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ADJUSTMENT OF THE LABOR MARKET TO THE FOREIGN OUTFLOW OF SKILLED LABOR: THE CASE OF CONSTRUCTION WORKERS

by

Edita A. Tan
with the cooperation of
Gloria Gabilla and her staff

Abstract

The paper is an exploratory study of labor market adjustment to the outflow of construction workers. It argues that the ease with which the market adjusts to out-migration or to any change in demand of any skill depends on the cost of acquiring training for and the relative abundance of inherent talent and aptitude required by the skill. The shorter the training period, the less costly the training inputs and the more abundant the manpower qualified for the skill, the quicker the adjustment. Migration may pose a problem in the case of high-level manpower such as scientists, professors, entrepreneurs and managers. They are difficult to replace since the supply of manpower of suitable aptitude and intelligence for these occupations is relatively small in any population. Moreover, their training is relatively long and requires expensive educational inputs. The current composition of migrating labor, construction workers, nurses, seamen and domestic help, is not problematic in this respect. They are of average ability and their training cost is not particularly high. The study bears out the expected easy adjustment. The rapid outflow of manpower in these occupations has been matched by an equally rapid production of the corresponding skills. The construction industry, for instance, experienced persistently high unemployment despite the migration. The yearly entry of labor more than offsets the outflow. The production of nurses and seamen in colleges and universities grew rapidly as a response to foreign market opportunities. The Philippine labor market as a whole shows great flexibility in the supply of labor with inexpensive training.

The study conducted a small survey of construction workers in six construction sites in Metro Manila to obtain information on the responsiveness of supply to foreign market demand and the vacancies created by the outgoing workers. It asked questions on where workers get their training, length of training period from one skill level to another (unskilled to middle level to master craftsman), geographic mobility, occupational mobility and unemployment experienced in the last two years. The study shows that more than 90 percent of the sample relies on on-the-job and other nonformal sources of training; that the training period is fairly short except for the master craftsman level (two to five years) and that there is a fair degree of geographic and occupational movement. All these indicate a flexible supply of workers for construction and support the aggregate statistics showing large yearly increment of labor force in the industry.

The study concludes that there need not be cause for serious concern about the replacement of outgoing workers since they are easily replaced. There is, however, a tendency for the better qualified and the more experienced workers to be selected for foreign jobs. This can lead to deterioration of quality of the workers left behind. The study stopped short of this problem.

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The paper is an exploratory research on the adjustment process of the labor market to the outflow of workers using the case of construction workers. They form the largest single group of short-term or contract workers in the recent upsurge of emigration. The study tries to trace the adjustment to the vacancies created by migration via geographic movement, transfer of labor from one occupation to another and acceleration of training. Two sets of data are used -- aggregate data from the national labor surveys and a cross-section observation from a small survey of foremen and workers in construction sites. The aggregate data show among others unemployment condition and the changes in relative wages in various occupations. The small survey attempts to document the process of adjustment in the construction industry.

Migration is one of several labor market decisions made by individuals in their households. The sensitiveness of the population to opportunities abroad is but a reflection of its sensitiveness to other market conditions. Philippines manpower has shown keen responsiveness to market opportunities. This is evidenced by the willingness of many Filipinos to invest in education including college, to accept jobs unmatched to their education/training, to migrate to cities and to rather agricultural areas, to seek work in foreign places of very unfamiliar climate and cultures and by their other decisions. The growth of enrollment at all levels of education has been rapid with college enrollment of the relevant age group reaching the rate of the most

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advanced countries in the world (U.S. and Japan). The distribution of college graduates among the various disciplines has fluctuated in response to market demand. Internal migration, especially to the main cities has been at such a rapid rate as to cause urban crowding problems. Application for emigration has always exceeded the number accepted. The latest immigration data gave 721,176 for mid 1981 contract workers in the Middle East and the high seas, and up to 35,000 annual permanent migrants to the United States and Canada. Added to these are the smaller groups of service workers going to London, Italy, Hongkong, and other places. Recent emigrants cut across education and occupation categories.

