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~~Income~~ Distribution, Underdevelopment
and the Labor Market

by

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Abstract

The paper discusses how the essentially private educational system in the Philippines evolved as a consequence of its underdevelopment and unequal income distribution. These conditions work together to constrain the education and labor choices of individuals. The capital market is segmented in such a way that credit is not available at the same cost to everybody. Poor communications and transport system leads to inadequate and unequal distribution of information, and to unequal distance cost to schools and other facilities. The imperfections tend to exacerbate the inequality in income since the poor tend to have lesser access to schools, credit and information. Students have no access to credit and they are constrained by their family resources in their education and other choices. The poor are, therefore, unable to pursue high-cost education. In general, the given level and distribution of income generates a distribution of education options such that a decreasing proportion of the young population can afford increasingly high-cost education programs. In response to this distribution of potential demand, schools opened inexpensive programs. These consisted of low quality curricula and fields such as teacher education, commerce and liberal arts that require smaller library and laboratory inputs. Consequently, the school system produced for the labor market a relatively more abundant supply of graduates of these inexpensive programs. The relative scarcity of labor of different types and quality of education determined their relative rates of returns and employment or unemployment. The paper then concluded with policy suggestions. In particular, it pointed to the need for educational planning and a redirection of development strategy towards equity in income distribution.

INCOME DISTRIBUTION, UNDERDEVELOPMENT AND THE LABOR MARKET

By Edita A. Tan

The education-labor market in the Philippines is found to work rather inefficiently. The inefficiency is evidenced by the persistence of unemployment among certain groups of educated labor, wide variation in the rate of return to education of various types, extremely large wage differential between skills and the proliferation of poor quality colleges that produce the educated labor in excess supply. These problems are interrelated and may be traced to some common causes. This paper analyzes the implications of underdevelopment and income inequality in the working of the education-labor market. It treats these problems as constraints on education choice. The model shows how the inequality of income and underdevelopment generates unequal sets of choices for the population, thereby effectively segmenting the market. A socially optimum condition cannot be reached in a segmented market. Obtained, instead, is a structure of suboptima for the different segments. This is manifested in an equilibrium structure of employment or unemployment and rate of return. The distribution of the equilibrium values in the various segments of the market is generated by the distribution of income and underdevelopment.

The model applies fairly well to the Philippines because its educational system is essentially market determined with the mainly private higher educational institutions wholly supported by student fees. Government control of private schools has been mainly administrative such as supervision and record-keeping of enrollment and graduates, maintaining a minimum standard of instructional facilities, and setting up the curricula for various programs. The curricula were mostly borrowed from the United States, with little adaptation to Philippine

needs. Consequently, private educational institutions have been able to establish themselves and to operate with minimal control from the education authority. Many profit-motivated proprietary colleges and universities were established in the postwar. They have been free to expand enrollment or to institute any degree or non-degree program. Until this decade, they were free to charge any fee. The required license to open a new program was fairly easy to obtain since the standard to be met was not high.

State support for education has been very much concentrated in the provision of elementary education. The government committed itself to the universal provision of elementary education. Given the very limited resources at its disposal especially in the early years of its development efforts (1950s to the 1960s), committing itself to compulsory education so absorbed the education ministry's resources as to deprive other educational activities and programs of administrative and financial support. Consequently, it has not been able to establish effective curriculum development and planning units. This may explain the lack of direction for the private sector activities. This may also explain the small share of state-supported higher education.

The State University (University of the Philippines) and other state-supported post secondary schools, like the Philippine Normal College and the Philippine College of Arts and Trades, were established during the American colonial period. They continued to receive support and in the last decade, there was a policy to spread the campuses outside Metro Manila. This was in order to achieve a more equitable geographic distribution of state-supported education and to develop expertise in needed

agricultural areas such as aqua-culture. The opening of new campuses and the expansion of old campuses led to an increased share of state-supported college education. Originally, state universities and colleges offered the same mix of field specialization as the private sector — law, education, medicine, teacher education, liberal arts, engineering, etc.. More recently, development-oriented programs were instituted or strengthened. We see the fast expansion of enrollment and new programs at the Los Baños campus, the agricultural branch of the State University; the establishment of a Visayan campus with concentration in fishery and the conversion to the Polytechnic University of the Philippines of the Philippine College of Arts and Trades. The State University provides graduate programs in almost all areas of specialization. This function is very important in the country since very few private collegiate institutions have graduate education. In addition, the bulk of research is undertaken in the University of the Philippines. Finally, it provides much better quality education than the private sector. Except for these aspects, the public college sector has remained small.

This paper proceeds by first providing a theoretical framework for the analysis of unemployment and student and school decision. The second part gives an empirical analysis of the behavior of the education-labor market. It includes a discussion of the trend and structure of unemployment, career outcomes of college graduates, enrollment growth and distribution, and the schools' response to market conditions. Section 4 concludes the study.

2. Theoretical Considerations

2.1. The Nature and Choice of Education Capital

The decision to pursue a certain type of education is treated here as capital or an investment decision. Studies on motives for acquiring education strongly support this treatment. More than 80 percent of interviewed students cited financial and other job-related benefits as the reason for studying [HELMS, 1978]. However, capital choice theory may be applied to education only at great simplification of education options. Education is not clearly observable. It can be defined more meaningfully in a philosophical sense than as an observable capital variable. As a capital good counted at a point in time, it is a whole range of knowledge acquired by an individual consisting of all scientific, linguistic, and artistic information absorbed; the discipline to reason, analyze information, and make correct judgment; and the ability to search for new information and create new knowledge. Special skills used in the production of goods and services such as engineering, bookkeeping and surgery have also been included in the definition of education. This multi-faceted nature of education as a capital makes it difficult to categorize and to measure. For this reason, very rough categorization has been used in planning and empirical works. *

The usual classification used is by type of schooling such as the various grade levels, the various fields of specialization in college, and formal or non-formal education; the latter including skills training and informal campaigns. These, it is to be noted, are extremely rough categorizations since they do not distinguish levels of actual knowledge. Despite this problem, we proceed in the conventional manner.

A special feature of the formal schooling process is that there is a fairly rigid annual sequence of capital build-up from kindergarten up to the university level. The curricula for elementary up to sophomore years in college are usually for general education. For college education, specialization takes place after the sophomore year. Subprofessional or vocational-technical training may supplement the high school general curricula. The intensity of specialization in a field increases as one moves from first to second and to third degree programs.

The heavy content of general education up to first degree programs permits much flexibility in labor adjustment to changes in skill requirements. One can easily move up the sequence or change fields of specialization while still in school or after joining the labor force. All these changes can be accomplished in a fairly short time. A shift of specialization in college will take less than four years and may be completed in just one year for related fields. A shift in graduate degree fields may take as much as the full-length of a graduate program. Pursuit of medical or a Ph.D. degree takes about four additional years from a first degree. Nevertheless, these are short gestation periods relative to worklife or the lifetime.

Because of the sequential nature of formal schooling investment, an important benefit of attaining a certain level of schooling is the value of being able to pursue succeeding levels. A high school education is very valuable in this sense as it allows one to pursue a number of post secondary education alternatives. In contrast, an elementary education permits one to go on to the next higher level only.

