines Sur, April 1974)

Education and age class	Employment rate	Age Class			
		20-29	30-49	50-64	65-plus
a. <u>No education</u>					
10-19 years	57.1%	.025 (20-29)	.025 (30-49)	.05 (50-64)	n.s.
20-29	100.0		n.s.	n.s.	n.s.
30-49	100.0			n.s.	n.s.
50-64	94.4				n.s.
65 and over	85.7				-
b. <u>Some elementary education</u>					
10-19 years	61.7%	.05 (20-29)	.001 (30-49)	.001 (50-64)	n.s.
20-29	78.7%		.05 (30-49)	.005 (50-64)	n.s.
30-49	92.2			.05 (50-64)	.025 (65-plus)
50-64	97.5				.025 (50-64)
65 and over	76.5				-
c. <u>Elementary graduate/some high school</u>					
10-19 years	69.7%	.001 (20-29)	.001 (30-49)	.001 (50-64)	.001 (65-plus)
20-29	79.0		.001 (30-49)	.01 (50-64)	n.s.
30-49	90.6			n.s.	n.s.
50-64	95.0				n.s.
65 and over	100.0				-

Table No08.13. (cont'd)

Education and age class	Employment rate	Age Class			
		20-29	30-49	50-64	65-plus
d. High school graduate/some college					
10-19 years	48.1%	.001 (20-29)	.001 (30-49)	.001 (50-64)	.001 (65-plus)
20-29	76.0		.001 (30-49)	.01 (50-64)	n.s.
30-49	93.3			n.s.	n.s.
50-64	92.3				n.s.
65 and over	81.8				-
e. College graduate					
20-29	83.0		.001 (30-49)	.001 (50-64)	n.s.
30-49	97.9			.05 (50-64)	n.s.
50-64	100.0				n.s.
65 and over	83.3				-

Table RS08.14. Household members 25 years of age or older, by age, residence, and education (Bicol River Basin, Camarines Sur, April 1974)

Age and residence	None	Some elem.	Elem. grad	HS grad	Coll. grad	Total (est.)
a. 25-34 years						
Poblacion	1%	10%	40%	27%	22%	16,170
Barrio	2	31	45	11	10	82,250
Total	2	28	44	14	12	98,420
b. 35-44 years						
Poblacion	1%	18%	40%	22%	20%	11,946
Barrio	4	40	37	14	5	70,450
Total	4	36	37	16	7	82,396
c. 45-54 years						
Poblacion	5%	34%	34%	15%	12%	11,286
Barrio	12	58	21	5	3	51,100
Total	11	53	24	7	5	62,386
d. 55-64 years						
Poblacion	7%	45%	29%	8%	10%	8,514
Barrio	19	55	18	4	4	34,000
Total	16	53	20	5	5	42,514
e. 65 years and over						
Poblacion	17%	43%	23%	8%	9%	528
Barrio	34	51	9	3	2	550
Total	31	49	12	4	4	1,078
f. Total						
Poblacion	4%	26%	35%	18%	16%	53,724
Barrio	10	44	31	9	6	262,200
Total	9	47	32	11	7	315,924

Table RS08.15. Estimated median weekly income (cash or kind) of workers reporting a nonfarm or off-farm job as the primary occupation, by education class and residence (Bicol River Basin, Camarines Sur, April 1974)^a

Education class	Poblacion	Barrio	Total
None	P17.37	P18.85	P18.45
Some elementary	18.51	17.38	17.60
Elem. grad./some HS	24.51	20.13	21.38
HS grad./some coll.	41.10	39.45	40.11
College graduate	77.15	72.36	74.72
Total	P34.16	P22.60	P25.77

^aIncomes reported by farmers will be discussed in a forthcoming number of the SSRU Research Report Series.

Table RS08.16. Percentage of white-collar workers among total employed, by age, residence, and sex (Bicol River Basin, Camarines Sur, April 1974)

Age class	Poblacion			Barrio			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
10-14 years	-	-	- ^a	0.4%	1.8%	0.6%	0.3%	1.1%	0.6%
15-24	11.3%	23.0%	16.7%	2.8	9.8	5.0	3.7	12.2	6.5
23-34	28.2	56.7	39.0	11.1	38.3	18.6	13.7	42.4	22.1
35-44	35.4	54.3	42.5	10.2	29.0	15.4	13.7	34.1	20.0
45-54	42.0	55.4	46.6	7.4	24.9	12.7	13.1	31.8	18.9
55-64	27.2	49.2	35.6	8.0	24.8	12.3	11.3	31.0	16.8
65 and over	37.8	30.8	36.0	9.5	20.0	11.9	13.6	21.7	15.4
Total	28.5%	43.7%	34.6%	7.0%	21.1%	11.2%	9.8%	25.6%	14.8%