The decisions taken imply a rather fluid labor market. It must be noted that the per capita income here is only about $700 per year with the large majority of families receiving poverty incomes (ranging from 40%-65% by various estimates). Yet many decided to invest a relatively large amount on education of from 10 to 20 percent of income as seen in the large proportion of youth pursuing college education (more than 20%). Emigration involves an even larger investment in fare and fees for processing employment and immigration papers. The risk of being swindled by employment and travel agencies should be included in the cost. The cost ranges from less than ₱500 to ₱10,000. The Institute of Labor and Manpower Studies found (1982) that 36 percent paid from ₱1,000 to ₱10,000, a very high cost indeed relative to the total resources of middle and upper middle income families from which the bulk of migrants originate (seamen, construction workers and nurses).

It is argued here that the impact of emigration on the labor market and the process of adjustment will differ between skills because of differences in the degree of tightness in their particular markets and in

the ability requirement, medium of training, direct cost and length of gestation period of acquiring expertise. Some skills are in excess supply, some in shortage. Obviously, adjustment will be easier or less socially costly, the less tight the market for the migrating skill. The faster the length of training and the less the cost and ability required the smoother the adjustment. Contrast for example professional and production skills. There are formal and non-formal media of training. Professional expertise is obtained in college while most production skills are acquired from non-formal media including on-the-job training and informal apprenticeship in family-related enterprises or activities. Organized training at the firm is not commonly available in the Philippines and most firm training is mainly through learning by doing. In most work organization, there is a hierarchy of expertise. The workers are exposed or familiarized to a set of production tasks. Training usually involves following instruction or copying a more experienced worker in the production line. Learning by doing commonly means climbing up the hierarchy of skills starting at unskilled level and gradually learning the more complex or finer operations during the course of one's employment. Note that the level of output of non-formal training is more or less set by the level of production. The larger the level of output, the larger the level of employment, hence the larger the number of workers in the learning-by-doing process.

Generally, the rate of promotion from one skill level to the next higher is determined by the progress of his training. Yet the actual rate of promotion will also depend on available positions at the top. If the attrition rate or the output growth is small, workers can be stuck in tasks

for which they are overqualified. In a sluggish market, this kind of underemployment may prevail. This situation will have a bearing on the process of adjustment to emigration or any kind of exodus of workers from a firm or an industry. Vacancies created at the top rung of skilled occupations can be filled up easily by the promotion of the currently underemployed in the lower jobs. The adjustment is not dissimilar when openly unemployed labor fill up vacancies. Obviously disruption from emigration will be relatively weak when unemployment of either or both kinds exist. When the market is tight and particularly when there is shortage such that vacancies exceed the number of qualified persons looking for the job, the case of adjustment will depend on how well training of new workers can be accelerated to meet the shortage.

Some skills can be acquired in a week, others in several years. Some are most effectively acquired on the job, others in programs organized by firms, and still others in schools and technical institutes. Informal apprenticeship to relatives may be an effective method for some jobs but the number that can be so trained is limited to the number that can be personally handled by the present stock of masters. It is, moreover, a slow process in which the pace may follow the growing up of a young boy or girl.

Some skills like seamen's are acquired mainly for export. There is little domestic market for seamen and few or no vacancies are created by their emigration. Its effect is therefore mainly on the long-run supply of labor in occupations for which seamen are qualified to join. The case for nurses is similar since a large proportion of them consider the

external market when they decide on the nursing education. The adjustment in the nursing market is somewhat complicated by the fact that new graduates tend to temporarily join the labor market in order to acquire further training and/or to minimize the cost of foreign job search. Anticipating a high turnover rate of nurses and the inability to recover training cost, domestic hospitals pay a relatively low wage. This seems to explain the lack of improvement in salary despite the substantial migration of nurses. (See section 3, Table 4).

2. Market Adjustment

In order to understand better labor market adjustment to emigration, we go back to the working of the labor market and its occupational components. We take the whole hierarchy of occupations from the unskilled to craftsmen, production workers, professionals and at the apex are the scientists and artists. As mentioned above, their training differs in cost, length of time and rigour, and medium (formal and nonformal). They also vary in the required mental ability and special aptitude. The general case is for the higher level occupations to require higher mental ability and scarcer special aptitude. Assuming a normal distribution of mental ability, the proportion of a population qualified to join each occupational level decreases as the occupation ranking rises. Direct cost of education/ training also differs with the cost tending to go up with the level of expertise. We may visualize the long-run supply curves for the various occupations to follow the pattern illustrated in the chart below. Occupations are ranked from highest to lowest starting with A, B, ...

