THE LABOR FORCE APPROACH AND THE KOREAN LABOR FORCE DATA

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I

There have been basically two conceptual approaches to the regular economic activities of the population in the working ages, roughly 15-64, in censuses or related surveys in various countries. The first type, called the gainful worker(or gainfully occupied) approach, is primarily concerned with the usual economic activity or status of a person of working age while the second type, called the labor force approach, is with the economic activity in any specified time period, considering whether the person is working(employed) or unemployed at the time of the census.[1]

A gainfully occupied worker refers to a person who actually, for a large part of the time, works at an occupation through which he earns wages or salary, obtains direct income in other form, or assists in the activity or status.[2] This approach has long been in use in various countries where the census collected information on the economic activities of the population. It is relatively simple to apply, and has the advantage of broad coverage.[3]

The Korean censuses during the colonial period(1910-1945) utilized this approach in the measurement of the work force. While this approach proved to be useful when the major concern was a total count of the working population(without regard to the numbers employed or unemployed at a particular time) and for an inventory of the occupations of that population, it became clearly inadequate when the need arose to measure employment and unemployment in the labor market.[4] Lacking a specific time reference, the gainful worker approach produced "an occupational return even if the person was not actually working at it."[5] Furthermore, it failed to include in the work force those persons who were

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1) See Leon E. Truesdell, "Concepts of the Working Population," *Estadistica*, Num. 22 (Marzo de 1949), pp. 76-83.

2) *Ibid.*, p. 77.

3) *Ibid.*, p. 77.

4) *Ibid.*, p. 78, and Philip M. Hauser, "A New Approach to the Measurement of the Work Force in Developing Areas" (Unpublished manuscript).

5) *Ibid.*, p. 6.

seeking first employment as they became of working age. This approach may also erroneously include those persons who had long been retired or who were neither working nor seeking work at the time of census enumeration since the related question is directed simply to respondents' occupation.[6]

The labor force approach was developed in the United States in the thirties in order to correct the deficiencies of the gainful worker approach for the measurement of the work force in "the complex, interdependent, highly vulnerable economy of urbanized and industrialized United States."[7] As indicated above, the labor force approach is based on actual work activities with attention paid to employment status, involving a specific time reference.

The "economically active population" or the "labor force" is a derived concept.[8] It is the sum of those persons classified as "employed" and those classified as "unemployed."

The employed comprise all persons 14 years old and over (a) who actually worked for wage, pay or profit or worked without pay during the survey reference period in a family business or on a family farm(fully employed); (b) who actually worked for wage, pay or profit or worked without pay while going to school, doing housekeeping or something else during the above specified dates(partially employed); or (c) who did not work during the reference period and did not look for work but had a job or business from which they were temporarily absent because of industrial displacement, bad weather, vacation or other personal reasons(temporarily laid-off). Unemployed persons refer to all persons 14 years and over who did not work for wage, pay or profit during the reference period but are looking for work. A person is considered also as looking for work even if he did not actually try to find work during the reference period because of temporary illness, bad weather, or the belief that no job was available. Those who are not in the labor force are categorized as the economically non-active population, comprising persons engaged in house-keeping, attending school or too old or disabled to do any work.[9]

The Korean censuses conducted after Liberation—in 1955, 1960 and 1966—collected information on the economic activity of the population utilizing the labor force approach.

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6) *Ibid.*, p. 6.

7) *Ibid.*, p. 5.

8) See William G. Bowen and T.A. Finegan, *The Economics of Labor Force Participation* (Princeton: Princeton University Press, 1969), pp. 3-15.

9) The labor force approach, as described here, was introduced into Korea without much critical assessment of the situation of labor force with regard to its marketability. As will be shown subsequently, this approach needs further refinement for its usefulness in the Korean context. For general discussions, see Leon E. Truesdell, *op. cit.*, United Nations, *Demographic Aspects of Manpower*, Report 1, Sex and Age Patterns of Participation in Economic Activities (New York: United Nations, 1962) pp. 1-2; Wilbert E. Moore, "Exportability of the 'Labor Force' Concept," *American Sociological Review*, Vol. 18, No. 1 (February, 1953), pp. 68-72 and "Persistent Problems of Labor Force Analysis," *Population Index*, Vol. 17, No. 2 (April, 1957), pp. 78-91; Hauser, *op. cit.*, and "Population Change and Development in Manpower, Labor Force, Employment and Income," paper presented to ODA Conference, Hong Kong, January 10-13, 1972; and Bowen and Finegan, *op. cit.*

The censuses include questions on economic activity status, class of worker, industrial and occupational classification of employment. Responses to these questions are then cross-classified with other relevant factors such as age, sex, education and the like on a sample basis (20% in 1960 and 10% in 1966). Published data are not necessarily consistent throughout the census years in kind and classification. Also, tabulation on a sample basis raises a problem of sampling errors. Analytical difficulties in this respect become acute when we try to analyze the time trends of a cohort in the working age population.[10]

Another major source of data is the annual survey of the economically active population which began in 1963. This survey was instituted by the Economic Planning Board, Korea to obtain up-to-date information on economic activities of the population in order to provide effective data for the formulation and implementation of plans and policies. This annual report not only fills up the time gap left by the regular censuses but also supplements the census by providing further information on the labor force, such as the economic activity rate by season, the number of hours worked and the like.

The Board undertakes this survey every season of the year on a sample basis (0.1 percent of the total population aged 14 years and above), but publishes the results of the four surveys one annual report, presenting yearly figures on labor force with the exception of labor force participation rate, employment rate, and the hours of work.[11]

II

The labor force approach, however, raises a number of conceptual problems when applied to a working population in which the majority is engaged in farming, and where a labor market is not clearly established. It is our aim here to examine the nature of the Korean labor force data in light of the recent criticism against the application of this approach to the working population in less industrialized economies.

Because of the highly seasonal nature of agricultural activities, the labor force participation rate of the Korean working population fluctuates rather widely between seasons. According to the annual report on the economically active population, the participation rate is highest during the busiest months of the year, June, and lowest during the slack period, December. In 1966, the total size of the economically active population in December is less than 70 percent of that in June. Breakdown of labor force participation rates by farm and non-farm households, as presented in Table 1, clearly indicates that wide seasonal variations are apparent only in the farm households. In the non-farm households, fluctuations of participation rates appear to be rather random, not

10) Utilizing the survey data Kwan S. Kim undertook an interesting analysis of the structural characteristics of labor force in the dualistic Korean economy. See his, "Labour Force Structure in a Dual Economy: A Case Study of South Korea," *International Labour Review*, Vol. 101, No. 1 (January, 1970), pp. 35-48.

