PHILIPPINE LABOR STATISTICS: A CRITIQUE & RECOMPUTATION OF P. S. S. H. DATA

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Accurate labor statistics are among the most important data required for economics and efficient economic planning. The chief source of labor statistics in the Philippines is without question the labor forces survey data collected by the Bureau of Census and Statistics and published in the **Philippine Statistical Survey of Household** Bulletin. The importance of such data is recognized by the Bureau. They state, for example, that "the primary objective of the statistical survey of household series ... is to gather up—to—date and reliable statistical data of the labor force ... which the government may need for the formulation of short-range or long range plans for social and economic development."[1] Unfortunately, however, the P.S.S.H. data can not be used for such purposes without risk of serious error or misinterpretation. This situation arises because of the crucial methodological weakness which produces substantial error in the absolute figures published in the Bulletin. The present paper discusses the nature of the methodological weakness and presents the results of the re-

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1 *The Philippine Statistical Survey of Households Bulletin*, Bureau of the Census and Statistics, Series #10, October 1961, p. iii.

computation of key labor statistics for the years 1956—1962.[2] The paper is divided into the following three sections: 1) a discussion of the error involved in the estimation procedure used in the P. S. S. H., 2) a description of the technique used in recomputing elements of the P. S. S. H. data, and 3) the presentation of the recomputed values for the most important labor force variables.

The estimation procedure used to arrive at the Bureau's absolute P. S. S. H. labor force figures involved keying the population ten years of age and over as determined by the blow-up of the P. S. S. H. sample survey to a predetermined population figure. This procedure was dictated by the desire to prevent distortions in the labor force data over time. Variations in the totals estimated directly from the survey data were of sufficiently large magnitude to interfere with the interpretation of trends and the short run fluctuations which appeared. For example, if we examine the absolute annual change in the May figures for the population aged 10 and above the changes, in thousands, are: 1957—1958, 541; 1958—1959, 426; 1963—1964, 229. For the eleven month period May 1961 to April 1962 the figures show a decline of 210 thousand. This instability in the figures is the product of sampling error,[3] and an unknown but probably significant response and enumerator error. Faced with this problem in 1957, a time period three years before the 1960 census, the solution chosen was the very reasonable one of tying the survey results to a predetermined population total. The predetermined population total was the previous survey figure increased at an annual rate of increase of 3.0%. In the vacuum of knowledge in which the operation took place, the 3.0% assumption was reasonable. The error in the P. S. S. H. result stems form the failure to

2 It has been possible to compute a partial list of the data for 1963 and 1964. Where possible these figures are also presented.

3 The range of the percentage coefficients of variation of the population estimates is between 1.75 and 3.47. See Burton T. Oñete, *Estimates of the Population and Labor Force in the Philippines.* International Rice Institute, 1965, (Unpublished Memorandum).

utilize the knowledge obtained from the results of this 1960 census as to the absolute population size and the rate of increase during the relevent time period. The census revealed that the survey population estimates were too low and that the estimated rate of increase of the population was in excess of the assumped rate of 3.0%. The census information should have been used to arrive at a set of less arbitrary control figures.[4] Failing the recomputation of historical data, the census results should have at least been used in arriving at the post census control figures but the population totals of the P. S. S. H. were never reconciled with the 1960 census totals for the corresponding populations and the 3.0% rate of increase used by the P. S. S. H. was never adjusted to the more rapid and acceleration rate of increase indicated by the census.[5] Some idea of the magnitude of error involved can be seen from the following table.

TABLE 1

COMPARISON OF CENSUS AND P. S. S. H. POPULATION TOTALS AND RATES OF INCREASE

[FIGURES (IN THS.) AS OF FEBRUARY 15, 1960]

	1960 Census	P. S. S. H.	% Defference
Household population aged 10 and above	17,927	16,646*	7.1
Annual rate of increase (in %)	3.2	3.0	6.2

*May 1959 population figure increase at 3.0% for 9.5 months.

4 The Bureau of the Census and Statistics is not, of course, oblivious to the problem. The April 1962 *Bulletin* p. 1, states, for example that, "It should be known that the published figures have not been adjusted to the 1960 Population Census figures. However,studies are under way for the revision of the sample design of the Philippine Statistical Survey of Households (P. S. S. H.) based upon the 1960 Population Census data". This redesign has now been incorporated in the 1965 surveys.