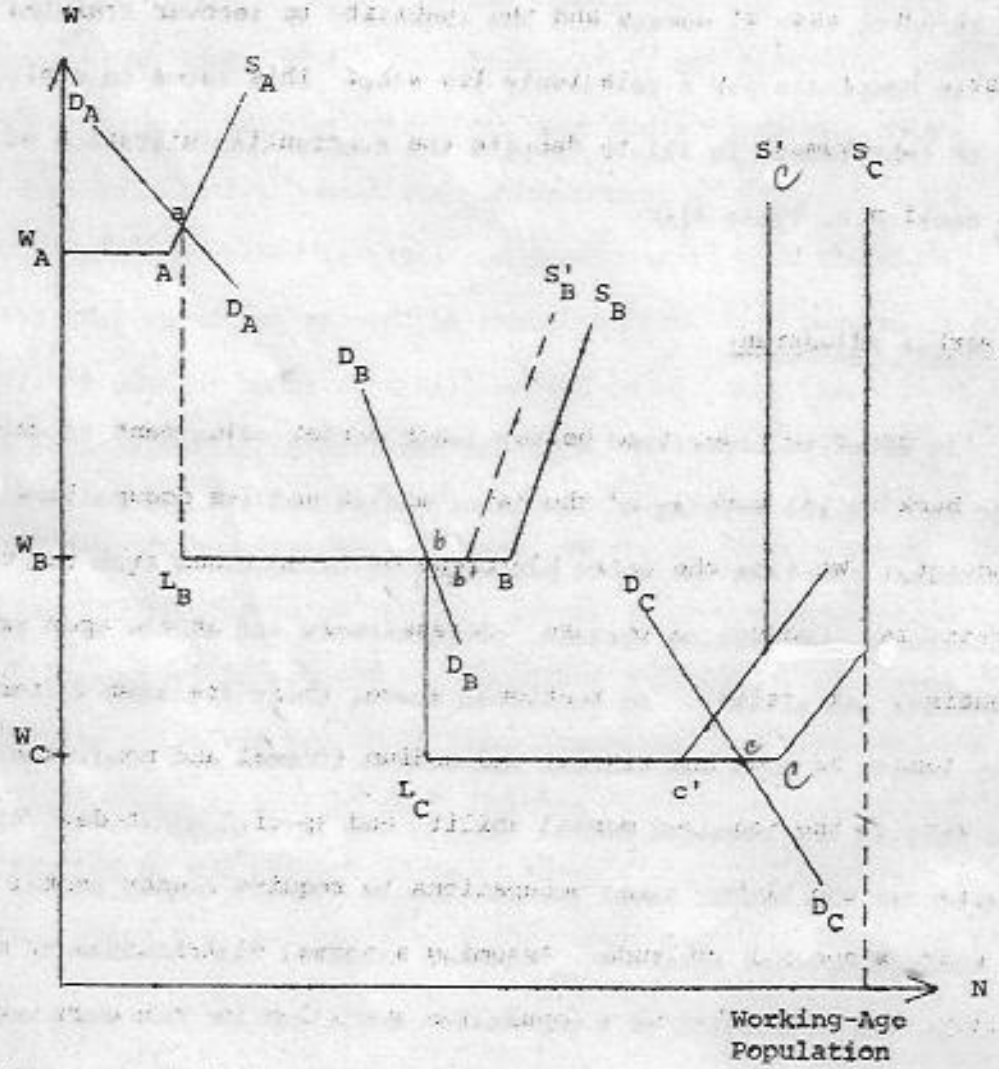
W
S_A
D_A
W_A
A
a
D_A
S'_B
S_B
D_B
W_B
b
b'
B
L_B
D_B
D_C
S'_C
S_C
W_C
c
c'
L_C
D_C
N
Working-Age Population

Chart 1

Z. Occupation A has a much smaller supply than B, B than C and so on, and the wage that would attract people to join the occupation should reflect the differences in cost of education/training. Thus W_A is higher than W_B, $W_B > W_C$. C might be considered the lowest skill occupation to which everybody is assumed to qualify. The difference between the horizontal portions of the supply curves, $W_A - W_B$ and $W_B - W_C$, are the additional costs of acquiring education/training from B to A and from C to B. The supply curve turns positive to reflect the additional cost of attracting an increasing number of people to any occupation who are not fully suited or qualified to it and who must therefore incur psychic and other cost, like a musician being forced into engineering.