^aNo white-collar workers are reported for this age bracket

Table RSO8.17. Occupational classification scheme embodying classes proposed by Bacol (1971)^a

Category and subcategory of occupation	Classes (Bacol)	Members (Bacol)
<u>Nonfarm-nonagricultural</u>		
High white-collar	I-III	Upper professionals (e.g., professors, physicians); lower professionals (e.g., teachers, nurses); administrators (government or private)
Low white-collar	IV-V	Clerical and related (e.g., bookkeepers, policemen); sales workers (e.g., proprietors, salesmen)
High blue-collar	VI-VII	Upper skilled (e.g., tailors, electricians); transportation (e.g., drivers, conductors)
Low blue-collar	VIII-X	Lower skilled (e.g., carpenters, bakers); service (e.g., janitors, barbers, waiters); unskilled (e.g., laborers)
<u>Nonfarm-agricultural</u>	XI	Fishermen and loggers; all agribusiness pursuits (e.g., rice millers)
<u>Farmers</u>	XII-XIII	Farm owners, managers, tenants, lessees
<u>Farm workers</u>	XIV	Farm laborers

^aSee Melinda M. Bacol, "Intergenerational occupational mobility in the Philippines," Philippine Sociological Review 19(3-4): 193-208.

25. The percentage of white-collar workers among all employed members of the labor force is about 15. Differences occur by residence (poblacion, about 35 percent; barrio, 11); by sex (males, 10 percent; females, 26); by age (low for those under 25, high for the 25-44 category, declining after 44); and by education (increasing regularly with years of formal education--from 11 percent for workers with no formal education to 93 for college graduates). Briefly, the person most likely to have a white-collar job will be a middle-aged, female college graduate who lives in the poblacion. See Tables RS08.06 and 08.16.
26. About half (48 percent) of workers are self-employed, a third (32 percent) are employed by others (by government, 8 percent; by private individuals, 24 percent), and almost all of the remaining 20 percent are unpaid family labor. Less than 1 percent are reported to be employers.
27. Farmers most commonly reside on the parcel, or one of the parcels, which they cultivate. However, nonfarm and off-farm workers show a slightly more dispersed pattern, with 20 percent working outside the barrio where they live and 13 percent outside their home municipalities. Poblacion dwellers are much more likely than barrio residents to work outside their own communities (43 vs. 30 percent; Table RS08.03).
28. The estimated number of hours worked during the reference week varies by occupation and residence. Farmers and farm laborers average about 30 hours per week; nonfarm workers, about 36 (significantly longer). Among nonfarm workers, those who live in the poblacion work significantly longer hours than those in the barrio (38 vs. 36). Overall, in fact, and regardless of occupation, poblacion residents have significantly longer work weeks than barrio people.
29. Estimated median weekly income (in cash or kind) reported for off-farm and nonfarm workers varies greatly by education but not by residence. The overall median is about P26.00 per week (or about P0.79 per hour

for a 35-hour week).¹¹ See Table RS08.15.

Income is directly correlated with educational attainment, ranging from P18.45 per week for those with no formal education to P74.72 for college graduates (Table RS08.15).

30. Despite the longer hours they work, poblacion dwellers of a given educational attainment do not report significantly higher income than barrio residents with the same level of education (ibid.).

EDUCATION, AGE, AND EMPLOYMENT

From findings reported earlier (paragraph 23), it is clear that, by and large, the chances of being employed increase in direct proportion to age. There is apparently a straight-line correlation between ages 10 and 54, with only a slight decline in the two categories that follow. This relationship can be seen in Table RS08.04 and is confirmed by the results of tests presented in Tables RS08.11-12 (section a). Further proof of this is offered by a comparison of workers of different ages, all of whom have had the same educational experience: consistently, where significant differences in employment rate appear, the older workers are more often employed (Table RS08.13). Age is an important positive determinant of employability.

Now, it is also true that each succeeding age class is less well educated, on the average, than its predecessor (Table RS08.14). The putting together of these two facts, as in Table RS08.18, raises a question of practical importance: Do added years of formal education lessen one's chances of getting a job?

One answer to the question has already been given (paragraph 23). Here it was stated that the highest employment rates are found among those who have either little or no education or a four-year college course. The pattern

¹¹ Data on incomes reported by farmers and farm-family laborers will be given in a forthcoming number of the SSRU Research Report Series.