11) Perhaps in the future, an arrangement might be worked out with the Bureau of Statistics to make a sample of individual data on cards or on tape available to interested scholars to enable them to perform comprehensive analysis.

Table 1. SEASONAL VARIATIONS OF THE ECONOMICALLY ACTIVE POPULATION (JUNE= 100) KOREA, 1963—1966 BY SEX AND FARM AND NON-FARM HOUSEHOLD

Month	All Countries				Farm				Non-Farm			
	1963	1964	1965	1966	1963	1964	1965	1966	1963	1964	1965	1966
						Both Sexes						
March	82.8	80.5	82.3	81.6	76.3	73.4	76.1	73.5	94.8	94.1	93.3	97.9
June	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
September	91.7	91.1	90.6	87.7	84.7	86.7	85.4	82.5	104.5	99.6	99.7	96.8
December	69.3	67.2	69.8	68.2	54.7	55.2	55.6	54.5	100.7	90.3	94.9	92.4
						Men						
March	91.3	88.5	90.0	89.1	88.6	83.5	85.8	84.2	96.1	96.6	96.4	96.3
June	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
September	97.5	99.5	96.9	94.7	93.2	97.9	93.7	90.4	102.7	102.2	101.7	101.0
December	82.4	81.5	81.7	81.8	70.2	72.9	70.8	68.3	102.7	95.5	98.1	101.4
						Women						
March	75.1	68.4	70.4	69.0	66.7	60.2	63.0	59.7	95.1	89.1	87.1	91.4
June	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
September	85.1	74.1	80.9	78.7	79.8	72.1	74.4	72.0	97.5	94.2	95.7	94.8
December	55.7	45.7	51.5	49.6	40.2	32.1	35.3	34.0	92.8	89.5	88.3	87.0

Source: Economic Planning Board, Korea, *Annual Report on the Economically Active Population* (Seoul: Economic Planning Board), 1963, pp.49-57, 1964, pp.66-71, 1965, pp.58-62 and 1966, pp.70-75.

reflecting seasonal characteristics.

The three censuses mentioned above were not conducted in the same season or the same month —the 1955 census in September, the 1960 census in December, and the 1966 in October — which creates difficulties in estimating comparable labor force participation rates. The labor force participation rates estimated for the three census years by sex are presented in Figure 2. They apparently reflect the alleged seasonal variation—more clearly with women — in the unchanging overall age pattern of the participation rates, but with a rather consistent proportional difference.

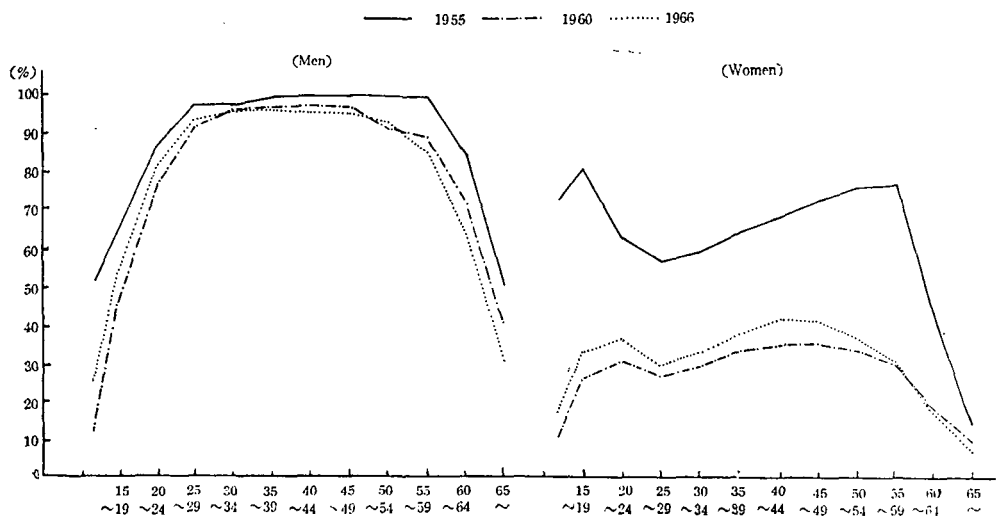
Given that there is inconsistency in the time at which the three censuses were taken, it is necessary to make some adjustment for the purpose of comparison. We realized, however, that a hasty adjustment yielded results which proved to be rather futile. If we compare the 1955 labor force participation rates to the 1966 rates the former tend to be unusually high for both sexes, but especially so for women, despite the fact that there is not much difference in the amount of labor demanded between September and October.[12]

Furthermore, the 1960 participation rates appear to be unusually high considering that the census was conducted in December, the middle of the slack season. The 1963 survey

12) Yong Sam Cho, *"Disguised Unemployment" in Underdeveloped Areas, With Special Reference to South Korean Agriculture* (Berkeley: University of California Press, 1963) pp.74-76.

on the economically active population shows that the December participation rate is lower than the October rate by an average of 15%. As Figure 1 shows, the 1960 rates are only slightly lower than the 1966 rates (October rates) for the age groups below 35, and become higher in the older age groups which is hardly conceivable, given the observed seasonal variations. Adjustment of the 1960 rates on the basis of the 1963 survey data would yield a participation rate higher than unity for prime ages. Lacking further information against which the census figures could be checked, it is not possible to determine the trend on the basis of census material collected so far. It is hoped that the future censuses be consistent in enumeration time and the annual survey be continued to supplement the former.