2.2. Cost of Education and Ability Requirement

Men are borne with differing innate characteristics. There is unequal distribution of mathematical, artistic, linguistic, and even physical abilities. The varying historical and cultural backgrounds of families develop dissimilar values and attitudes. There is a distribution of these characteristics among the population of a nation. The cost to an individual, psychic as well as monetary, of acquiring a certain category of education depends on his innate characteristics given school-related cost. Let us call this personal cost. Personal cost varies depending on the degree of matching of innate characteristics and those suited or required by the education category pursued. A mismatch will require of the student longer and more intensive time input in his studies to overcome his poor ability in the subject. It might also mean psychic cost in the form of smaller satisfaction from the education pursued. The personal cost of pursuing a Ph.D. degree in Physics may be prohibitive for someone who has very poor innate ability in this field but is more inclined to music or the stage.

Because of the differences in innate abilities, attitudes and values, an individual will not be indifferent to education options that give equal monetary returns. Or an increase in the relative monetary returns to an option would not attract everybody to undertake that education process. We would expect instead an upward sloping enrollment of students in a given option since monetary return has to compensate for the personal cost of undertaking an education process in which the marginal students have weak abilities and/or inappropriate attitude.

At some point, the supply may turn vertical as personal cost becomes prohibitive because of utter lack of talent and dislike for the education of the marginal population. For this reason, the supply elasticity is expected to decrease with intensity of specialization and to be low for fields that require special abilities like the arts. There are, however, many areas of education where the supply is fairly elastic. Everyone qualifies for the lowest education levels. That is why nations have compulsory elementary or even high school enrollment. Most first degree college programs containing many courses of general interest should have fairly elastic supply. In fact, first degree graduates of teacher education, business, psychology, liberal arts and even engineering have been more prone to shifting occupations.

The monetary cost of providing education varies by level and by field of specialization. In general, cost increases with level. Higher levels seem to have larger scale economies. These have led to the establishment of relatively large colleges and universities and their location in population centers. Some fields require more capital stock per pupil. The quality of instruction also depends on the level of expenditures for teachers, laboratory, and library.

Geographic access to schools differs for each level of education because of the concentration of colleges and universities in large cities. In contrast, primary schools are provided in all towns and large villages. High schools are not yet universally accessible though many large towns have them. The degree of dispersal of schools determines the distribution of distance among population groups, hence, the distance cost of education.

In general, provincial students must bear an increasing distance cost with the level of education.

From the above, we showed that the distribution of schools among geographic areas and the distribution of ability and aptitudes are basic factors determining the cost structure of education and therefore the supply of students to each educational program.

2.3. Constrained Optimization Model and the Supply of Graduates

In the model, we assume the family to be maximizing the net worth of each of its children's education over mutually exclusive options, j , $j = 1, 2, \dots, E$ subject to two constraints, cost and ability. (Net worth is used equivalently with returns to education.)

$$\text{Max } (NW_j)$$

$$NW_j^i = \sum_{t=1}^j \frac{R_t^{ij} - C_t^{ij}}{(1+r)^t} - \sum_{t=1}^e \frac{R_t^{ie} - C_t^{ie}}{(1+r)^t}$$

st.

$$C_t^j \leq B_t^i, \quad C_t^e \leq B_t^i$$

for each year of schooling $t = 1, 2, \dots, j$ corresponding to age 7, 8 $\dots j + 6$. For those desiring college

$$A^i \geq \bar{A}^j, \quad A^i \geq \bar{A}^e$$

R is expected benefit, C is total cost for each year t in pursuit of education, j or e by child i . The budget B_t for each child of corresponding age a is a function of family income Y_f .

$$B_t^i = B_a^i = b_a(Y_f^i)$$

$\bar{A}$ is the minimum ability required for education e, j . These constraints determine the set of alternatives which are relevant to each child of a given background and ability.

Consider a population of children with its distribution by family income and distance to schools. Array the children by their respective school budget at each schooling age and map this distribution to the cost of schooling of each level, grades 1, 2 ... corresponding to each age. Children of age a can go to school so long as $C^j \leq B_a$. From this mapping, we identify the children who can and those who cannot pursue each education alternative corresponding to their age a . Imposing the ability constraint reduces the set for some children or the number of children who can pursue certain education options. In practical terms, this means that the richer and brighter a child is, the larger the set facing him. The poor bright child in a distant location may face a set that is significantly larger than that of his dull counterpart. On the other hand, the superior quality of school and home environment in which

rich children are brought up can so offset inferior inherent ability as to break the ability constraint for their higher education.

Market adjustment to relative rates of return to education will be made within the defined sets of relevant alternatives. A decreasing proportion of the population is expected to respond to positive returns to higher education, in particular, to the more costly college programs. For this reason, disequilibrium in rates of return between costly and inexpensive program may occur and may be expected to persist or to be stable. This is illustrated in Chart 1.

Without financial constraints, the potential supply curves of graduates of programs requiring different ability may be represented in Chart 1 as $GR_A S_A$, $GR_B S_B$ and $GR_C S_C$. The curves are, respectively, the supply curves of graduates from programs with increasing ability requirement. GR is the gross return that just covers the cost of going from a lower program to the next higher program, say, from A to B, then B to C. More precisely,

$$GR_B = \sum_{t=1}^T \frac{R_{Bt}}{(1+r)^t} - \sum_{t=1}^T \frac{R_{At} - C_{At}}{(1+r)^t} = \sum_{t=1}^T \frac{C_{Bt}}{(1+r)^t}$$

$$GR_C = \sum_{t=1}^T \frac{R_{Ct}}{(1+r)^t} - \sum_{t=1}^T \frac{R_{At} - C_{At}}{(1+r)^t} = \sum_{t=1}^T \frac{C_{Ct}}{(1+r)^t}$$

$$GR_A = \sum_{t=1}^T \frac{R_{At}}{(1+r)^t} - \sum_{t=1}^T \frac{R_{0t}}{(1+r)^t} = \sum_{t=1}^T \frac{C_{At}}{(1+r)^t}$$

R is expected monetary benefits and C is cost of tuition, books and supplies at time t .

Assume a demand curve for B, D_B . Equilibrium will be at Q_1 and gross return at GR'_B . Individuals with talent for program B, i.e., GR_B will reap some rent to this ability by income $GR'_B - GR_B$. Consider a case where there are financial constraints that reduce and shift the supply curve to $GR_B'S'_B$. With the same demand curve, D_B , equilibrium is now at Q_2 and returns to the program is now GR''_B . The additional returns to the investment in the program is due to the financial constraint that makes its graduates more scarce. The supply of A is given by the initial population N_0 . Assume the wage of A is GR_A . Those who will remain in program A is $N_0 - N'_B$. The observed wage differential is increased from $GR'_B - GR_A$ to $GR''_B - GR_A$. One part of this average differential is rental to ability; the other is rent to affluence.

We underscore the implications of the budget constraints on decision. Irrespective of what may be the relative gross returns to schooling of different levels but provided they are not negative, school attendance at each level will be mainly a function of variables affecting the financial constraint: family income, distance to school, and level and type of program. Here we showed how the ability requirement and the cost of a schooling alternative determine the position and slope of the supply curve of graduates of this alternative.

2.4. Supply Curve of Skills in the Labor Market

As in our earlier discussion, the supply curves for the various skills differ because of the variation in the abilities required by the skill and the cost of education (and training). There are jobs that

require only average general abilities; there are jobs that require superior special ability such as brain surgery, violin concertizing, financial management, etc.. Obviously, the horizontal portion of the supply curve will be smaller the higher and the more specific the talent required. The positive portion of the supply curve reflects the increasing marginal cost of acquiring a skill and working with that skill. In the labor market, the supply curve for each skill corresponds to the supply of graduates of educational programs producing this skill as drawn in Chart 2.