Table RS08.18. Percentage employed and percentage with complete high school education, by age class (Bicol River Basin, Camarines Sur, April 1974)

Age class	Employment rate ^a	HS grad. ^b
10 - 14 years	84.9%	-
15 - 24	86.2	-
25 - 34	94.2	26%
35 - 44	97.3	23
45 - 54	98.6	12
55 - 64	96.4	10
65 and over	98.0	8
Total	92.3%	18%

^aSee Table RS08.04.

^bSee Table RS08.14.

is especially clear in the poblacion, where the rate for those with no formal training is 98 percent; for college graduates, 94 percent; and for the three intervening education classes, 90, 86, and 87 percent (Table RS08.04). This suggests, once more, that, from the viewpoint of employability, it is best to have little or no education at all or a college diploma.

This conclusion is confirmed and enlarged by a comparison of the employment rate of each education class with the rate of every other such class, and applying an appropriate statistical test for the significance of the differences observed. The findings indicate that the most employable individual is one with no formal education, the next most employable has had an incomplete elementary course, while next in line is the college graduate. Finally in last place is the high school graduate (Table RS08.09).

In a second test of the role of education in employability, age groups were considered separately. Here it appears that this U-shaped relationship

between educational attainment and employment rate applies specifically to middle-aged workers (30-49 years old), and not to others. For workers who are younger than 30 or over 49 education apparently neither improves nor lessens their chances of landing a job.

We can summarize the above paragraphs in the following two statements.

31. A worker's employability increases with age, at least until he reaches 55.
32. Education has little effect on employability except in the middle years (30-49). Here those most likely to have jobs are those with little or no education and those who have finished college.

EDUCATION, AGE, AND OCCUPATION

But workers are not merely employed. They are hired for specific jobs, classifiable as this occupation or that, and promising more or less income with some degree of regularity, and more or less prestige in the community. How do education and age relate to these aspects of employment? In particular, do educational level and age affect a worker's chances of getting a white-collar job, higher income, and more regular work hours?

As regards age, we note that the percentage of white-collar workers is much smaller in the 10-24 age classes than it is in all other groupings. Of the 10-14 and 15-24 categories only 0.6 and 6.5 percent, respectively, have white-collar jobs, while the older groups range from 22.1 percent (25-34 years) to 15.4 percent (65 and over; Table RS08.16). After 24, in other words, the general trend is a linear but a negative relationship; the older one is, the less likely he is to hold a white-collar job (Tables RS08.16 and RS08.11-12, section b).

Education, on the other hand, shows a positive correlation with white-collar employment, at least after one has completed the elementary grades.

For those with less than a complete grade school education it is difficult to know if a few years of formal education will increase or lessen the chances of a clerical position. The evidence is not conclusive. See Tables RS08.06 and 08.10.

In brief, the relationships suggested by the data are these.

33. Generally speaking, age is inversely related to white-collar employment.
34. At least following graduation from the elementary grades, the higher one's educational attainment, the more likely he is to get a white-collar job.

Table RS08.19. Average (mean) hours worked per week by all workers, by education and by age class (Bicol River Basin, Camarines Sur, April 1974).

Education and age class	Mean	Standard deviation	Sample	Estimated population
a. Education class				
None	29.5	21.1	310	14,820
Some elementary	31.6	19.0	2,445	117,150
Elem. grad./some HS	32.9	19.3	2,407	111,663
College graduate	36.3	18.2	498	20,837
b. Age class				
10 - 14 years	28.2	18.2	501	24,524
15 - 24	32.8	19.9	1,751	80,929
25 - 34	33.5	19.3	1,332	61,271
35 - 44	34.1	19.5	1,107	51,615
45 - 54	33.5	19.1	948	43,866
55 - 64	34.4	19.2	610	28,207
65 - plus	28.1	19.5	254	11,844
All workers	32.9	19.5	6,498	304,504

Classifying workers by primary occupation, we find that nonfarmers are reportedly following a longer work week than both farmers and farm workers (see paragraph 28). Taking education, rather than primary occupation, into account, the general pattern demonstrated is a positive correlation between education and hours worked per week, at least up to completion of high school, after which there appears to be a leveling off of work time. In other words, the higher the education one has, the more likely he is to work full time (see Table RS08.19).

With age, on the other hand, two patterns are discernible. First, below 45 years, hours worked per week increase with age. With this age group (45-54), the week is shortened from 34.1 hours (35-44) to 33.5 (45-54) and 28.1 (65-plus).