Figure 1: LABOR FORCE PARTICIPATION RATE, KOREA, 1955, 1960 AND 1966 BY AGE AND SEX



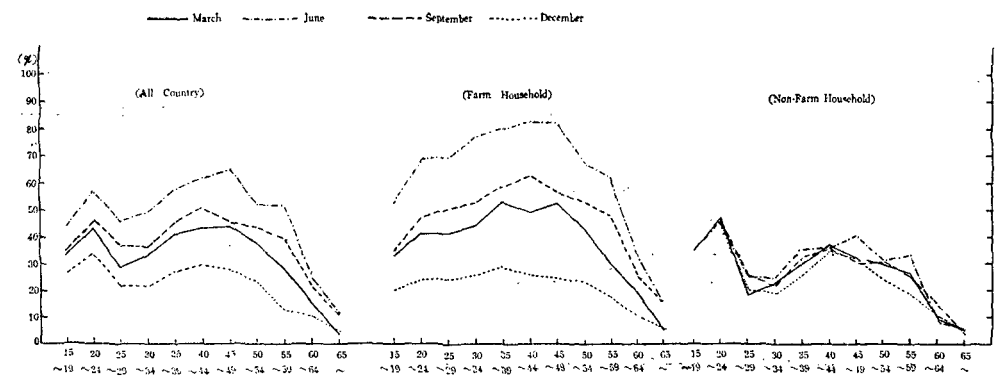
Source: Bureau of Statistics, Ministry of Home Affairs, Korea, ***1955 Population Census of Korea***, Whole Country (Seoul: Bureau of Statistics, 1959), Table 13, pp. 94-95, Economic Planning Board, Korea, ***1960 Population and Housing Census of Korea***, Vol. 2, 11-1 Whole Country, Table 11, pp. 110-111, and ***1966 Population Census Report of Korea***, 12-1 Whole Country (Seoul: Economic Planning Board, 1969), Table 4, pp. 110-111.

Ⅲ

Since the labor force approach is concerned with the actual economic activities during the reference period rather than regular gainful occupation, and since anybody who worked more than an hour for profit or otherwise would be counted as an economically active person, the dominance of household industry with unpaid family workers in the Korean economy raises a question of the inclusion or exclusion of family members in the labor force, especially women, who inevitably render assistance to the household

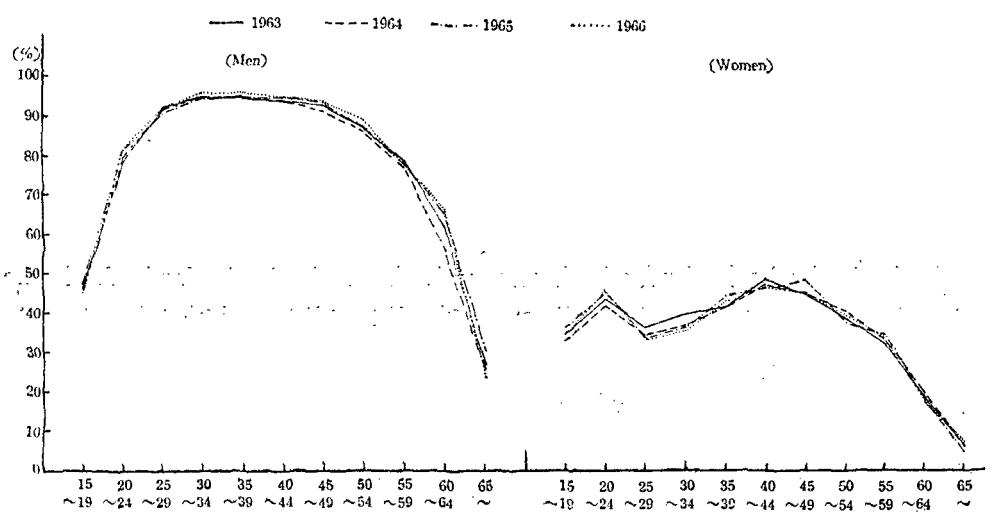
farming or enterprise when their labor is in demand. This conceptual difficulty is not easily solved without further specifying the nature of unpaid family labor in terms of its regularity, necessity, and magnitude. It is however, interesting to note that, in each age group, the average annual proportion of women who are reportedly in the labor force remains fairly constant over the period covered by the annual survey, 1963-1970 as shown in Figure 3.

Figure 2: SEASONAL VARIATIONS OF LABOR FORCE PARTICIPATION RATES OF WOMEN, KOREA, 1966 BY AGE AND SEX, FARM AND NON-FARM HOUSEHOLD



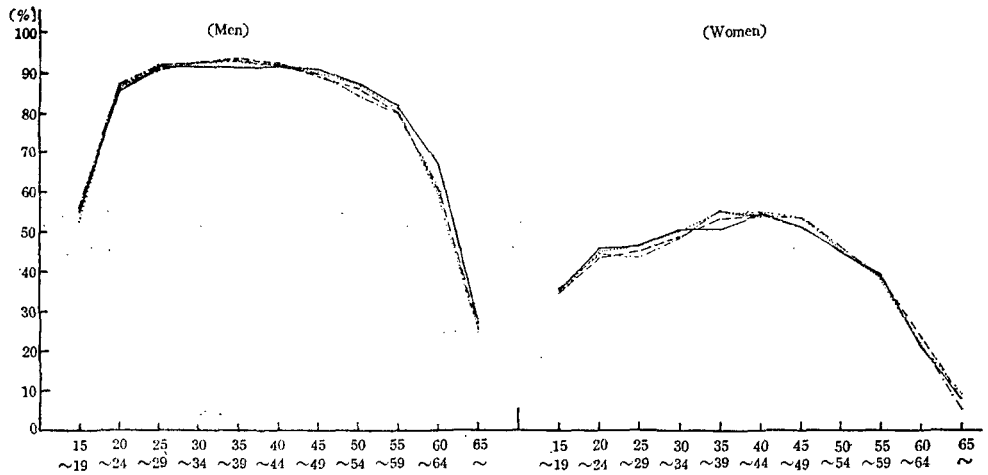
Source: Economic Planning Board, Korea, *1966 Annual Report on the Economically Active Population*, Vol. 5, (Seoul: Economic Planning Board, 1967), Table 8, p. 28.