5 An apparent exception to this 3.0% rate of increase occurs in the May series between 1962 and 1963. When the rate from the implicit May 1962 figure (17,769) to the May 1963 figure (18,355) represents a rate of 3.3%. This was not, however, a departure from usual procedure, but represented an error which was not discovered until after publication of the *P. S. S. H. Bulletiin* Series 15%. This explanation was kindly provided by Mr. Candido Ordinario, Senior, Statistical Household Survey Division in a personal correspondance.

Table 1 shows that by 1960 the P. S. S. H. population was a 7.1% underestimate. Because of the use of a non accelerating and underestimated rate of increase, the difference between the P. S. S. H. population figures and the ones used in the recomputations increases so that by May 1964 the difference between them amounts to 1.567 thousand or 7.7%

The effect of the incorrect population base has been of course, to yield incorrect estimates of such crucial subtotals as labor force, employment, unemployment, etc.. Interpretation based upon the published absolute figures, therefore, result in erroneous conclusions as the following examples show. A concern with the rate of growth of labor components would involve the following miscalculations: the P.S.S.H. figures yielded an average annual compound rate of expansion of the Philippine labor force of 3.428% between May 1957 and May 1964, while our recomputed figures indicate a rate of increase of 3.570%. Employment has grown by 3.926% rather than the lower 3.792% indicated by the P. S. S. H. data. Employment in the non-agricultural sector of the economy has expanded at a rate of 4.605% per year between May 1957 and May 1863, .096 percentage points more than would be concluded from the figures presented in the P. S. S. H.

The equation for the regression of labor force (y) on time (x) (i. e. the time trend) for May of each year 1957 to 1964 is $y = 9{,}046.5 + 332.4\,x$ for P. S. S. H. data while it is $y = 9{,}669.7 + 369.0\,x$ for the recomputed data. Thus, the upward displacement (a measure of the P. S. S. H. underestimate of absolute numbers) indicated by the recomputed data for the midpoint of the 1957—1964 period amounts to 759.2 thousand workers. The slope of the trend line (the b value of the trend equation) is seen to be 36.0 thousand workers per year-instead of the 332.4 thosand indicated by the P. S. S .H. data. This is a difference of 9.9%. It follows that the Philippine economy has been doing a more successful job of expanding its labor force than would be deduced from the analysis of

the P. S. S. H. labor force statistics. It is concluded that the use of uncorrected P. S. S. H. data in analysis will result in incorrect conclusions.

A description of the procedure by which the recalculated figures were obtained is presented in the following paragraph. Since the error arises from the use of unrealistic predetermined population totals, the joint product of too small population base and too low rate of increase, the major change involved in the recomputations is the determination of population totals which are arrived at by a more reasonable method of estimation. The steps in the estimation of the required total, the household population aged 10 and above, are: the estimation of the total population by sex for the survey dates, the estimation of the male and female population aged 10 and over and finally the adjustment of these populations to the male and female non-institutional or household population aged ten and over. The data for these estimates are available in the form of the 1948 census, the 1960 census and a population projection for 1965. The next step is to compute the various labor force data from the population control figures. This step utilized the relationships between the elements as presented in the surveys. For example, the percent of the household population aged ten and above in the labor force, the percent of the employed at work who were employed at work in agriculture, etc., were taken from the survey results; although they were recomputed to two and three decimal places for greater accuracy.

The first step in arriving at the new population control figures was to determine the rate of population increase over the relevant time period. Since, contrary to some opinion, the 1948 census population total appears to be comparable in completeness with the 1960 census total,[6] we may take the

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6 Frank Lorimer, *Analysis and Projections of Philippine Population*, Population Institute, University of the Philippines, 1965 (Unpulished Manuscript) p. 41—49 (preliminary version).

intercensus rate of change as an estimate of the average rate of population increase during that time period. With the intercensus time period of 11.375 years and the population figures from the 1948 and 1960 censuses the average annual compound rate of increase is calculated to be 3.0555%. The rate of population increase over the time period 1948—1960 was not, of course, the constant average rate but an accelerating rate produced by a falling death rate in combination with an essentially constant birth rate. It thus becomes necessary to compute the change in the rate of increase. This can be achieved by detrmining the rate of increase at the time of the 1960 census. Once this rate is established, the 1948—1860 annual rates of increase are calculable. Independent analysis by the author and F. Lorimer has arrived at an estimate of 3.2% per year as the most probable rate at the date of the census. The procedures by which this estimate was reached are described very briefly in the following paragraphs.