There is much fluidity among workers in the labor market. Workers can move between jobs at varying degrees of ease depending on the ability and the difficulty of the training required. This goes from informal training of a few weeks to so many years of graduate work or artistic discipline. Many jobs have fairly easy or short training requirements. Many graduates of first degree college programs can move among a number of white-collar occupations such as teaching, office jobs, sales, management, social work, etc., with or without additional formal training. The same holds for most blue-collar jobs. And those with higher level education can always move downward. When there is unemployment in a high-level skill market, the excess labor there will tend to bump off the less qualified to the next lower jobs. The unemployment of the more skilled or more educated labor will be hidden in its employment in lower skilled jobs. We expect the bumping off to continue down the different job markets. This type of hidden unemployment is not easy to identify and measure since there are other reasons why individuals may take on jobs other than those for which they trained. The shift might be to

correct a wrong choice of field since many students decide their schooling/training under less than perfect information about their own talent and inclination, and about the labor market. The shift may also be in response to changes in market opportunities. These are desirable adjustments in the labor market and the resulting mismatch of original skills to jobs should not be considered as a disequilibrium under-employment.

This inherent fluidity of the market will be restricted by constraints on individual choice. The market can shift labor downward from high-cost skilled market to low-cost skilled market since those who can afford to acquire expensive skills can also acquire cheap ones. The opposite does not hold, however. Even if there are shortages in high-level/high cost skills, the financial constraints will not allow the unemployed in lower skill market to move into one for the higher skill.

This is illustrated in Chart 2. Consider the market for low-cost skill A with its demand and supply curves $D_A D_A$ and $GR_A S_A$. Equilibrium employment is N_A with unemployment of $N_0 - N_A$. In the market for high-cost skill B with its demand and supply curves, $D_B D_B$ and $GR_B S'_B$, there is full employment at N'_B and gross return GR'_B . The supply curve is smaller than the supply of total qualified people for B, $GR_A S_B$ because of financial constraint. The equilibrium return GR'_B includes rental to affluence and may be interpreted to imply a shortage. The overall labor market reaches an equilibrium with excess supply in A and a shortage in B and unequal rate of return to the investment in the two skills.

We may generalize the situation to a labor surplus economy where there is surplus in the agricultural and other informal sectors at a subsistence wage GR_A . The unemployment in the lowest skill category will tend to be distributed among low-cost skills but not to skills which only a small proportion of the population can afford.

2.5. Schools' Role in the Unemployment Problem

Schools' role in the unemployment problem depends on how well it interacts with other units in the labor-education market — students and employers. But unlike other economic units in this market, schools are not motivated purely by economic gains. Many institutions are founded on some lofty objectives such as to be a scientific center, to provide Christian education, to give educational opportunities to disadvantaged groups, etc.. These objectives may be pursued independently of perceived market demand but they are usually in line with it. For instance, religious education is given in the form of additional courses and, more commonly, via the social environment of the institution. The particular objectives of educational institutions need not, therefore, work against their meeting market demand. However, the market demand for labor of various categories of skills is not clearly and easily observed. Information tends to be transmitted not only slowly, but also inaccurately and possibly, unevenly to institutions. Any disequilibrium in demand and supply must take a large enough proportion to be manifested as an aggregate phenomenon. It is only with a lag that this is perceived. Much

later, they get recorded as part of the national statistics. For this reason, schools cannot be expected to respond quickly and accurately to market demand. Moreover, program changes in college can take place with the additional lag needed to train teachers in new fields.

Schools' responsiveness to demand may be improved by effective central monitoring of labor market information or by central planning. But as mentioned earlier, the Philippines does not have an educational plan and there is no systematic and up-to-date statistical collection and dissemination of labor and educational information. The absence of planning leaves schools very much to themselves in their decisions on program offerings, educational technology, enrollment sizes, quality of instruction, and other matters.

Education programs have different cost functions. In general, the average cost is higher the higher the level of education. Cost increases as quality of instruction and the available amenities such as sports, cultural and physical facilities increase. It also varies by field of specialization since required instructional technology or input mix differs between fields. At the same time, there are some economies of scale in instruction, at least up to a certain enrollment size.

Following the above discussion on the implications of financial constraints, we may draw the following demand for school places. This may be represented as a simple potential demand curve which has cost

and number of potential students on the axes. Everything else given — positive net returns to education, ability, etc. — the lower the cost of an education program, the more students can afford it, and therefore, the greater the demand. Consider points a , b , c as the costs of A , B , C fields of specialization in college, those who can afford C , i.e., ON_C has the option of choosing A , B or C fields; those who can afford B , i.e., ON_B , may choose between B and A , while those who can afford A only, ON_A cannot choose C or B . It is possible that the demand for field A exceeds the number that will be absorbed by the labor market, thus, resulting in unemployment.

The model seems to fit well the working of the Philippine education-labor market. The resulting structures of educational institutions, rates of return and rates of unemployment are what could be expected from the prevailing level and distribution of national income. Majority of students could afford low-cost education and so this was what schools provided. Enrollment in low-cost programs grew rapidly. High-cost education in private as well as public institutions remained small in proportion to the total. The relative scarcity of low-cost and high cost graduates determined their relative wage and unemployment rates.

Some empirical details are given below in support of the model. The analysis is focused on college education. We discuss the development of the educational system, the employment-unemployment rates, and rough estimates of rates of return to education.

3. Empirical Evidence

We argued above that because of the financial constraints in education-labor choices, the market would not move to an efficient equilibrium point. Majority of manpower tended to acquire inexpensive education/training with only a small minority able to pursue high-cost education/training. Consequently, the market supplied a relatively larger number of inexpensively trained labor. This led to its higher unemployment rate and low return. Schools depended on student fees so that majority of them operated cheap programs. The sections below provide some indirect empirical support of the argument.

3.1. The School System

Private colleges (and universities) grew at high but fluctuating rates and tended to offer few and similar areas of specialization. Growth of schools was fastest from the first few years of post independence when they almost quadruppled in number from about 100 in 1945 to 1946 to 400 in 1950-1951. Apparently, this expansion was not economically viable so that some colleges closed down. The number fell gradually to 339 in 1960-61. From then on, it continued to increase so that by 1967-68, there were 566 schools. By 1978-79, the number reached 750. The colleges were concentrated in Manila where more than 20 percent was located. College student population was even more concentrated in this city, since the giant schools having 50,000 or more students are located there. Provincial colleges grew in number faster than Manila schools. This made access to college easier for provincial students.

The great expansion of higher education as reflected in the growth of enrollment and schools, has involved a widening of field offering though majority of the institutions offered few fields which tended to be commerce or business, liberal arts and teacher training. The concentration of field offering by colleges is seen in Table 1. In 1967-1968, less than 10 percent of the 566 colleges and universities had programs in fields other than these three. Over the decade, more institutions began to provide programs in other fields. Large increases were made in engineering programs which rose from 44 to 191; agriculture, from 2 to 93, and medical sciences, from 14 to 186, while law and foreign service remained practically the same, 62 to 61 from 1967-68 to 1978-79. Though commerce continued to be provided in about half of the schools, the number of schools with this program fell from 424 in 1969-71 to 376 in 1978-79. There was also a drop in the liberal arts programs from 480 to 401 with teacher training increasing but only very slowly from 402 to 433 in the same period.

We next investigate the cost structure of colleges and universities and their faculty profile using data from the Education Ministry's 1968-69 and 1972 studies of schools.

In 1968-69, the average annual fees in private schools for non-scientific courses — business, teacher training, and liberal arts — ranged from ₦315 to ₦465 (\$53 to \$78 at exchange rate of ₦6/\$1). Scientific and technical fields requiring laboratory and engineering equipment cost more. But except for medicine, the tuition fee

was still within the reach of a large proportion of college-bound students. Fees for medicine were about three times higher than most fields. Over time, fees rose mainly to keep up with inflation rate but the cost structure did not change significantly. The cost of business and teacher training remained lower than science-based fields.