Figure 3-a: LABOR FORCE PARTICIPATION RATES, KOREA, 1963—1966, BY AGE AND SEX



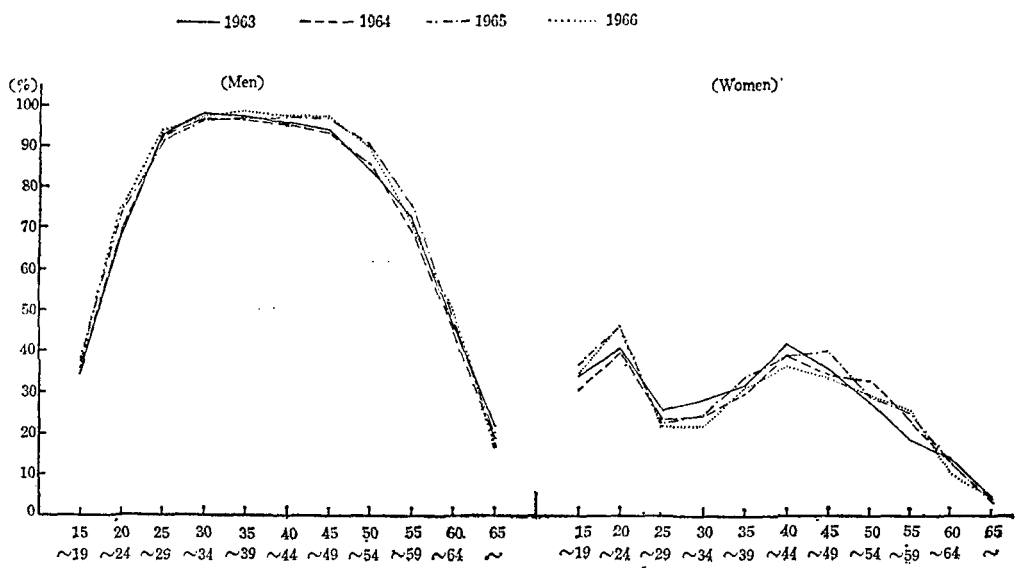
Source: See citation in Figure 2.

Figure 3-b: LABOR FORCE PARTICIPATION RATES, KOREA: FARM HOUSEHOLD, 1963—1966, BY AGE AND SEX



Source: See citation in Figure 2.

Figure 3-c: LABOR FORCE PARTICIPATION RATES, KOREA: NON-FARM HOUSEHOLD, 1963—1966, BY AGE AND SEX



Source: See citation in Figure 2.

Since, as indicated above, seasonal variations are prevalent among rural females but not among their urban counterparts, it is necessary to consider the annual average rate of female labor force participation separately for farm and non-farm households for the same period. The age pattern of the activity rate remained almost unchanged in both sectors. In fact, the activity rates fluctuate much less during the period under consideration

in the rural sector than in the urban sector.

The consistency of the activity rate over the seasons leads us to hypothesize that unpaid family workers respond to the census or survey in a way that makes the distinction between the economically active and non-active meaningful for scientific analysis. Further research, however, is in order to discover who tend to respond positively to the questions:

What did this person do most of the time during the 7 days before the census date? Did this person work at all, even for as much as an hour, during the 7 days before the census date for wages or profit or in a family business or family farm?

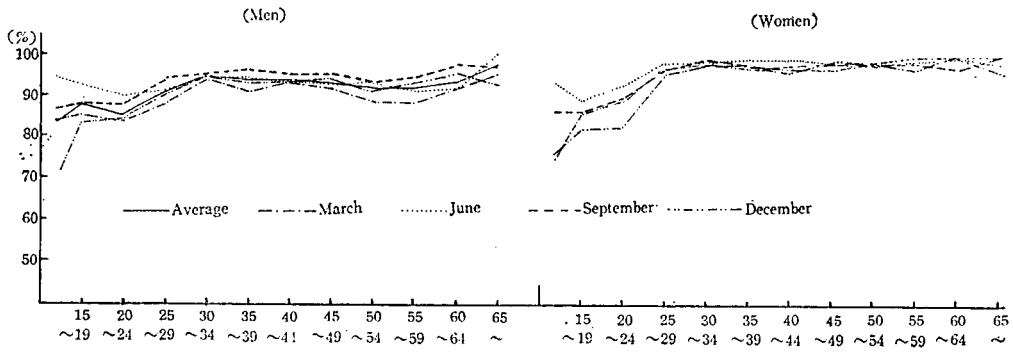
Ⅳ

It is noteworthy that while the labor force participation rate varies widely from season to season in farm areas, the employment rate remains relatively constant. Seasonal variations in employment rate are much wider in non-farm areas than in farm areas, indicating that labor force participation is largely determined by employment level rather than unemployment level as is the case in many industrialized countries. Fluctuations in the labor force participation rate correspond very closely with fluctuations in the magnitude of the labor demand in the rural areas. It is equally significant to point out that the proportion reportedly unemployed remains almost constant.

That the proportion unemployed does not fluctuate over the years or between the seasons leads one to believe that the labor market test in the labor force approach in Korea is not born out. It appears that those people reported as looking for jobs do so almost habitually; thus, labor market conditions are not reflected. While the proportion unemployed remain unchanged, those people who do not participate actively in the work force during the slack seasons are readily mobilized for work during the busy seasons in farm areas.

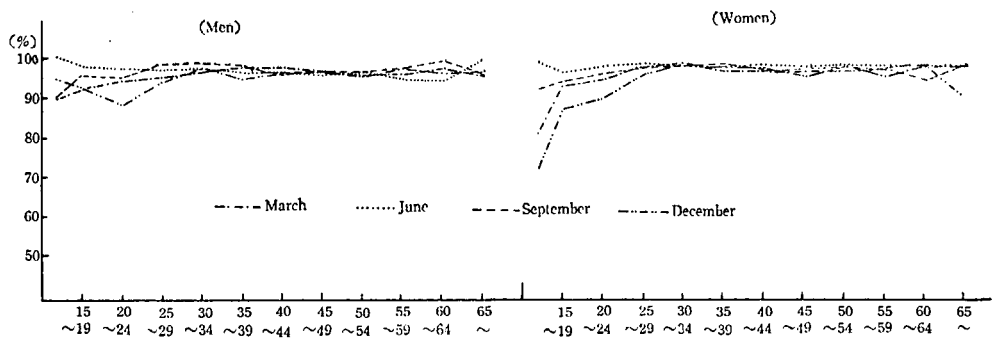
The consistently high rates of employment, however, appear to be characteristic largely of the farm households. As Figure 4 shows, in the farm sector the employment rates do not fluctuate from season to season and remain at the fullest employment level—above 95 percent, with no indication of variation with age. That employment remains relatively stable at a high level implies that regardless of wide seasonal variations in economic activity rate, the unemployment remains fairly constant at a very low level. There is a tendency in the rural areas for employment rates to be related with occupational opportunities, rather than the occupational demand. One may therefore conclude that in the farming areas, unemployment is not problematic, if not non-existent. On the other hand, the employment pattern of the non-farm household does show variations with season with no identifiable pattern, and with age, from a low of 60 percent to the maximum level. This urban-rural contrast of the employment pattern seems to indicate that in the non-farm areas, employment is responding to labor demand. There is a substantial proportion of