The procedure is based upon the theory of quasi—stable populations. Such populations, the Philippine population being an example, have sets of consistent interrelated characteristics. For example, only certain combinations of fertility and mortality levels and patterns are consistent with a given age structure and these fertility and mortality conditions yield specific rates of growth. Based upon careful analysis of fertility and mortality levels and trends and using the 1960 census age structure, appropriately adjusted, the growth rate of 3.2% emerges.[7] Other rates of increase are consistent with the adjusted age structure, but when they and their accompanying vital rates are analysed, inconsistencies appear with the independently estimated mortality and fertility conditions. For example, good correspondence occurs between the Philippine

7 For an exhaustive treatment of the topic see *Ibid.*, p. 1—74.

age structure and a stable population increasing at a rate of increase of 3.0%, but the mortality and fertility levels which are consistent fall outside the estimated limits for these variables. In this case fertility and mortality are too high.

In addition to this type of analysis, direct evidence of the rate of increase itself indicates rates more in line with the chosen estimates than any other consistant rate. Space allows for a brief description of only two areas of analysis in addition to the intercensus rate of increase, they being the P. S. S. H. population trend and the trend of vital statistics. The rate of increase for the P. S. S. H. total household population figures 1957—1961 was 3.184% per year. For the longer interval 1957—1964 the rate fell to 2.46% as the population estimates diverged from our estimates.[8] The May 1965 survey was the first one to use the new sample design based upon the 1960 census results and shows a substantial upward displacement in the total population figures,[9] a displacement which raises the rate of increase 1957—1965 to an annual rate of 3.40% per year. This rate can be compared to our annual rate of increase of 3.26% per year for a total population estimate for the same 1957—1965 period. It would thus appear that a rate of increase derived from successive rounds of the P. S. S. H. certainly do not contradict the rates chosen here.

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8 This diversion should not be confused with the diversion of the P. S. S. H. control figures for the population age 10 and above discussed above. The latter was due to the continued use of the constant rate of annual increase of 3.0% while the diversion discussed here was presumably due to the use of sample design based upon the 1948 census and, therefore, increasingly in error.

9 The 1964 P. S. S. H. total household population was 11.% below our estimated *household* population. The P. S. S. H. total household population which could have been expected (computed by a one year extrapolation of the 1957—1964 trend) in 1965 on the basis of the old sample design would have been 11.6% below the estimated population. The upward displacement which actually occured in the 1965 survey figure reduced the difference to 6.1% which interestingly enough compares quite closely with the 7.1 and 6.3% difference in 1957 and 1958.

An analysis of vital rates, while not indicating the levels of actual birth and deaths, can be used to indicate thier trends and thereby the rate of natural increase. The trend in death rates, as adjusted by Aromin,[10] compared to the relative constancy in the predetermined birth rate yields rates of growth for the intercensus period in the neighborhood of 2.96 to 2.96% per year compared to the compound annual rate of 3.056 calculated from the census data. The rates accelerate to approximately 3.26 to 3.36% for the period just preceeding the 1960 census.[11] These findings again support our estimate.

Having decided on the rate of increase of 3.2% per year for the census date as the best estimate which can be made in an area af uncertainty, the annual rates of increase for the years 1948—1960 were, therefore, calculated under the assumption that the rate of increase was characterized by a linear acceleration which was centered at the midpoint of the 11.375 year time period at the average rate of 3.0555% and which rose to a rate of 3.2% per year at the census date. These annual rates were then adjusted to January 1st rates and applied to the previous years midyear population figure to arrive at the July 1st population estimates for 1948—1960 which are presented in Table II. The estimates in Table II for 1961—1964 are arrived at by the use of an identical technique. The annual rates of increase for 1960—61 and 1961—1964 were computed on the basis of a linear change in rates from the average rate of population increase February 15, 1960 to February15, 1965. (This was computed by finding the compound rate of increase between the census total and a population projection to February 15, 1965).[12] In addition, Table II presents the July 1st population estimates of the Bureau of the Census and Statistics based upon a more crude technique in

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10 Basilio B. Aromin, "The Trend of Mortality in the Philippines: 1903 to 1960", *Statistical Reporter* 5 (3): 1—7 July 1961.