The above observations may be summarized in these two proportions.

35. The higher the educational attainment of a worker, the more likely he is to get full-time white-collar employment and to receive higher income.
36. Among the young and adult workers (10-44 years), work time increases with age. Among the older workers, on the other hand, it tends to shorten with age.

SELECTED CONCLUSIONS

At the beginning of this report we recalled the fact that farmers of Camarines Sur placed free high schools very high on their list of priorities--in fourth place, in fact, preceded only by water management, land reform, and nonfarm employment opportunities. In view of this high priority, we suggested that two questions needed answering: first, How did education affect one's employability? second, How important was it that the government make secondary education more easily available in the River Basin?

The answer to the first question has already been given, but is repeated here for clarity's sake. If sheer employment is one's goal--just having job,

any job--his best bet will be to have no education at all, or to have a college degree.¹² Further, no matter what his educational attainment, his chances of having a job will increase with age (paragraphs 31-32).

But sheer employment is frequently not the goal. What the average person seems to want, in fact, either for himself or for his children, is a job that will mean a good income, freedom from physically demanding manual labor, and a measure of prestige (Castillo 1973: 54-55). This generally implies a white-collar occupation, and where this is the goal an investment in additional years of education may well pay off. For as we observed earlier (paragraph 34), there is a straight-line correlation between educational attainment and the chances of being a white-collar worker.

To summarize, our answer to the first question is this: the older one is, the more likely he is to have a job; the better educated one is, the more likely he is to have a well-paid job.

The second question concerns the priority which the government should assign to increased opportunity for high school education in the Bicol River Basin. Unlike the first question, this one is relatively difficult, for it concerns, not what is, but what should be.

Our approach to the second question is an admittedly narrow one. We do not deny, nor even discuss, for example, the desirability per se of more widespread secondary education among residents of the Bicol River Basin. This important subject, and others like it, are completely bypassed. Instead, we confine our attention to labor-force considerations. In particular, we ask what effects might likely follow from a sizable increase in the percentage of workers who have had some high school training, or even received a high school diploma, but have not finished college.

¹² However, see below, where it is suggested that quality high school training may be the equivalent, in the labor market, of a poor or mediocre college degree.

The present River Basin employment picture is one in which a disproportionately high percentage of middle-educated workers are without jobs, while workers with low or high educational attainment are unemployed in the expected proportion (college graduates), or significantly less so. Consider these data.

Education class	Labor force	Unemployed
None	5%	3%
Some elementary	38	23
El. grad., some HS	40	49
HS grad., some col.	10	17
Col. graduate	7	7
Total pop. (est.)	326,028	24,866

Note that although the first two (or low) education classes account for 43 percent of the labor force, they are only 26 percent of the total unemployed. On the contrary, however, the next two (or middle) education classes represents only 50 percent of the labor force but 66 percent of the total unemployed. Given these data, when we speak of the educated unemployed in the River Basin, it is to these two education classes we refer, especially the latter--high school graduates with less than four years of college training.

The rise of this marked unemployment among the middle-educated has traditionally been explained in several ways. A common reconstruction of the process is this: employers have taken advantage of the growing percentage of college graduates in the labor force by raising the educational requirements for many positions. In particular, high school graduates are no longer eligible for many jobs they once could hold: to qualify today, they need a bachelors degree

Another view sees the root cause of this educated unemployment in the workers, not the employers. There are blue-collar jobs available to the

middle-educated, these analysts say, but the typical worker of this group feels that, because of his above-average years of schooling, anything less than a white-collar job would be beneath him. Failing in his attempts to get the desk job he wants, his lament has a Scriptural ring to it: "To clerk I am not able; to dig I am ashamed." And so he holds out for a more suitable position while someone less well trained than he gladly takes the job he refused.

A third explanation of the educated-unemployed phenomenon appeals to existing data which seem to confirm it. Briefly, this view sees the source of the problem in neither the employee nor the worker, but in a deteriorating school system, or educational inflation. By this is meant that the content of education in most Philippine schools has, especially since World War II, become progressively less substantial. The result is (it is commonly said) that today's average high school graduate knows about as much as a pre-war grade school graduate, while the average college-degree holder of today compares (some would say, unfavorably, with the holder of a pre-1942 high school diploma.

That some inflation is a fact has been demonstrated by several post-war studies which replicate in part the Monroe Survey of 1925.¹³ Of special interest is the so-called Swanson Report (1960), which compares the performance of sixth-graders in 1925, 1947, and 1959 on the same tests.¹⁴ In the general elementary schools and community schools selected by superintendents for the purpose (Swanson Report, p. 44), the 1959 pupils (who were presumably

¹³ Paul Monroe, A survey of the educational system of the Philippine Islands (Manila: Bureau of Printing, 1925).