Figure 4-a: EMPLOYMENT RATES, KOREA, 1966 BY AGE AND SEX



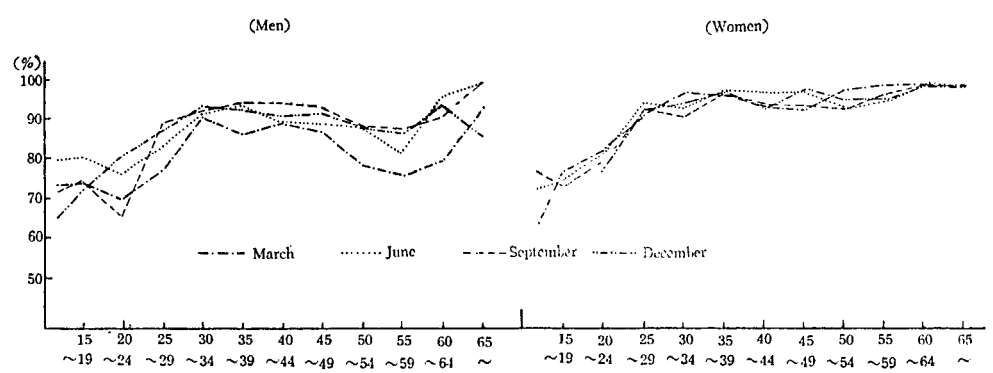
Source: Economic Planning Board, Korea, *1966 Annual Report on the Economically Active Population*, Vol. 5 (Seoul: Economic Planning Board, 1967), pp. 67-71.

Figure 4-b: EMPLOYMENT RATES, KOREA: FARM HOUSEHOLD, 1966 BY AGE AND SEX



Source: See citation in Figure 4-a.

Figure 4-c: EMPLOYMENT RATES, KOREA: NON-FARM HOUSEHOLD, 1966 BY AGE AND SEX



Source: See citation in Figure 4-a

men and women deprived of employment opportunities in various age groups although they are reportedly seeking gainful opportunities. This leads us to believe that the problem of employment and/or unemployment in the urban sector should be treated separately from that in the rural sector. We will return to this point later on.

V

In an economy where the agricultural sector dominates, the distinction between the employed and the unemployed is not always too clear. Since both the censuses and the surveys define the employed as a person who did any amount of work during a specified period of time, those who are not regularly employed may be categorized as the employed as they might have engaged in the work as defined by the census by say, giving help to other family members or attending family business temporarily. This likelihood is greater in the farming sector or domestic enterprises. And since there is no rigid rule regarding entering the labor market as in industrialized countries, these basic difficulties entailed in the labor force approach necessitate a further look into the nature of employment.

By way of attending to this difficulty the Korean census in both 1960 and 1966 differentiated the "fully employed" from the "partially employed" in the enumeration of employed persons. In 1966, as Table 2 indicates, the proportion of the employed in the "partially employed" category accounts for 4.2 percent of the employed men and 32.7 percent of the employed women. Thus, a large proportion of women reportedly employed is participating in economic activity not as fully employed but only as partially employed, with part of their working hours devoted to non-economic activities such as attending school, housekeeping and so on. The rate of the partially employed is also closely related to industrialization as well as urbanization, both of which have the effect of reducing this rate. That a substantial proportion of employed persons do not fully devote their working hours to economic activity seems to indicate a lack of rigidity of market testability of the labor force in Korea and requires further information on the

Table 2. EMPLOYMENT TYPE OF THE EMPLOYED POPULATION IN KOREA, 1966 BY SEX

	Men				Women			
	Total	Fully Employed	Partially Employed	Temporary Lay-Off	Total	Fully Employed	Partially Employed	Temporary Lay-Off
All Country	100.0	94.6	4.2	1.2	100.0	66.7	32.7	0.6
Shi	100.0	96.0	1.9	2.1	100.0	86.8	12.1	1.1
Gun	100.0	94.0	5.2	0.8	100.0	60.0	39.6	0.4
Non-Farm	100.0	96.1	1.9	2.0	100.0	83.7	15.3	1.0
Farm	100.0	93.4	5.9	0.7	100.0	57.2	42.5	0.3

Source: *1966 Population Census Report of Korea*, 12-1 Whole Country, *op. cit.*, pp. 110-119.

actual number of hours that employed persons worked. The annual survey report has been publishing such information since 1963. As the Annual Report itself points out, about 5 percent of the reportedly employed population worked less than 18 hours a week in 1970. The labor law stipulates the adequate weekly working hours as 44 hours per week. If we consider 36-44 hours as approximating the legal stipulation, about 20 percent of the employed persons are not working to the full strength as the law permits (Table 3).

Table 3. EMPLOYED PERSONS BY HOURS WORKED

Year	Total	Hours Worked Per Week						Average Hours Worked Per Week
		(1-18)	(19-29)	(30-34)	(35-39)	(40-49)	(50 hrs)	
1963	100.0	8.7	14.1	6.8	7.1	19.5	40.0	47.5
1964	100.0	9.3	12.2	7.1	7.5	19.7	44.3	46.0
1965	100.0	7.9	12.2	6.3	7.1	20.3	46.2	48.0
1966	100.0	8.8	11.9	6.7	7.1	20.9	44.6	47.7
1967	100.0	7.1	10.7	6.4	8.0	21.7	46.1	48.3
1968	100.0	5.5	10.2	6.7	7.2	23.1	47.3	49.2
		(1-17)	(18-26)	(27-35)	(36-44)	(45-53)	(54 hrs & over)	
1969	100.0	3.4	6.9	7.2	20.5	22.0	39.7	50.3
1970	100.0	5.0	7.1	7.2	23.0	20.3	37.0	48.3