Note that the labor supplied to each occupation is a part of the national labor force. The lowest skilled population absorbs the residual labor that is not in the next higher level. To reflect this, the supply curve for C starts at L_C, that for B at L_B given the level employed in A and B markets.

Consider the emigration of labor in B given the initial positions in the three markets at a, b, and c. There is unemployment at B and C. The emigration of say b'B shifts the B supply curve to $L_B b'S'_B$. Wage rate would change depending on the size of the emigration. In general, the impact of emigration of a particular skill is limited to its own market and the market of the skills below it. If emigration takes place in the lowest occupation, its effect on the rest is likely to be nil. Consider the emigration of say c'C which shifts the supply curve to $L_C c'S'_C$.

Though full employment is achieved at a higher wage rate, there is no impact on B's market (also A's) since the new wage is still below B's minimum wage rate. Emigration of A is not replaced from down below.

The long-run supply of labor in any occupation comes from new entrants and the existing labor force in other occupations which are qualified to enter it. In the short-run, the supply comes from existing stock only. Emigration would shift the supply curve by exactly the number emigrating. If the shift results in raising the wage rate, this will attract labor from similar and lower occupations as well as new entrants to the labor market. The movement of labor from one occupation to another or of new entrants to an occupation, is a long-run decision involving skill acquisition. This response is reflected in the long-run supply curve drawn above.

We note from the graph that emigration of high-power skills which require high cost, long education/training period and rate abilities is not easily replaced. A university scientist takes almost 20 years to educate formally and additional years of practice to sharpen his expertise. A dedicated, talented and honest civil servant is just as rare and difficult to replace. The vacancy created can disrupt the operation of their respective organization and lead to large social losses. The likely problem created by migration will therefore tend to be more serious the rarer the skill.

3. Evidence of Adjustment from Time Series Aggregate Data

Data from different secondary sources are put together to reflect the responsiveness of the labor force to conditions in the labor market and particularly to the opportunities opened in foreign places and to the vacancies created by migration. We must note that the emigration of skilled labor is taking place under condition of unemployment in most occupations including those which experience labor outflow. How much has the emigration tightened the labor market as a whole and in the occupations directly affected by it? Did it result in higher wage rate? How did the supply of labor respond to the changes in the market? The unemployment situation, movement of relative wage rates, and growth in labor supply in the various occupations over the last decade are analyzed in answer to these questions.

There is no comprehensive monitoring of migrating and returning labor. The Ministry of Labor Bureau of Employment Services (BES) collects the best set of data on contract workers who obtain their foreign jobs via the Overseas Employment Development Board (OEDB),[1] the Seamen's Board (SB) and the private recruitment agencies. A system of tracking emigration through other channels has not been established. Consequently, there is no regular and accurate record of labor migrants to North America who leave under various reasons. Total migrants to this continent may range from

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[1] The BES and the OEDB are recently merged into the Philippine Overseas Employment Authority (POEA).

35,000 to 50,000 per year. Assume that from 15,000 to 20,000 of this number belong to the labor force. The increment in processed contract workers plus the annual permanent emigrant labor force to North America comprise the total outflow. This number may be compared to the excess supply per year estimated roughly as follows:

$$\text{Excess supply}_t = \text{Unemployed } LF_t + \text{Increase in } LF_t - \text{Increase in employment}_t$$

For the second half of the 70's, excess supply was more than half a million. Labor outflow was less than 100,000 up to 1977 and though increasing rapidly to reach about 230,000 in 1980, it was only a fraction of the excess supply. The figures show that at least on the aggregate level and barring serious adjustment problems the labor market can amply replace the labor outflow. In fact, we find that the outflow could not make a significant dent in the pool of unemployment of about 6.6 and 6.7 percent or 643 and 818 thousand workers in 1975 and 1976, not counting about 21 percent unpaid family workers. Unemployment is reported to have worsened since 1976 though the later figures are not comparable to the earlier ones. The 1977 to 1980 data are based on a new definition of employed and unemployed which tends to underestimate the unemployment rate. For August 1976 for instance when data using old and new definitions were used, the old definition gave 5 percent open unemployment rate. The new definition for the third quarter

1976 gave 3.1 percent.[2] The reported unemployed are about 700,000 for 1977, 1978, 1979, and 951,000 for 1980. The later survey reports provide much less unemployment details so we are not able to present the full-time equivalent unemployment of the underemployed and the unpaid family workers. We look now on the occupations which experience substantial outflow -- construction and transport workers. Table 3 shows that open unemployment rate has remained high in these two occupations. In fact, the construction industry experiences the highest rate of open unemployment ranging from 8.0 to 13 percent over the 1971-76 period. Apparently, the high initial unemployment in this industry has not been offset by the migration. And starting from 1974 when migration to the Middle East began, the industry's labor force growth accelerated from negative rates in 1971 to 1974 to positive rates of 12.3 and 6.1 percent in 1974-75 and 1975-76.