An indirect evidence of the poor quality of instruction is the size of the budget for library and laboratory equipment that is reflected in non-salary expenditures per student. Note that these inputs are mainly imported so that the per student budget to these inputs can be compared with that for Western schools. The range in the budget among schools at the exchange rate of P6/\$1 was \$8 to \$78 in 1960-1969, a miniscule level compared to Western universities. Most schools in fact allocated more than 50 percent of the budget to salaries and only five percent to library and laboratory inputs. (Please see Table 3.)

We turn next to the variation in cost among field of specialization as reflected in fees charged by institutions. In Tables 4 and 5, we find that the fees for medical and legal education were very much higher than for commerce, the liberal arts and teacher education. It would seem that engineering programs could be offered at a relatively low cost. Their fees were only slightly higher than for other fields. This might account for the rather fast expansion of engineering programs.

Fees also differed by type of institution. They were very much lower than the average departmental cost at the University of the Philippines. The difference was sharpest in science-based fields such as medicine and engineering. For medicine, the cost was P4,273 for U.P.,

Rs. 1,474 for sectarian and Rs. 1,207 for non-sectarian schools. For engineering, the corresponding figures were Rs. 1,859, Rs. 483 and Rs. 470. Note, however, that the per student cost at non-U.P. state institutions was less than a third of U.P. cost denoting the extent of quality differential in the two sets of state schools.

In Table 4 we note the concentration of college students in the inexpensive fields. Over the postwar years, the proportion in liberal arts, teacher education and business fluctuated around 70 percent. Interestingly, there were substantial shifts of enrollment between these three fields. Enrollment in engineering, a modestly priced education, also showed a fairly high growth. Despite the perceived high demand for medical doctors, enrollment could not expand as rapidly.

Finally we have Table 5 which gives the distribution of college faculty by degree held, whether bachelor's, masters or Ph.D.. In most private colleges (3/4 of those reporting in 1968-1969) more than 75 percent of their teachers had a bachelor's degree only. Even at the U.P., some departments had a significant number of instructors with this degree. The percentage of all private school teachers with masters and doctoral degrees rose from 25 percent in 1969-70 to 28 percent in 1972-73. This improvement was probably offset by the pull of better-paying jobs in non-education institutions and in foreign markets. The more competent business and engineering faculty has been drawn to executive positions in business, while social science and other science graduates have moved to government administrative jobs. There has also been a very substantial emigration of professionals.

3.2. Unemployment Trend and Structure

The incidence of unemployment differed quite substantially between various categories of labor and between the different industrial sectors as shown in Table 6. In 1956, the range in open unemployment rate among occupations was 3.1 for farmers to 15.8 percent for manual workers in non-farm; and among industrial sectors, 3.1 percent in agriculture to 15.7 percent in construction. Over time, the degree of variation narrowed, as shown by the fall in the standard deviation of unemployment rates from 3.06 among industrial classes, and 3.26 among occupational classes in 1956 to 1.63 and 1.51, respectively, in 1975. The narrowing of the unemployment rate differential may be interpreted to reflect the adjustment of manpower to market conditions. We expect the labor force to move away from occupations or industries where the probability of being unemployed is relatively high to those where it is lower. The probability of finding a job in any part of the labor market depends in the initial level of unemployment and in the number of new job openings. Sectors like construction, transport, and government drew labor from other sectors and the new entrants to the labor force. The labor force in these sectors grew at such a high rate that the rate of unemployment, though falling, remained relatively high (9.3%).

To be noted is the high proportion of inexperienced labor among the unemployed — about one-half in most years. Their unemployment rate was more than twice that of the experienced group: 10.3 percent versus 4.7 percent in 1956, 10.6 percent versus 3.7 percent in 1961, and 8.3 percent versus 2.6 percent in 1965. The differential fell in the 70s to 4.3

percent as against 2.8 percent. Children aged 10-14 had very low unemployment rate since they were mostly in school so that the unemployment among the young must have been concentrated in the 15-24 age group.

College graduates open unemployment was about equal that of the total labor force. Their underemployment rate in terms of hours worked is, however, lower than the aggregate since they are absorbed in white-collar jobs that provide more stability and regular work hours. In 1971, for instance, there was only 1.4 percent full-time equivalent underemployment among the professional, administrative and clerical occupations, with more than 90 percent in wage-salaried jobs and close to zero in unpaid family work. Including underemployment makes the effective unemployment rate of college graduate much lower than that of the aggregate.

Unemployment among college graduates in the Philippines has two particular features. One is the substantial variation in their unemployment rate. Another is the slow job absorption of new graduates. The rate of absorption from time of graduation and the overall unemployment rate differ depending on the field of specialization and on the specific school or school type where the degree was obtained. We present the result of the 1970 and 1978 special surveys of the employment experience of college graduates.

The average waiting time before a first job was quite long. In the 1978 survey of all employed graduates, about 23 percent was not employed after one year from graduation and 9.2 percent after two years. The 1963-64 and 1967-68 graduates had a faster absorption rate than the 1978 sample. The rate of absorption within one year from graduation

improved from 83 percent to 84.5 percent for the 1963-64 and 1967-68 graduates. The proportion that was not absorbed beyond two years dropped from 13.7 percent to 8.3 percent for these two years graduates.

Not all who did not get absorbed could be considered as unemployed. Specially in the first months of job search, some graduates voluntarily did not accept the first job offered in anticipation of better jobs. Graduates cited various reasons for waiting, some of which are voluntary in nature as shown in Table 8. However, we may count as unemployed those who had longer than one year duration of job search which was about 21.4 percent for 1970 survey and 22.9 percent for the 1978 sample.

We now go to the absorption rate by program of study, program being defined as above, i.e., a field in a particular school. We present here a detailed table from the 1970 survey as it gives a good insight into the working of our educated labor market. We find that the graduates' absorption rate differed as much between field as between schools so that no generalization can be made as to whether or not certain fields are in greater demand. Quality seems to matter much as indicated by the high absorption rate of graduates from well-regarded schools. For instance, graduates from the University of the Philippines (U.P.) had the highest absorption rate after one year from graduation. In many fields, the absorption rate reached 100 percent within one year. But even among U.P. graduates, the rate differed by field of specialization.

We cannot generalize either as to graduates from private institutions. Though U.P. graduates generally do better, graduates from

some private institutions including provincial schools, do as well in a number of specializations.

The 1978 survey classified the schools by type — U.P., other state colleges, Catholic, Protestant, proprietary, foundation, teacher training, and agricultural. There is significant variation in absorption for each length of time elapsed since graduation among these categories. As in the 1970 survey, the University of the Philippines' graduates had the highest absorption rate after six months from graduation, with the rate rising to 98 percent after two years, while those from proprietary institution had the lowest absorption rate — 62 percent after six months; 91 percent after two years. It is interesting to see that graduate of agricultural and other science technical fields got absorbed at as slow a rate as those in teacher training. Graduates from Protestant and foundation (non-profit, non-sectarian) schools had a shorter job search than those from Catholic and proprietary schools. There is, however, greater variation among Catholic institutions. The job success of the graduates from their best schools compared well with graduates from the University of the Philippines.