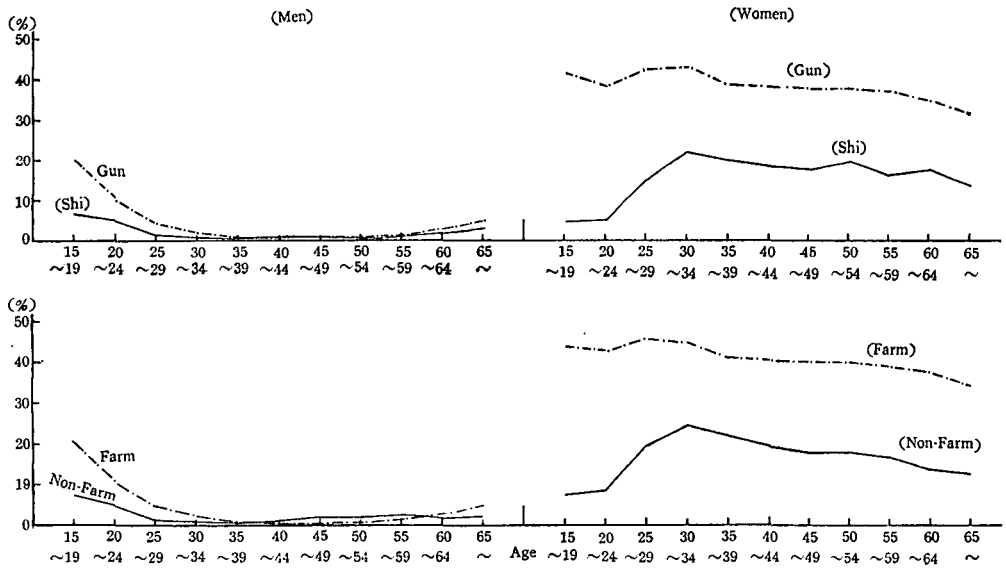
Source: Economic Planning Board, *The Annual Report on the Economically Active Population 1970* (Seoul: Economic Planning Board, 1971), pp. 35 and 82.

Both wide seasonal variations in labor force participation and the under-utilized labor in terms of working hours led some economists to introduce a new concept, under-employment or disguised unemployment. In essence this concept refers to those members of the labor force who could be removed without necessarily affecting the productivity of the industrial sector in which they are engaged. This additional concept is intended as a measurement of labor wasted or not utilized to the fullest. The policy implication, therefore, is that new jobs could be created for those workers under this category, and thus their labor could be fully utilized for a new industry.

We cannot, however, hastily assume that this is the case. Those adult members of working age whose labor is said to be under-utilized may not necessarily seek economic opportunities where their labor can be fully utilized nor are they readily mobilized to their full strength for jobs other than they are presently engaged in. In both agricultural and service sectors in Korea, the household to a large extent remains a production unit. Labor needed for household farming or enterprises is met by human resources available within the household or related to it, not with those made available at the labor market. Those who are engaged part-time in productive activities on a household basis may not seek a job outside of the household at all. Traditionally, women are not expected to be engaged in other than domestic activities, and farming has been regarded as an extension

of domestic duties. Any farm household in possession of land which needs more than its household labor resources finds helping hands within the local village either through the custom of mutual neighbourly help or hiring.[13] In the case of a small household

Figure 5: PARTIALLY EMPLOYED PERSONS BY AGE AND SEX, SHI AND GUN, AND FARM AND NON-FARM HOUSEHOLD, KOREA, 1960.



business, labor mobilization is also primarily made through the network of kinship or acquaintances. The nature of employment in this setting therefore tends to be different from that through the labor market where demand and supply of labor is based on the rule of its full utilization. Under-employment introduced with the above assumption, tends to be rather misleading, and is liable to generate erroneous employment policies. We therefore need to investigate further on the nature of labor utilization in Korea.

VI

Unemployment

Paradoxically, the labor force approach, though designed for measurement of unemployment, does not produce reliable measures when applied to a population largely dominated by agriculture. In rural areas, where people do not work for wages it is not easy to measure the size of the labor force. As indicated above, the number of persons in the

13) In the field survey undertaken by the author, it became apparent that, even in a hamlet located not very far from an urban center, its members rarely went out of the hamlet to seek employment.

labor force is closely related with the amount of work available rather than the size of the population in the working ages. In other words, even though the population in the working ages is increasing, the number of the economically active population is not necessarily increasing accordingly. Although the increasing population creates a pressure on the labor market, its expansion is more closely affected by the actual work opportunities. This means there is reservoir of people outside the labor market who will enter the market if work becomes available. Another problem is that not all the unemployed are employable. Those who report themselves as unemployed in one area do not necessarily make themselves available for work opportunities created in another town.[14] For example, a farmer who has been accustomed to work within the boundary of his own village is not likely to make himself available for work opportunities outside of it.[15] Furthermore, the unemployed in the sense defined here do not really exist in the rural areas. "Countries with high population pressure learn over the centuries how to provide some work for everybody."[16] When farming is on a small scale basis and is carried out in terms of the household unit, surplus labor stays on the farms, claiming the family income, even though it may not be fully occupied.[17]

This tendency is reinforced by the absence of relief pay for the unemployed, in less industrialized countries.[18]

The discussions above led some economists to insist that the notion of unemployed should be discarded.[19]

It may be unsatisfactory to talk about unemployment without being able to define the unemployed precisely.[20] But it is equally unsatisfactory not to talk about it at all. As Lewis points out,[21] unemployment problems, though marginal, gradually become problematic in developing countries, as the proportion of the working population in the urban areas increases, and also the proportion of daily laborers in the rural areas increases. These two categories are often left completely unemployed without any financial help from the family to support themselves. Exact assessment of unemployed in this category may be impossible with the given conceptual apparatus, but as a social problem subject to policy measures they raise a serious policy question, especially when there is no nearly adequate unemployment compensation measure. [22] In Korea, large cities are growing rapidly, the proportion of the population residing in urban areas approaches

14) Gunnar Myrdal, *Asian Drama* (New York: Pantheon, 1968), Vol. 2, p. 999.
15) See Footnote 12.
16) W. Arthur Lewis, "Unemployment in Developing Countries," Lecture to Mid-West Research Conference, October, 1964.
17) *Ibid.*
18) Myrdal, *op. cit.*, p. 999, and Lewis, *op. cit.*
19) Myrdal, *op. cit.*, p. 1022.
20) Lewis, *op. cit.*
21) *Ibid.*
22) It is therefore necessary that there be a revised concept of unemployment suitable to Korean situations. For further revisions, see Hauser, "A New Approach to the Measurement of the Work Force in Developing Areas," *op. cit.*

almost fifty percent. In the cities, a great majority of the people in the working ages are engaged in non-agricultural activities, and employment practice is taking different forms than in the rural towns. The secondary industry pays wages for workers recruited, and requires them to have a certain amount of technical skills to do the work. Due to the massive influx of rural farmers in the cities, the number of persons in the labor force is growing much faster than the number of jobs created by secondary industry. The service industry may recruit more labor than it needs at a lower wage, rate but it does not develop social customs of employing excessive labor in a flexible manner prevalent in rural areas. In farming areas, the increasing population pressure is dividing up the arable land cultivated by the household as production unit. And as the pressure increases, farmers tend to leave for large cities. While in rural areas additional or surplus labor is absorbed by one's own family, in the cities there are many individuals for whom no one feels responsible. For them employment becomes a matter of surviving and unemployment becomes a serious social problem.