11 For a full discussion see F. Lorimer, *op. cit.*, pp. 26—31.

12 *Ibid.*, appendix A.

TABLE II

MIDYEAR POPULATION ESTIMATES IN THOUSANDS

Year	July 1 Population (1)	Bureau Census and Statistics (2)	Difference (2 — 1)
1948	19,094.3	19,673.5	22.0
1949	19,651.5	20,274.8	44.3
1950	20,230.5	20,894.3	62.6
1951	20,831.7	21,532.9	76.7
1952	21,456.2	22,190.9	
1953	22,104.7	22,869.1	90.7
1954	22,778.4	23,568.0	89.4
1955	23,478.6	24,288.2	82.?
1956	24,206.0	25,030.4	68.2
1957	24,962.2	25,795.4	47.0
1958	25,748.4	26,583.7	17.8
1959	26,565.9		
1960	27,413.6		
1961	28,301.7		
1962	29,231.4		
1963	30,204.8		
1964	31,224.4		
1965	32,292.5		

which the average rate of increase of 3.055 is used as constant. The difference between the two estimates are presented in column 4. The comparison indicates a maximum divergence amounting to an overestimate by the Bureau of .4% in 1954.

From estimates of total population as of July 1st, estimates can be made for P. S. S. H. survey dates by increasing or decreasing the July estimates by the rate of increasing at the midpoint of the interval between July 1 and the survey date for the appropriate time period. For example, the October 1959 population estimate is obtained by increasing the July 1st 1959 population for 3 months at the August 15th, 1956 rate of increase. The population estimates for P. S. S. H. survey dates are presented in Table III.

TABLE III

POPULATION TOTALS FOR P. S. S. H. DATES IN THS.

Year	April	May	October	November
1956		24,394	24,394	
1958		25,613	25,158	
1959		26,425	25,952	26,020
1960		27,267	26,778	
1961		28,148	27,634	
1962	28,990	29,070	28,533	
1963		30,036	29,474	
1964		31,048	30,458	
1965		32,107	31,490	

In order to arrive at a household population aged 10 and above for both sexes, the above figures must be adjusted in the following three respects:

1) adjustment for sex distribution
2) ajustment for age distribution
3) adjustment for non-institutional population

The total population were broken into male and female populations for each year by using the sex ratio (males/100 females) estimated for that year on the assumption of a linear change in the sex ratio between 1948 and 1960 and 1965.

The adjustment for age distribution by sex made on the assumption of linear change in the age structure between 1948 when 67.8% of the male and female population was ten years of age and over and 1960 when the percentages were 66.1% and 66.8%[13] and between 1960 and 1965 when percentages

13 The age structure for the 1948 and 1960 census is adjusted for age irregularity. The adjustment for 1948 is taken from the United Nations, *Population Growth and Manpower in the Philippines*, Population Studies #32, 1960, Apendix B, Table B.4 p. 40. The age adjustment for 1960 is taken from Frank Lorimer, *op. cit.*, Table 12, p. 72.

of 66.3% and 6.9% were obtained from the population projection. The multiplication of these and their interpolated values with the population estimated yielded estimates of the male and female population aged 10 yeras and above as of the survey dates. These figures were then adjusted to household, non-institutional population figures on the basis of a constant ratio of non institutional to total population.[14] The resulting figures are given in Table IV together with the P. S . S. H. figures.

The difference between the recomputed and the P. S. S. H. figures for both P. S. S. H. dates are substantial and increasing. The failure to adjust the P. S. S. H. to 1960 population total is also clearly evident in Table IV. The implicit P. S. S. H. population figure in thousands for May 1960 is 16,747.8, This is 1,179.2 or 6.6% lower than the February 15,1960 census figure appropriately adjusted.

The population figures presented in Table IV formed the base or control populations for the recomputation of the key labor force elements. This was acconplished by simply applying to the population figures and their derived sub-figures the appropriate percentages as computed from the P. S. S. H. data.. For example, the figure for the male labor force for October, 1961, was derived by multiplying the male population aged 10 and above by .70278, which is the ratio of the male labor force to the male population as give in the P. S.. S. H. survey. Similarly other elements as for example the employed and employed at work at .68586 and .67511 times the population figure. These percentages are similarly derived from the P. S. S. H. figures for

14 This ratio was calculated from data for the population aged 10 and above by sex presented in, United Nations, *Population Growth.....*, Appendix B, Table B, 7. p. 43.