3.3. The Rate of Return on Education

There have been some attempts to estimate the rate of return on various levels of education. The results from the various estimates consistently showed that the average return on college education was low. (Please see Table 9.) One reason might be the college explosion which increased rapidly the supply of graduates in the labor market. Another important reason is the generally poor quality of instruction that must have produced low productivity workers. We may show the effect of quality of education on returns by comparing the salary of the University of the Philippines' and the private schools' graduates. In some fields, the monthly pay for U.P. graduates was twice other graduates. There was also a significant variation in pay among fields of specialization. As expected, inexpensive majors which the majority of students could pursue earned relatively low income. (FAPE 1970, 1978.) Even at the University of the Philippines, graduates of teacher education earned the lowest pay. Alonzo's study of the 1964-1969 graduates showed that the variation in pay due to variation in school type was as much as the variation due to field of specialization. The variation due to school type indicates the effect of quality of education on returns.

4. Concluding Remarks

Inequality, by itself, need not lead to inefficiencies. They happen because of the combination of underdevelopment and inequality in the distribution of income. Information is not good and is not equally distributed because of underdeveloped transport and communication system. The financial market is segmented in a way that favors the urban rich borrowers and savers. These imperfections tend to result in a distribution of information and cost of credit that is favorable to the rich urban population. The inequality in income is thereby exacerbated by the underdevelopment of the market and thus results in a highly unequal distribution of educational and other opportunities. A vicious circle of intergenerational poverty has operated. The circle can be broken by increasing the per capita income of the poor so that the financial constraint on their choice is relaxed. Improvement in transportation system would lower the cost of distance and enhance the information about the market opportunities especially among the rural population. Economic development, in general, tends to accomplish these. However, the Philippine development experience has failed to do these mainly because the strategies adopted preserved the imperfections and intensified the inequality of income. The financial market grew in size but it remained segmented in favor of the urban protected enclaves.² As discussed earlier, the education authority did not plan for a more rational allocation of investment, public or private. It seemed to have simply coasted along private demand and political requirement. Even the public sector has not been planned to improve

efficiency or equity. Over the last decade and a half, the public sector was expanded threefold with the establishment of new institutions and the expansion of existing ones. Their founding seemed to have been halfhazardly done for there was little attention put to faculty development. As a consequence, the quality of instruction in the new institutions do not differ much from the private schools with which they now compete. They merely replicated the already overexpanded poor-quality private sector. On the other hand, the mother State University, the University of the Philippines at Diliman, has foregone using its potential as the nucleus of the whole system. It is the most valuable educational institution in the country because of its possession of the largest and best graduates and research facility. These could have produced for the whole educational system teaching materials, more effective curricula and technology, and good teachers. The University does not do enough of each of these. It has operated instead as an ordinary but good university. Following the trend in the private sector, it passively met the fast growing demand for undergraduate instruction which absorbed much of its resources. As a consequence, its output of research, graduate degrees, teaching materials and instructional innovations has been meager. The U.P. can also be faulted for not contributing to equity in opportunity for good education. Its studentry has been concentrated in the upper urban class. The last count showed students of this background comprised 65 percent of the total. Its attempts at democratization have been weak and ineffective.

Much can be done for rationalizing the educational system. There is a definite need for education planning and development strategy can

be geared to distribution rather than simply growth. Equity is an avowed objective of the present administration yet the mix of development strategy has been in favor of the rich capitalist class and countered the effect of its policy on labor and the poor.

Table 1--Number of Schools by Course Offering in the Provinces and in Metro Manila
1967-68, 1969-71, 1972-73, and 1978-79

	<u>1967-68</u>		<u>1969-71</u>		<u>1972-73</u>		<u>1978-79</u>		<u>Percent of Schools Offering Each Field</u>			
	M.M.	Provincial	M.M.	Provincial	M.M.	Provincial	M.M.	Provincial	1967-68	1969-71	1972-73	1978-79
	1	1	1	80	1	82	3	90	0.3	11.8	11.9	11.7
	14	11	9	25	-	-	14	23	4.4	4.9	-	4.8
	46	159	39	385	44	379	62	314	36.2	56.0	60.8	47.5
gy	12	32	17	143	17	150	26	165	7.8	23.2	24.0	24.1
Dietetics	-	-	8	57	8	57	14	75	-	9.2	9.4	11.2
ervice	13	50	14	59	14	60	14	48	11.1	10.6	10.6	7.8
s	-	-	15	44	15	44	19	36	-	8.6	8.5	6.9
ciences	52	226	41	439	41	408	59	342	49.1	69.9	64.6	50.6
	2	12	28	68	28	69	48	138	2.5	14.0	14.0	23.5
	-	-	3	6	-	-	6	21	-	1.3	-	3.4
	47	231	33	379	34	383	52	381	49.1	58.5	61.4	54.7
s	3	3	-	-	-	-	-	-	1.1	-	21.7	-
	5	2	-	-	-	-	-	-	-	-	-	-
	-	-	30	130	30	121	45	136	1.2	23.2	2.6	22.8
	-	-	9	9	9	9	13	24	-	2.6	-	4.7
the Phil.	117	449	67	620	67	628	134	658				

DEC, List of Authorized Private Schools and Courses; 1969, 1971: FAPE Education Book, Vol. V, Intellectual Disciplines, 1976; 1972-73, DEC, Bu. of Private, Public, and Vocational Ed. Stat. bulls and sch reports, Phil. Assoc. of State Universities and Colleges, FAPE, Atlas questionnaire; 1978-79 Directory of Schools by School Offering by Region, 1978-79, MEC.

medical sciences offered was nursing; 14 in 1967-68. Only 5 schools offered optometry, 6 dentistry, and 4 medicine. offered pharmacy. Most engineering schools had civil engineering, 27 mechanical, 24 electrical, and 22 chemical. The even in the table are from the field within each category which had the largest number of schools offering it, say, civil engineering for medical sciences and engineering.

Table 1--Number of Schools by Course Offering in the Provinces and in Metro Manila
1967-68, 1969-71, 1972-73, and 1978-79

Course	1967-68		1969-71		1972-73		1978-79		Percent
	M.M. Provincial		M.M. Provincial		M.M. Provincial		M.M. Provincial		1967-68
<u>Undergraduate:</u>									
Agriculture	1	1	1	80	1	82	3	90	9.3
Chemistry	14	11	9	25	-	-	14	23	4.6
Commerce and B.A.	46	159	39	385	44	379	62	314	36.2
Eng'g and Technology	12	32	17	143	17	150	26	165	7.8
Food, Nutrition and Dietetics	-	-	8	57	8	57	14	75	-
Law and Foreign Service	13	50	14	59	14	60	14	48	11.1
Music and Fine Arts	-	-	15	44	15	44	19	36	-
Liberal Arts and Sciences	52	226	41	439	41	408	59	342	49.1
Medical Sciences	2	12	28	68	28	69	48	138	2.9
Nautical Sciences	-	-	3	6	-	-	6	21	-
Teacher Training	47	231	33	379	34	383	52	381	49.1
Biological Sciences	3	3	-	-	-	-	-	-	1.1
Physics	5	2	-	-	-	-	-	-	-
<u>Graduate:</u>									
Masteral	-	-	30	130	30	121	45	136	1.2
Doctoral	-	-	9	9	9	9	13	24	-
No. of Schools in the Phil.	117	449	67	620	67	628	134	658	

Sources: 1967-68 DEC, List of Authorized Private Schools and Courses; 1969, 1971: FAPE Education Book, Vol. V, Makati, 1976; 1972-73, DEC, Bu. of Private, Public, and Vocational Ed. Stat. bulls and sch reports, 1976; Universities and Colleges, FAPE, Atlas questionnaire; 1978-79 Directory of Schools by School Offering

NOTE: Majority of medical sciences offered was nursing; 14 in 1967-68. Only 5 schools offered optometry, 6 dentistry. Thirteen offered pharmacy. Most engineering schools had civil engineering, 27 mechanical, 24 electrical. Figures given in the table are from the field within each category which had the largest number of schools. Nursing and civil engineering for medical sciences and engineering.