In non-agricultural industries where technology is rapidly developing, the wage scale tends to differentiate widely in terms of the level of skill or training, and those who feel qualified for a high wage are not likely to commit themselves to a job which requires little skill and pays a low wage.

With the expansion of education as shown earlier, the population in the working ages has been differentiated in terms of qualification for jobs, and the growing non-agricultural industry with its attendant division of labor make more complex the rule of demand-supply of manpower in each sector.

While education provides work training, it also makes the educated person selective in the choice of occupation. As the level of educational attainment is directly equated with the scale of prestige, an educated person has a strong tendency to seek a prestigious occupation. Traditionally, prestigious occupation has been rather narrowly defined, and has not expanded in proportion to the expansion of education. As shown earlier, public school education grew rather rapidly at each level; the supply of educated manpower has tended to exceed the adequate work opportunities in demand.

Unemployment is thus gradually becoming a real issue in non-agricultural sectors and/or in urban areas. The census provides data on unemployment by farm and non-farm areas and urban and rural areas. In 1960 and 1966 roughly 10 percent of the economically active men and 5 percent of the economically active women are reported unemployed. But if we estimate the proportion unemployed separately, it is substantially higher in Shi than in Gun areas, and in non-farm than in farm sectors. We argue that the economically active population reported as unemployed in rural and farm areas does not present a problem as real as those in urban and non-farm areas. Furthermore, the proportion unemployed in Gun and farm areas is rather negligible. Among the urban labor force, the unemployment rate is proportionally higher among younger ages — up to 25 — than among the remaining age groups.

If we compare the Shi (urban) unemployment rate to the non-farm rate, the former

tends to be higher than the latter for both sexes and invariably for all five-year age groups. Although the majority of the non-farm households is concentrated in the urban areas, some proportion of the rural areas is non-farm. Slight as the difference between the two rates maybe, it appears that the areal differences (urban-rural distinction) are more closely related with the unemployment rate than the farm—non-farm distinction. This tendency may also indicate that the unemployed are more likely to move into the cities to look for jobs than to stay with the family.

Table 4. UNEMPLOYMENT RATE 1960 AND 1966, KOREA, FARM AND NON-FARM, AND SHI AND GUN BY AGE

	All Country		Farm		Non-Farm		Gun		Shi	
Age	1960	1966	1960	1966	1960	1966	1960	1966	1960	1966
					Men					
Total	6.82	9.8	2.2	3.8	14.0	15.3	3.4	14.8	17.2	17.3
14	12.05	19.3	4.9	8.6	28.2	38.7	6.9	11.0	32.7	44.1
15-19	11.0	19.3	4.0	9.0	24.8	33.7	6.6	15.7	32.4	36.5
20-24	9.2	19.8	3.1	9.6	17.6	32.2	5.2	11.0	29.8	34.8
25-29	6.0	10.5	1.4	5.0	10.5	15.8	4.2	5.6	22.6	18.3
30-34	4.8	5.5	0.8	1.8	8.8	8.6	2.6	2.7	13.4	10.2
35-39	4.3	4.9	0.7	1.3	8.7	7.9	2.1	2.4	10.6	8.8
40-44	4.3	4.5	0.8	1.0	9.7	7.9	1.8	2.1	10.0	8.3
45-49	4.5	5.1	0.9	1.1	11.0	9.5	1.9	2.3	11.0	10.2
50-54	3.6	5.9	1.0	1.4	10.5	12.6	2.0	2.4	12.3	13.8
55-59	2.7	5.9	1.2	1.5	8.6	14.4	1.8	2.4	11.6	15.7
60-64	3.3	2.5	2.1	1.0	9.9	7.5	1.7	1.4	9.2	7.8
65+	5.0	1.9	2.4	0.9	8.5	6.0	2.6	1.2	9.1	5.8
					Women					
Total	5.8	5.3	2.5	1.6	13.1	11.2	3.4	1.9	15.9	14.1
14	2.1	5.6	5.5	6.7	20.5	26.1	7.3	8.0	22.2	27.4
15-19	9.0	14.2	3.3	6.0	18.4	20.9	6.5	6.7	22.2	22.1
20-24	4.7	10.5	1.8	2.9	11.8	17.1	4.0	3.3	21.4	20.0
25-29	3.5	3.6	1.6	0.7	8.4	8.6	2.7	0.9	14.8	12.3
30-34	3.1	1.4	1.5	0.3	7.2	3.8	2.4	0.5	9.5	5.2
35-39	3.0	1.2	1.6	0.4	6.9	2.9	2.2	0.6	7.7	3.6
40-44	3.1	1.2	1.7	0.3	7.2	2.8	2.2	0.6	7.2	3.5
45-49	3.5	1.3	2.1	0.5	8.2	3.1	2.3	0.7	7.5	3.6
50-54	3.7	1.7	2.4	0.9	9.2	4.1	3.8	1.1	8.0	4.9
55-59	4.3	2.3	3.1	1.4	9.4	5.8	3.1	1.6	8.9	3.6
60-64	7.5	2.0	5.7	1.7	16.0	3.4	3.7	1.7	9.7	4.4
65+	7.2	3.0	3.6	2.2	12.1	6.0	6.7	2.3	4.6	8.5

Source: *1960 Population and Housing Census of Korea*, Vol. 2, *op. cit.*, pp. 110-111 and *1966 Population and Census Report of Korea*, *op. cit.*, pp. 110-111.

One should, however, note that the unemployment rate is highest for the youngest age group and rapidly declines with the increasing age. The unemployed in the younger ages must include a substantial number of youths just entering the labor market as they become of working age or graduate from school and who have never looked for a job before. There is a question as to whether these new job claimants should be considered as unemployed. The rapid decline of unemployment with increasing age may indicate that this group is getting employed in the course of time. If this is so, the unemployment figures need to be further differentiated in terms of the length of the period during which a job has been sought.