¹⁴ For the 1925 and 1959 cohorts, the Stanford reading, arithmetic, and language tests were used; for the 1947 and 1959 cohorts, the Philippine Achievement Test in arithmetic, reading, and language and dictation. See A survey of the public schools of the Philippines--1960 (called the "Swanson Report," after J. Chester Swanson, staff leader; Manila: USOM/Philippines, 1960), pp. 44-46. See also the section entitled "Deterioration of instruction in English" (pp. 94-97).

better than most public school sixth-graders of the time) were one grade below the 1925 group in reading, almost two grades below in arithmetic, and more than two grades in arithmetic reasoning. In the last 15 years, the critics say, the situation has gone from bad to worse.

That this post-war educational inflation is at work, contributing to the unemployment of the middle-educated, is suggested by a fact mentioned earlier in this report. It may be recalled that the only age class in which the middle-educated are (as of 1974) significantly more unemployed than others is the 30-49-year category (pp. 33-34 and paragraph 32). If we do a little arithmetic, we discover that of this age group, (a) only the eldest (those who were 47-49 years old in 1974) are likely to have had any of their high school training before 1942, and (b) one-half the group (those 39 and younger) had all their schooling after the Japanese Occupation of the Philippines (beginning early 1942).¹⁵ In other words, this evidence points to low-quality training as a root cause of greater unemployment among the middle educated.¹⁶

To summarize, the employment scene in the Bicol River Basin is characterized by the notable unemployment of the middle-educated, that is, workers who were graduated from elementary and/or high school but did not finish college. Alternative explanations of this phenomenon are (a) employers' raising the educational requirement for many clerical jobs to the college-degree level, (b) the middle-educated workers' unwillingness to accept any-

¹⁵Children enter Philippine public schools (where most go for the elementary level) at seven years. During the pre-war period there were eight elementary grades and four of high school. After the War the grade school period was cut to six years.

¹⁶A possible objection to this interpretation is the observation that, while it is true that the middle-educated are notably unemployed only among the 30-49-year-olds, one cannot blame post-war schooling for this, since the younger middle-educated (under 30) were also trained in the post-war era, yet they are not significantly more unemployed than their age fellows. The objection has merit. However, these younger groups (esp. those 10-24) have such generally low employment rates that one suspects that the major influence at work in employment is age (Table RS08.04). It would seem that only from about 25 years on does education become an important consideration in employability.

thing but a white-collar job, or (c) post-war educational inflation, which results in large numbers of middle-educated workers' not having the skills needed for many white-collar jobs. It is likely, we believe, that all three of these factors are involved in educated unemployment.

We can now return to the question at issue. What effects would likely follow if high school training were made more readily available to a larger percentage of the potential labor force?

The immediate effect, obviously, would be a larger percentage of workers with one-four years of secondary education. Further, if the present trend continued, it would also result in an increase in the percentage of unemployed. From a labor-force viewpoint, the mere multiplication of high schools in the River Basin is not a good idea. Nor is there, despite a popular opinion to the contrary, any advantage likely to be gained by further vocationalizing the high school curriculum.¹⁷ Neither of these steps will help solve the present problem of educated unemployment. What seem clearly to be called for, rather, are an improvement in the quality of education and an increase in the absorptive capacity of the labor market.

SUGGESTIONS

In lieu of more high schools, or greater emphasis on in-school skills training, two tactics are suggested: first, a serious, intensive effort to upgrade the quality of formal education in the River Basin, particularly (to start with) at the elementary and secondary levels; and second, an all-out effort to increase employment opportunities, especially in nonfarm occupations. To achieve the second goal in a rational fashion, a survey of existing

¹⁷For a discussion of this point, including evidence that graduates of the general high school curriculum are more employable than those who have taken the vocational course, see the Ranis Report (ILO 1974: 323).

establishments, including those outside the manufacturing sector, will be an obvious prerequisite.

The Bicol River Basin Development Program includes the second project, namely, the development of greater employment opportunities, among its highest priorities. Perhaps the upgrading of education in the Basin's schools deserves similar emphasis.¹⁸

¹⁸ Although most SSRU staff members are somehow involved in the preparation of every report, the following played more extensive roles in this one: Edith Casillan, Chito Irigo, Marinette Tan, and Nene Tolentino. To all, whether mentioned here or not, the authors' thanks.

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