Table 2--Average Annual Fees Charged by Universities and Colleges
by Field of Specialization and Type of Schools
1968-69, 1972-73

	1972-73	1968-69		
		All Private Schools	Sectarian	Non-Sectarian U.P. Dept. Cost
Business	509	315	401	569
Teacher training	595	335	421	908
Liberal Arts		465	421	514
Engineering		483	470	1,859
Law		541	612	842
Nursing		468	552	752
Medical Technology		588	562	-
Medicine	1,792	1,474	1,207	4,273
Agriculture	-	-	-	-

Source: 1972-73 FAPE Atlas, 1975, p. 298, 1968-69, Progress Report on the "Study of the Tuition Fees for the last 5 years in Private Institutions, May 1969".
Bureau of Private Schools, Division of Research and Evaluation.

Table 3--Expenditures per Pupil in Private Selected
Colleges and Universities in Manila and U.P. Departments
1968-1969

	Teaching Salaries	Non-teaching salaries	Other Cost	Total Cost
A. Private Schools				
1	197	27	470	694
2	102	36	96	233
3	162	44	116	321
4	298	8	195	501
5	65	34	310	408
6	127	66	177	371
7	181	56	97	335
8	176	113	273	562
9	225	41	248	514
10	140	12	237	390
11	175	32	133	342
12	274	62	211	546
13	322	147	416	886
14	450	94	468	1,011
15	134	31	159	325
16	152	52	182	386
17	160	73	127	360
18	189	134	121	444
19	105	69	176	350
20	226	48	297	553
21	188	94	209	491
22	130	19	78	227
23	136	44	132	315
24	89	63	108	260
25	137	68	163	369
26	110	47	62	220
27	58	36	53	147
28	138	33	58	230
29	138	20	69	228

Table 3
(Continued)

	Teaching Salaries	Non-teaching Salaries	Other Cost	Total Cost
B. University of the Philippines				
Department Cost				
1. Agriculture	929	263	514	1,443
2. Forestry	1,251	514	1,727	2,978
3. Fishery	1,064	1,026	1,679	2,743
4. Vet. Med.	1,722	628	1,584	3,306
5. Bus. Adm.	407	58	161	569
6. Education	621	137	287	908
7. Economics	361	78	613	973
8. Law	685	55	157	842
9. Engineering	721	254	1,138	1,859
10. Statistics	818	392	1,161	1,979
11. Botany, Biology, Zoology	792		264	1,056
12. Chemistry	514		146	660
13. Physics	380		505	885
14. Mathematics	306		107	413
15. History	880		131	1,011
16. Nursing	618	50	135	752
17. Dentistry	1,156	350	1,009	2,165
18. Medicine	2,736	463	1,537	4,273

Source: For U.P., E. A. Tan and Evelyn Miao, "The Structure of Philippine Educational Institutions," U.P. School of Economics IEDR Discussion Paper No. 71-12.

Table 4--Percent Distribution of Employed Graduates by School and by Occupation

Occupation	U.P. System	Other State Colleges	Teacher Community	Agricultural Colleges	Arts & Trades	Catholic Schools	Protestant Schools	Proprietary Schools	Foundation	No date
technical	67.2	39.2	61.6	59.7	68.1	39.1	68.0	38.9	60.0	43.5
3	11.6	6.6	4.7	0.0	2.9	5.4	4.7	6.0	3.3	10.6
ars	11.1	44.6	30.2	13.4	10.1	46.4	19.3	37.2	26.7	25.9
	1.1	1.2	0.0	6.0	0.0	2.0	0.7	1.7	3.3	3.5
s	0.0	2.4	0.0	4.5	2.9	1.1	2.0	2.8	0.0	2.5
	5.8	0.6	0.0	9.0	0.0	0.1	1.3	0.4	1.7	1.2
transport	3.2	3.0	2.3	7.5	15.9	5.6	4.0	12.4	5.0	12.9
	0.0	1.8	1.2	0.0	0.0	0.3	0.0	0.6	0.0	0.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	189	166	86	67	69	1,223	150	2,478	60	85

Table 4--Percent Distribution of Employed Graduates by School and by Occupation

School Type/ Occupation	U.P. System	Other State Colleges	Teacher Community	Agricultural Colleges	Arts & Trades	Catholic Schools	Protestant Schools	Proprietary Schools
Professional, technical	67.2	39.2	61.6	59.7	68.1	39.1	68.0	38.9
Administrative Managerial	11.6	6.6	4.7	0.0	2.9	5.4	4.7	6.0
Clerical Workers	11.1	44.6	30.2	13.4	10.1	46.4	19.3	37.2
Sales Workers	1.1	1.2	0.0	6.0	0.0	2.0	0.7	1.7
Service Workers	0.0	2.4	0.0	4.5	2.9	1.1	2.0	2.8
Agricultural	5.8	0.6	0.0	9.0	0.0	0.1	1.3	0.4
Production, transport & Laborers	3.2	3.0	2.3	7.5	15.9	5.6	4.0	12.4
Armed Forces	0.0	1.8	1.2	0.0	0.0	0.3	0.0	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Number	189	166	86	67	69	1,223	150	2,478

Source: Table 17, FAPE Review, Vol. X, Nos. 3 and 4, January/April 1980.

Table 5--Educational Attainment of Faculty of
Private Colleges and Universities and U.P.
1968-1969

	% With BA/BS	% With MA/MS	% With Ph.D.
A. University of the Philippines	46.4	36.1	17.5
B. Provincial Schools			
1	43.4	49.4	7.2
2	63.1	30.2	6.7
3	84.4	12.5	3.1
4	100.0		
5	80.6	14.5	4.8
6	78.0	19.5	2.4
7	60.9	39.1	
8	92.6	5.4	2.0
9	34.2	60.5	5.3
10	78.4	18.4	3.2
11	92.5	5.0	2.5
12	74.7	25.3	
13	91.4	6.7	1.9
14	49.0	51.0	
15	73.0	25.4	1.6
16			
17	82.7	16.4	0.8
18	86.5	13.5	
19	80.4	19.0	0.5
20	84.4	15.6	
21		88.9	11.1
22	100.0		
23	100.0		
24	82.4	17.6	
25	78.8	21.2	
26	81.2	18.8	
27	89.7	10.3	
28	62.5	31.2	6.2
29	88.9	11.1	
30			
31		90.6	9.4
32	96.9	3.1	
33	77.4	22.6	
34	90.9	9.1	
35	84.6	15.4	
36	47.4	52.6	
37	65.0	35.0	

Table 5
(Continued)

	% With BA/BS	% With MA/MS	% With Ph.D.
C. Greater Manila Area			
1	75.2	17.0	7.8
2	47.7	49.7	2.6
3	16.3	50.0	33.7
4			100.0
5	69.2	30.8	
6	55.7	24.3	20.0
7	91.7	7.2	1.1
8	55.0	45.0	
9	41.1	54.4	4.4
10	40.6	47.6	11.7
11	47.1	49.0	3.9
12	91.4	8.6	
13	64.3	33.9	1.8
14	78.9	17.5	3.6
15	79.5	20.5	0.0
16	46.8	46.7	6.5
17	95.2	4.8	
18	37.4	42.6	
19			
20	60.0	40.0	
21			
22	42.8	57.2	
23		100.0	
24		100.0	
25		100.0	
26			
27	72.1	27.9	
28	53.1	46.9	
29	42.8	57.2	
30	85.7	14.3	
31	17.4	82.6	
32			
33	28.6	71.4	
34	100.0		
35	73.3	26.7	
36	81.8	18.2	
37	65.2	34.8	
38			
39			
40			

Source: Edita A. Tan and Evelyn Miao, "The Structure and Performance of Philippine Educational Institutions," IEDR Discussion Paper No. 71-12, July 12, 1971. UP School of Economics, Diliman, Quezon City.