Between 1960 and 1966, there is only a slight difference in the unemployment rate. But the age structure of the rate shows a distinct contrast between the two — the unemployment rate went up substantially in the first younger age groups whereas it declined in the older ages with minor exceptions. Whether this structural trend is an indication of a change in recruitment favouring older persons should be further investigated.

Analysis of the relations between the education level of the economically active population and the level of unemployment for 1960 and 1966 also shed some light on the emerging problem of unemployment related to expanding education.

For 1960 the unemployed persons are broken down by the years of school completed, for the entire country, and then for the urban and rural areas separately. This method of classifying the level of educational attainment has a serious weakness in that it fails to differentiate those who completed each level of education from those who did not. Since the reason for not completing education at any level is mostly financial, and those who complete their respective levels of education will have a better chance of employment, this distinction should be closely related to employment situation.

In 1960, the unemployment rate at the national level is only about 7 percent. But if we look at the Shi area alone, it increases to 17.5 percent. Within the Shi areas, the level of education is clearly related to the unemployment rate. As shown in Table 5, the proportion unemployed is gradually going up as the level of education increases until that of high school, and then drops somewhat. The proportion unemployed with college education, however, is slightly higher than those with primary school education only or none at all. The similar pattern is also found among unemployed women in the urban areas, with the proportion unemployed reaching a peak at the level of junior high school. For the persons with high school education, more than one out of five is reportedly unemployed. This may, however, be an over-estimate in view of the fact that those who received only a high school education come out to the labor market at younger ages, and are less likely to find jobs.

It is rather remarkable that there is such a considerable difference between those who received any education and those who received no education at all in terms of the unemployment rate. Although the proportion unemployed is relatively negligible in the rural areas, the level of education seems to have the same function of increasing the

Table 5. UNEMPLOYMENT RATES, KOREA, SHI AND GUN, 1960, BY SEX

Years of Schooling	All Country		Shi		Gun	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
			Men			
Total	381,260	7.1	242,770	17.5	138,490	3.5
0	50,050	2.6	19,245	9.4	30,805	1.8
1-3	5,870	5.5	2,930	17.2	2,940	3.3
4-6	151,905	7.0	91,105	16.1	60,800	3.8
7-9	66,320	12.8	46,715	22.1	19,605	6.4
10-12	76,460	16.3	58,600	22.5	17,860	8.5
13-16	29,325	16.3	23,250	18.8	6,075	10.7
17 & over	590	8.6	490	9.9	100	5.2
Unknown	740		435			
			Women			
Total	133,885	6.2	73,975	16.3	59,910	3.5
0	45,465	3.5	13,020	9.0	32,445	2.8
1-3	4,240	7.7	2,365	15.4	1,875	4.7
4-6	56,715	8.7	35,425	17.2	21,290	4.8
7-9	13,950	20.1	11,295	28.9	2,655	8.8
13-16	2,080	19.9	1,960	23.2	120	6.1
17 & over	45	9.4	30	7.5	15	18.8
Unknown	495		220			

Source: *1960 Population and Housing Census of Korea* Vol. 2, 11-1, *op.cit.*, pp. 142-165.

scope of unemployment. While the great majority of the rural labor force is engaged in farming, with a very small proportion of them reported as unemployed, an unemployment problem emerges perhaps among those who do not engage in farming while residing in the rural areas or those who do without land.

The 1966 data on education and unemployment are not strictly comparable with the 1960 data. Furthermore, it is impossible to estimate the proportion of the economically active population reported as unemployed by those who had not completed each level of school because anybody who did not complete his education at any level is included in one large category called 'not completed'. Our analysis of the unemployment rate therefore cannot be complete as we cannot include those economically active persons who did not complete their education at respective levels. Partial though our analysis may be, it will not distort the general picture of the unemployment structure entirely since those who did not complete only account for 4.8 percent of the economically active persons — 5.3 percent of the economically active men and 3.6 percent of the economically active women.

In 1966, we first note that the proportion of the economically active persons—both men and women—reporting as not having had any education was reduced considerably compared to that in 1960, especially for the economically active women. The unemployment rate of

Table 6. UNEMPLOYMENT RATES BY EDUCATIONAL ATTAINMENT, KOREA, SHI AND GUN 1966, BY SEX

Educational Attainment	All Country		Shi		Gun	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
			Men			
Total*	549,230	9.2	363,940	17.4	185,290	4.8
Never Attended	38,060	2.8	16,310	9.9	21,750	1.8
Graduated	465,770	10.9	316,090	17.7	149,680	6.0
Primary School	179,660	7.5	103,610	15.4	76,050	4.4
High School	241,680	15.8	175,810	20.7	76,870	9.8
College or Higher	44,430	14.4	36,670	14.1	7,760	8.8
			Women			
Total	142,060	5.3	105,080	14.1	36,980	1.9
Never Attended	16,500	1.4	6,760	16.1	9,740	0.9
Graduated	117,330	8.4	91,810	12.1	25,520	3.1
Primary School	60,440	5.6	42,800	23.5	17,640	2.4
High School	52,960	18.5	45,380	15.7	7,580	8.1
College or Higher	3,930	13.7	3,630	20.6	300	5.4

* Those who did not complete schooling at each level and whose educational attainment unknown are excluded.

Source: *1966 Population Census Report of Korea*, 12-1 Whole Country, *op. cit.*, pp.126-131 & 450-455.

the women in the labor force with no education also declined sharply while that of men remained almost the same. The unemployment rate of the active men and women still contrast sharply with those with education. Among the educated labor force, the unemployment rate is higher for those with secondary education than with primary education. But the employment rate of the active population with higher education is slightly lower than those with secondary education, but still higher than those with primary school education. Why the unemployment rate goes down as the level of education moves up from the secondary to the higher level is a question for further study. But it appears as though unemployment is less problematic with highly educated manpower than with the intermediate level. As will be shown later, high school education falls short of providing proper education for the manpower skills demanded by industry as the education at this level is more of continuity with the primary education than of education with its own practical aims. College or university education may have its shortcomings viewed from a practical economic point of view. But compared to a secondary education, a person who is going through this level of education is more concerned with attaining a job if for no other reason than his age, and makes an effort to relate what he learns to his future career.