While the aggregate picture is that of continuing excess supply, the outflow is expected to create some shortages or at least some tightening of the market in specific skills and in specific locations. Labor mobility is not that perfect in the Philippines so that vacancies created in one location may not be quickly filled up from outlying areas. There is also a cost to geographic movement. Additional training is required of

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[2] Since 1976, a new definition of employed was adopted classifying those who worked for at least one hour in reference quarter of the year. Previously, those who worked in the reference week were defined as employed. It would be difficult to find people who remember not working for at least one hour in the last three months. The new labor survey issues do not give the same detail on unemployment as previous survey publications and the latest issue is as yet of 1978.

the labor replacement. Difficulties of adjustment would create a shortage in specific segments of the labor market and tend to push up the wage rate. A rise in the relative wage rate of construction and transport workers, given persistent unemployment, would therefore be reflective of the adjustment problem.

Table 4 gives the relative wage rate for very specific blue and white-collar occupations from 1960 to 1981 obtained from the Wage Commission survey (WAPCO). We find no improvement in the relative wage of construction and transport workers vis unskilled labor. On the other hand, there is a narrowing of the wage rate of blue and white-collar workers. Most of the surveyed white-collar occupations, particularly nursing, clerical and teaching experienced a downward trend in relative wage. To be noted is the lack of improvement in nurses' wage rate despite the large outflow of nurses and the occasional complaint of hospitals about the fast turnover of their nursing staff.

Note that these data are based on a survey that is heavily represented by the larger establishments in Metro Manila. The wage figures tend to be larger than the national average wage rate since provincial areas and smaller establishments generally pay lower than their large Manila counterpart. The annual equivalent of the average weekly wage rate of laborers from the NCSO labor force survey is compared with the figures in Table 4. Note that the NCSO survey gives a slightly different picture. Workers in the construction industry experienced a substantial improvement in their earnings relative to laborers with the ratio of their earnings rising from 1.17 to 1.35 from 1971 to 1976. Workers in transport earned substantially more than construction

from the beginning but experienced a lower rate of improvement in their relative position. Contrary to the findings of the WAPCO survey, white-collar occupations showed no deteriation in their relative earnings. It may be concluded that the improvement in the relative wage of transport and construction workers was not substantial enough to reflect a significant tightening of the market for their skill. This is consistent with the earlier finding of persistently high unemployment in construction and transport industries that is partly explained by the fairly fast growth of their labor force.

Supply adjustment to foreign market opportunities for doctors and nurses was also strong. This is evidenced by the growth of enrollment and graduates in medical sciences as well as by the opening of college programs in the field. Table 6 shows an increase in the proportion of medical science graduates from around 5 percent between 1966 and1975 to 27.1 percent in 1977 or a jump from 5,000 to 28,000. The number of schools which offer these programs jumped from 96 in 1968 to 1969 to 186 in 1978-1979. A large proportion of this expansion must have been in the nursing field, which is within the budget of a larger number of college students as compared to medicine. In fact, there are less than 50 universities and colleges that offer medicine. Nursing enrollment comprised 75 percent of the total medical sciences. Also to be noted in Table 7 is the tripling of nautical schools which train our seamen from 9 in 1968-69 to 27 in 1978-79.

The responsiveness of the labor market is further evidenced by significant shifts in the distribution of enrollment and graduates by field of specialization. There was a definite decline in law and teacher

training, the fields which were in great demand in the early period of independence when the government administrative infrastructure and the public school system were being built. The relative importance of production oriented fields, such as agriculture and engineering, began to rise toward the 70s in response to shifts in labor demand and the unemployment in the other professional skills. At the same time, the number of technical schools for subprofessional production skills and their enrollment also grew. (Table 4)

4. Case Study of the Construction Labor Market

The ease with which training can be acquired is the most important determinant of labor mobility or of the strength of labor adjustment to changes in market conditions. We gather from aggregate and other data that Philippine manpower was fairly mobile especially in occupations which require low-cost training and average inherent ability. Workers in the construction industry may be considered to belong to these occupations. Their technical skills can be acquired in a short period of time without the use of very expensive training facilities. A large proportion of construction workers obtain their training from non-formal media such as from relatives and on the job. Formal training institutions though increasing in number in recent years, are not the training ground for most blue-collar skills.