Table 6--Reported Open Unemployment Rate of the
Experienced Labor Force by Sector
1956-1971

	1956	1961	1965	1971	1975
Total	4.8	3.5	2.2	2.8	2.5
1. Agriculture	3.1	2.8	1.4	1.4	1.4
2. Construction	15.7	12.8	7.3	9.3	9.3
3. Manufacturing	5.3	4.6	3.3	3.4	4.0
4. Commerce	5.1	3.7	2.2	3.3	2.2
5. Transport	8.1	2.8	4.0	4.0	4.4
6. Gov't service	10.2	2.7	3.0	3.6	2.7
7. Domestics	5.2	1.3	2.2	2.1	3.0
8. Personal	10.0	3.3	3.4	5.8	5.6
9. Other ind.	13.3	14.7	5.1	16.8	4.8
10. σ	3.055				1.63
Coefficient of variation	1.57				1.53

Source: NCSO, Labor Force Survey for each table.

Table 7--Reported Open Unemployment by Occupation
1956-1975

	1956	1961	1965	1971	1975
Total	4.8	3.5	2.2	2.8	2.5
1. Professional	6.9	1.3	1.8	2.6	0.7
2. Proprietors, administrators	4.6	2.0	1.1	1.7	0.0
3. Clerical	11.0	12.8	4.6	4.7	5.9
4. Salesmen	4.8	4.6	2.9	3.3	2.2
5. Farmers	3.1	2.8	1.4	1.4	1.4
6. Workers in transport	5.2	2.1	2.9	2.8	3.9
7. Craftsmen	6.6	5.3	3.8	4.9	4.7
8. Manual	15.8	16.1	8.4	8.7	3.9
9. Service	6.6	2.1	2.7	3.4	3.6
σ	3.26				1.51

Source: NCSO, Labor Force Survey for each table.

Table 8--Percent Distribution of Employed Graduate Respondents
by Reasons for Delay in Job and by Waiting Period, 1978

Reasons for Delay/ Waiting Period	Low Salary Offer	Working Condition	Advancement Opportunity	Job Too Far	No Job Opportunities	Eligibility
Less than 1 month	0.0	50.0	50.0	0.0	0.0	0.0
1 - 2 months	29.2	11.0	20.9	12.8	25.3	.5
3 - 4 months	24.3	12.2	18.2	14.3	31.0	.9
5 - 6 months	21.7	9.7	17.9	17.5	31.1	1.6
7 - 12 months	16.0	12.	17.0	14.8	39.3	.8
More than 1 year-2 years	21.1	7.7	14.7	16.7	38.1	1.0
More than 2 years	21.3	7.4	13.4	14.3	43.0	.5
0 - 6 months	25.5	10.7	19.2	14.1	29.3	.9

Source: Table 19, FAPE Review, January/April 1981, Vol. X, Nos. 3 and 4.

Table 9--Various Estimates of Rates of Return to Different Levels of Education

Years of Schooling	Miao, 1971			Williamson & DeVoretz, 1966 Cavite		ILO, 1971	
	Public	Religious	Proprietary	Social	Private	Social	Private
Elementary 1-4 over no education						7.0	9.0
Elementary 5-6 over elem. 1-4						7.5	8.0
High school 1-3 over elem. 5-6						4.5	4.5
High school 4 years over high school 1-3						6.5	6.5
College 1-3 over high school 4 years						5.0	6.0
College 4 years over high school 4 years						8.5	9.5
College 5 or more years over high school, 4 years						8.0	8.5
Elementary over no education				8	9		
High school over elem.				21	29		
College or university over high school	27	18	16	11	12		

NOTE: Miao's estimate is based on a sample of graduates from Quezon City schools; Williamson and DeVoretz', on a case study of Imus, a small town in Cavite Province; the ILO's, on the 1971 NCSO household survey of income and expenditures using families with one earner only.

Source: ILO Sharing in Development (in the Philippines) 1974; J. G. Williamson and D. J. DeVoretz, "Education as an Asset: The Philippine Economy" in M. B. Concepcion (ed.), Philippine Population in the Seventies, Manila 1969; Evelyn Miao, "The Structure and Performance of the Proprietary Institutions of Higher Education in the Philippines," Ph.D. dissertation, University of Wisconsin, Madison, 1971.

Footnotes

1. The 1970 survey was focused on the rate of absorption of college graduates and its variation by program of study, program being defined by the survey as a field of specialization provided in a specific school, say, engineering from the University of Santo Tomas. The purpose of this categorization was to be able to capture the effect of the quality of instruction on earnings and employment as reflected in the institution. The 1970 survey had the 1964 to 1969 college graduates for its population. The sample included both employed and unemployed graduates which had to be traced to their addresses. The 1978 survey, on the other hand, had for its population employed graduates who were located in their place of employment. They were all past years' graduates. The first survey focused on absorption, while the latter one obtained more comprehensive information including attitude about their schooling. Both are some observations from the reports.
2. Several studies attacked the policies followed and came up with these conclusions. Among these are the ILO 1974 Mission Report, Sharing in Development, The Philippine Case; R. Bautista and J. Power, Industrial Promotion Policies in the Philippines (1981); E. A. Tan, The Growth and Structure of the Philippine Financial Market and the Behavior of its Major Components, draft monograph, 1981.

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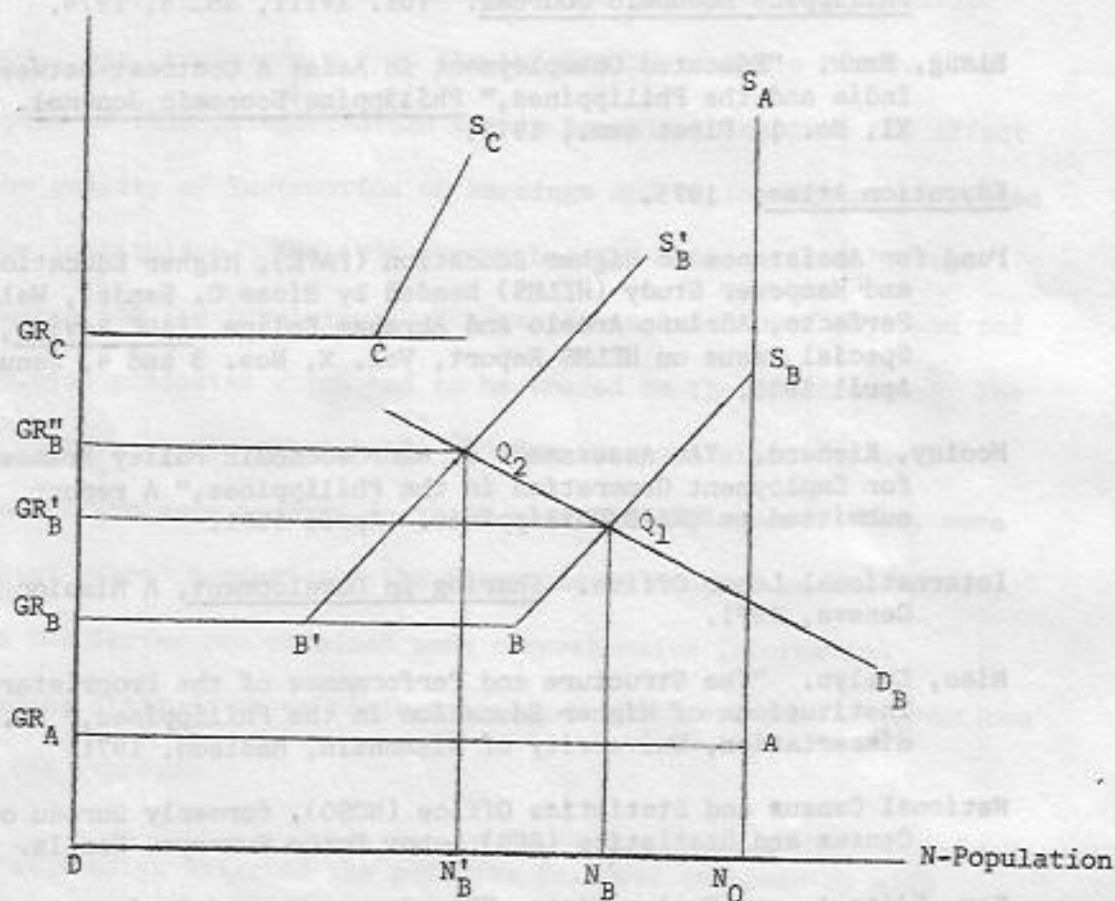