TABLE IV
RECOMPUTED HOUSEHOLD POPULATION AGED TEN AND ABOVE SURVEY DATES IN THS.

Year	Sex	May Population	P.S.S.H, Pop.	October Populatiion	P.S.S.H Pop.
1956	M	7,911		8,014	
	F	8,048		8,116	
	T	15,959	14,587	16,130	15,066
1957	M	8,145		8,251	
	F	8,245		8,3522	
	T	16,390	15,327	16,604	15,518
1958	M	8,389		8,522	
	F	8,485		8,620	
	T	16,874	15,787	17,142	16,022
1859	M	8,642		8,757	
	F	8,734		8,850	
	T	17,376	16,260	17,608	16,463
1960	M			9,024	
	F			9,113	
	T			18,137	16,957
1961	M	9,191		9,317	
	F	9,294		9,419	
	T	18,485	17,251	18,735	17,465
1962	M	9,465		9,623	
	F	9,579		9,739	
	T	19,044	17,724	19,362	17,989
1963	M	9,807		9,945	
	F	9,935		10,075	
	T	19,742	18,355	20,019	
1964	M	10,137		10,281	
	F	10,280		10,426	
	T	20,471	18,850	20,707	

employed and employed at work. The recomputed elements are presented in Table V. The labor force elements which are not contained in TableV can be obtained by using the recomputed figure for the appropriate element heading contained in the table. The elements contained in the table are sufficient to allow any elements contained in the P. S. S. H. survey to be recomputed.

It is hoped that the values contained in Table V will prove useful in arriving at a truer picture of the dynamics of the Philippine labor force.

TABLE V

PHILIPPINE LABOR STATISTICS

MAY SURVEY IN THOUSANDS

Labor Force Element	Sex	1956	1957	1958	1959	1861	April 1962	1963	1964
Population 10 and over	M	7,911	8,145	8,389	8,642	9,191	9,465	9,807	10,137
	F	8,048	8,245	8,485	8,734	9,294	9,579	9,935	10,200
Labor Force	M	6,355	6,494	6,748	6,787	7,244	7,438	7,715	7,925
	F	4,051	3,081	3,637	3,483	3,750	4,074	4,336	4,315
Employed	M	5,867	6,059	6,296	6,355	6,789	6,914	7,263	7,551
	F	3,248	2,689	3,152	3,126	3,259	3,510	3,850	3,905
Employed in argiculture	M	4,095	4,326	4,454	4,547	4,736	4,807	4,952	
	F	1,444	988	1,299	1,315	1,264	1,566	1,661	
Employed in non-agricult.	M	1,771	1,734	1,842	1,808	2,053	2,107	2,311	
	F	1,805	1,702	1,853	1,811	1,994	1,945	2,189	
Employed at work	M	5,661	5,600	6,021	6,198	6,587	6,702	7,050	7,367
	F	2,984	2,404	2,930	2,956	3,101	3,317	3,675	3,708
under 20		951	520	713	818	823	842		
20-39		2,127	2,649	2,528	2,583	2,524	2,555		
40 and over		5,567	4,802	5,666	5,733	6,261	6,589		
Employed at work in ag.	M	3,992	4,056	4,297	4,463	4,620	5,690		
	F	1,371	925	1,250	1,283	1,248	1,529		
Hours worked									
under 20		504	209	400	533	501	560		
20-39		1,427	1,938	1,817	1,882	1,834	1,809		
40 & over		3,432	2,725	3,303	3,308	3,513	3,825		
Employed at work in non-ag.	M	1,669	1,544	1,725	1,737	1,967	2,012		
	F	1,613	1,479	1,679	1,673	1,853	1,788		
Hours worked									
under 20		443		338	285	324	285		
20-39		706		774	1,044	691	743		
40 and over		2,130		2,564	2,415	2,755	2,763		
Total unemployed	M	489	437	454	431	455	525	451	374
	F	802	391	485	358	491	564	486	374
Not in Labor Force	M	1,547	1,643	1,622	1,850	1,934	2,027	2,092	2,210
	F	3,977	5,154	4,818	5,233	5,524	5,503	5,598	5,966
Employed not want additional work	M		4,894	4,890	5,004	5,212	5,184		
	F		2,311	2,556	2,579	2,434	2,787		
Employed and working 40 & over	M		468	675	681	908	963		
	F		70	148	103	198	217		

TABLE V continued

Labor Force Element	Sex	1956	1957	1958	1959	1961	April 1962
Under Employed and wanting additional Hours worked	M		698	729	670	669	767
	F		308	448	444	504	507
under 20	M		79	149	105	129	147
	F		70	171	191	232	188
20-29	M			281	226	207	268
	F		(619	158	123	136	137
30-39	M	20-39	(238	299	340	331	350
	F			118	130	129	185
		1956	1957	1958	1959	1961	1962
Agriculture forestry hunting & fishing	M	4,139	4,418	4,575	4,636	4,807	4,926
	F	1,496	1,089	1,419	1,441	1,360	1,695
Mining & Quarrying	M	23	----	26	46	35	36
			----	3	.....	3	.....
Construction	M	248	262	331	229	298	299
	F	4	4	.....	.....	.....	4
Manufacturing	M	441	416	434	433	469	525
	F	779	709	781	700	765	683
Electric, gas water and sanitary serv.	M	11	.....	26	26	28	36
	F	1	.....	.....	.....	.....	.....
Commerce	M	363	362	372	388	401	426
	F	537	527	577	597	592	622
Transportation storage & communication	M	269	270	280	263	341	371
	F	8	5	7	3	11	7
Government, community bus. and recreation sev.	M	345	288	302	372	351	358
	FF	148	126	141	159	200	205
Domestic Sev.	M	89	67	80	59	79	69
	F	283	250	307	283	290	374
Personal sev. other than d domestic	M	85	80	92	99	102	102
	F	125	105	135	126	120	118
Not reported	M	130	117	21	15	69	14
	FF	122	104	25	12	84	11

TABLE V continued

October Survey in thousands

Labor Force Element	Sex	November 1956	1957	1958	1959	1960	1961	1962
Population 10 and over	M	8,251	8,014	8,522	8,757	9,024	9,317	9,623
	F	8,116	8,353	8,620	8,851	9,113	9,419	9,739
Labor Force	M	5,883	6,179	6,293	6,383	6,486	6,715	7,047
	F	3,324	3,314	3,340	3,393	3,288	3,717	4,012
Employed	M	5,380	5,820	5,949	6,105	6,158	6,390	6,716
	F	2,906	2,999	2,991	3,095	2,995	3,379	3,630
Employed in agriculture	M	3,693	4,113	4,245	4,324	4,333	4,450	4,651
	F	1,216	1,280	1,427	1,370	1,273	1,478	1,706
Employed in non-agricul.	M	1,687	1,707	1,703	1,781	1,823	1,940	2,065
	F	1,690	1,719	1,564	1,725	1,722	1,902	1,924
Employed at work	M	5,123	5,597	5,682	5,924	6,023	6,290	6,583
	F	2,766	2,898	2,840	2,996	2,921	3,313	3,548
under 20		836	637	741	560	688	840	897
20-39		2,438	2,557	2,258	2,420	2,361	2,540	2,671
40 & over		4,560	5,259	5,508	5,920	5,876	6,212	6,548
Employed at work in ag.	M	3,523	3,955	4,047	4,204	4,247	4,391	4,560
	F	1,179	1,249	1,365	1,339	1,251	1,455	1,676
Hours worked under 20		498	359	391	367	458	522	607
20-39		1,707	1,821	1,773	1,767	1,718	1,907	1,974
40 & over		2,459	3,008	3,222	3,397	3,310	3,407	3,647
Employed at work in non-ag.	M	1,642	1,642	1,636	1,720	1,776	1,899	2,023
	F	1,586	1,649	1,476	1,657	1,670	1,858	1,872
Hours worked under 20				284	191	230	316	291
20-39				652	655	644	631	698
40 & over				2,159	2,522	2,565	2,799	2,900
Total unemployed	M	502	360	345	279	329	325	330
	F	419	316	348	299	288	338	382
Not in labor Force	M	2,125	2,065	2,218	2,367	2,530	2,578	2,567
	FF	4,790	5,031	5,268	5,451	5,824	5,673	5,719
Employed not want additional work	M	4,036		4,581	4,928	4,726	4,744	4,813
	F	2,469		2,443	2,639	2,422	2,634	2,826
Employed and working 40 & over	M	510		686	562	736	904	1,152
	F	93		118	105	124	201	223