Chart 1

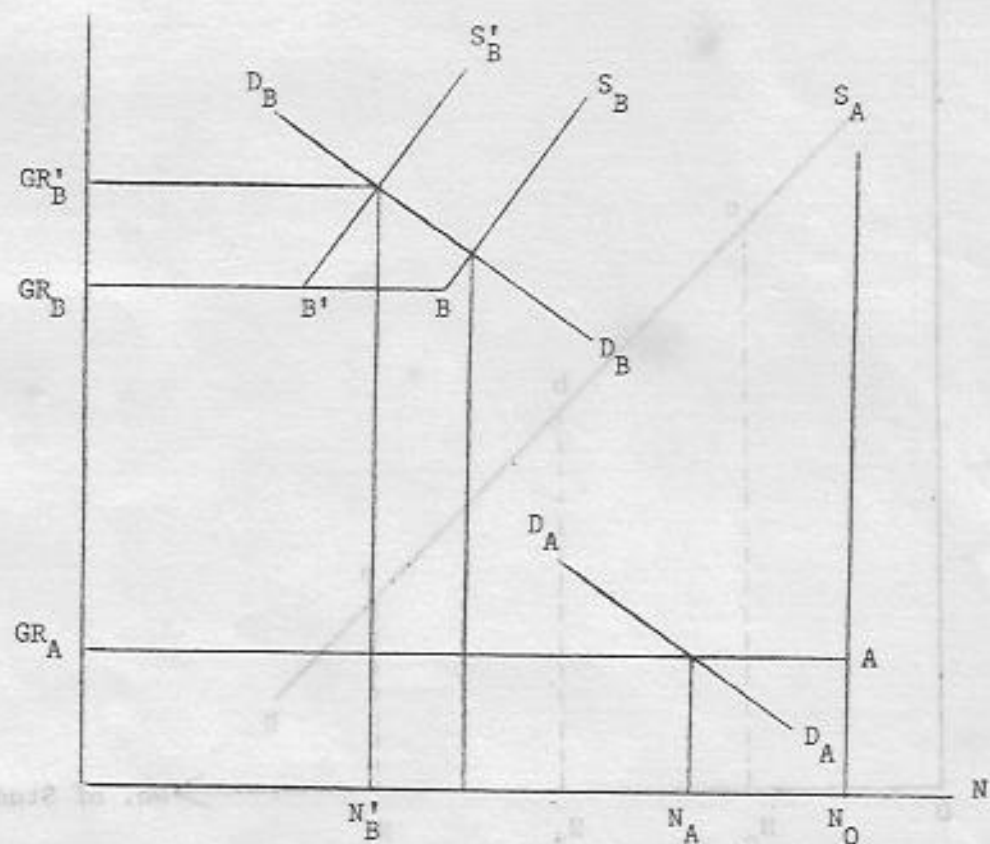


Chart 2

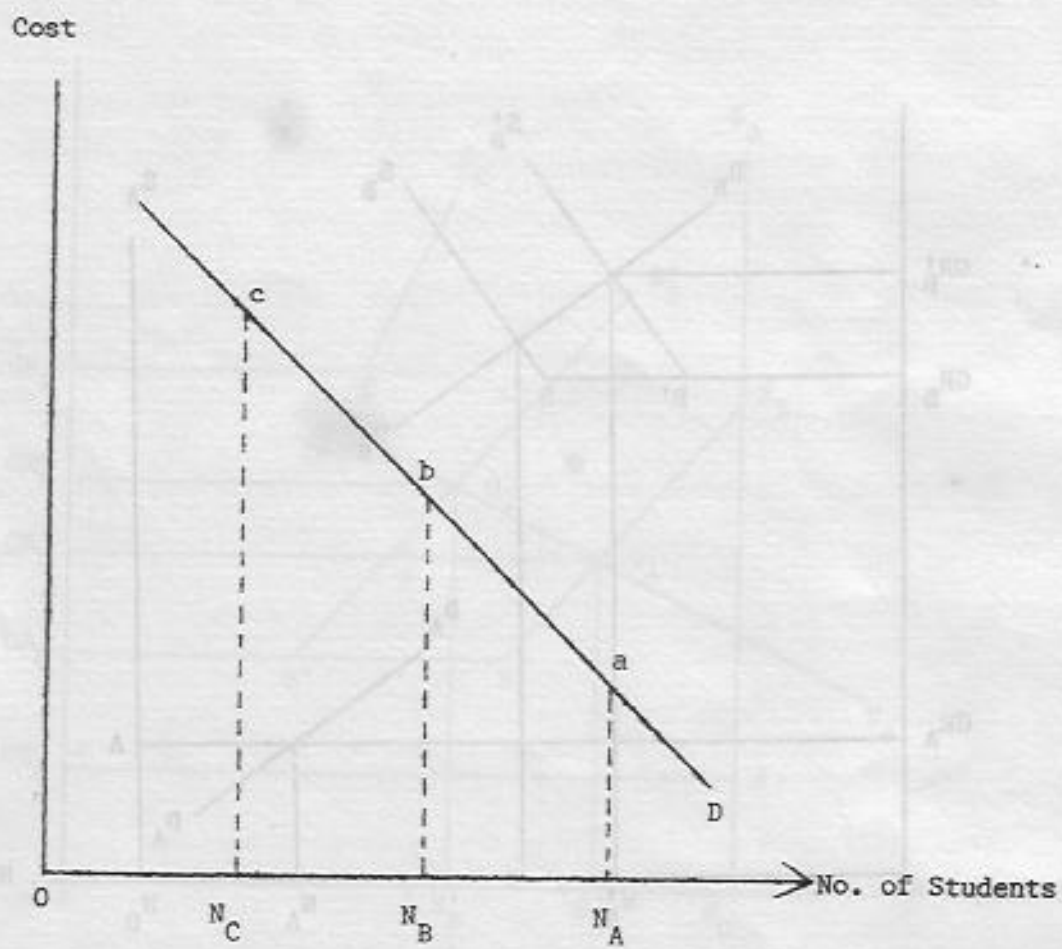


Chart 3