TABLE V continued

Labor Force Element	Sex	November 1956	1957	1958	1959	1960	1961	1962
Under Employed and wanting additional	M	835		682	613	695	743	752
	F	344		430	351	448	545	581
Hours worked under 20	M	191		112	81	100	107	105
	F	120		154	143	189	175	206
20-29	M			238	222	243	229	260
	F	643)	20-39	152	97	130	171	157
30-39	M	224)		331	310	352	406	386
	F			123	112	128	198	218
		1956	1957	1958	1959	1960	1961	1962
Agriculture forestry hunting & fishing	M	3,802	4,206	4,328	4,399	4,407	4,520	4,709
	F	1,261	1,427	1,529	1,480	1,372	1,580	1,811
Mining & Quarrying	M	.....	.....	25	38	32	33	41
	F	2	.....	.....	.....	.....		.....
Construction	M	253	290	200	248	282	282	286
	F	2	11	.....	3	.....	4	.....
Manufacturing	M	405	415	425	431	467	465	502
	F	679	736	629	658	676	688	668
Electric, gas water and sanatary serv.	M	.....	.....	25	25	19	20	34
	F	.....	.....	.....	.....	.....	.....	.....
Commerce	M	382	358	349	343	335	401	401
	F	521	544	487	541	503	570	607
Transportation storage & communication	M	262	262	251	269	298	305	314
	F	7	4	11	6	6	4	8
Government, community bus. and recreation serv.	M	314	303	362	328	311	362	391
	F	155	158	157	164	163	232	233
Domestic Serv.	M	72	63	53	57	53	58	71
	F	298	304	250	281	296	341	343
Personal ser. other than domestic	M	70	86	104	82	90	93	94
	F	91	117	111	100	114	106	104
Not reported	M	33	20	25	30	31	31	19
	F	33	24	23	12	22	20	18

ANNOUNCEMENTS

The Board members regret to announce that due to the Association's financial difficulties, nos. 1 and 2 are printed as one issue and nos. 3 and 4 will come out as the September-December issue. This was deemed as an alternative more favorable to members and subscribers than increasing the cost of subscription. THE PHILIPPINE STATISTICIAN will resume to come out in four separate issues per volume as soon as the financial standing of the PSA improves.

AGENDA* OF PSA FOR 1966

1. Annual Conference — July 2, 1966
2. In-service Training for Institutional Members and other interested parties, September — October, 1966 (about 6 weeks)

(*other important activities will be announced later.)

CURRENT ACTIVITIES

The PSA has two projects for the National Science Development Board:

(1) A Study of Scientific and Technological Manpower in the Philippines: Government (National) Sector

(2) Preparation of a Handbook of Current Researches in the Philippines

NEW INDIVIDUAL MEMBERS OF PSA

1. Teresita S. Calalang — SRDP — OSCAS, NEC
2. Isagani de Castro — GSIS
3. Prospero M. Castro — SRDP — OSCAS, NEC
4. Alfonso R. Cruz — P. O. Box 1245, Manila
5. Milagros O. dela Cruz — 10 Subic SFDM, Q.C.
6. Servando M. Garma, Jr. — SRDP — OSCAS, NEC
7. Sonia Yuson de Leon — 97 Cebu Ave., Q.C.
8. Mabini L. Juan — SSS,
9. Conrado V. Nano — 25 South Crame, Q.C.
10. William F. Pratt — 35 Amorsolo, SLV, Makati, Rizal
11. Abdul Razzaque Rukanuddin — Pakistan
12. Gloria Santos-Ocampo — E.R. Squibb & Sons, Phils. Corp.
13. Dolores I. Velasco — 9 Faith, Teresa Village I, Q.C.
14. Estrella de Vera — SRDP — OSCAS, NEC

Please report CHANGE OF ADDRESS PROMPTLY to the Secretary, PSA, P. O. Box 3223, Manila.

The Association expresses deep regret at the demise of 2 members:

1. Dr. Manuel Aycardo
2. Atty. Tomas Baltazar, Bureau of Private Schools