A small exploratory survey of 297 construction workers and 14 foremen in Metro Manila was conducted to provide some information on labor market adjustment in this industry. Data on media for training, length of training,

geographic mobility, occupational mobility, unemployment experience and wage rate were obtained from the survey. Six occupations were selected -- carpenters, masons, electricians and plumbers, welders. Qualitative questions on the tightness of the labor market, sources of supply of labor and length of training, hiring practices were asked of the foremen. It is thought that they are more knowledgeable of conditions in the market than construction company officials. Construction workers are hired for a job rather than permanently in a firm and they move from job location to job location. Foremen are usually given the responsibility of hiring and organizing the workforce for each job so that they directly experience or observe shortages or surpluses in the industry. Our decision to survey forement instead of company officials was also influenced by the inconclusive results obtained by the Institute for Labor and Manpower Studies (ILMS) Survey of Critical Skills. The question on experience in hiring was not answered by half of the firms surveyed and ambiguously by the rest. Note that the survey is exploratory in its attempt to document the process of adjustment of the labor market. The survey findings are summarized below.

4.1. Broad Characteristics of Construction Workers. The workers are fairly young with 65.3 percent below 30 and only one out of the usable 297 observations above 50. Majority (60 percent) have reached high school level of education and 25 percent finished elementary level. To be noted is the very small percentage who attended vocational/technical schools (4.7%). (See Tables 10 and 11). On the average, the workers had more than one source of training as indicated by the greater number of sources

identified than the number of observations: 356 versus 297. The most frequently cited source is on-the-job training (50.0%) and father and other relatives (32.9%). Vocational training was cited 12.9 percent of the time. There is some variation in the relative importance of each source. On-the-job training is more important for painters, plumbers and welders (close to 60.0%) than for the other three skills (slightly less than 50%). Vocational training is used more frequently by electricians (35%). This is to be expected for their work requires some basic scientific knowledge of the subject. Table 10 also shows their average educational attainment to be higher; 50 percent are at least high school graduates as compared to 28 percent for the other skilled workers. Welders are next to eletricians in having some vocational training (25 percent). They also have a higher educational attainment (92% reached high school with 52 percent graduating from high school).

4.2. Sources of Training and Length of On-the-Job Training. The workers were asked how long it took them to acquire each level of expertise in his occupation, classifying level of expertise into peon or unskilled, assistant, middle level and master. Table 12 shows that attainment of master qualification from the unskilled level generally takes about 6.5 years, 5.9 for plumbers and 6.9 for masons and painters. The rate of promotion from level to level, which partly reflects the rate of learning, is faster at the lowest skill level. The rate from peon to assistant and from assistant to middle level skill is less than two years for majority of the occupations. It is longest at the master level with ranges of 2.3 years for masons to 4.3 years for painters.

We argued that the rate of promotion partly depends on both the availability of higher skill level jobs and the qualification of the workers for the job. The rate of promotion will tend to shorten as the labor market tightens. Under this condition, the rate of promotion would closely approximate the rate of learning. Recall that the outflow of workers does not seem to have led to the tightening of the construction market and that in fact high unemployment has persisted in this sector. For this reason, we may assume the rate of promotion reported by the sample to have been slowed down by excess supply. This would imply that the training period in each level is shorter than that indicated by the reported rate of promotion and the existence, therefore, of some underemployment. Both factors would lead to easy adjustment in the construction labor market. We may expect that with proper motivation, most Filipino manpower can enter the construction market and acquire some skill in less than two years. Furthermore, the adjustment is hastened by the availability of workers who at each point in time are in the final stages of training in each level. They can be quickly assigned jobs in the next higher level of expertise. As a whole, workers on intermediate stages can be moved to the next level faster than new entrants. We can imagine a continuous flow of training to be taking place during the process of production. The flow of on-the-job training which is dependent on being on-the-job is automatically accelerated by an increase in the level of construction activity. The demand for construction workers creates its own supply though with a training lag.

This fact may explain the large annual increment in labor supply and the consequent persistence of unemployment in the construction sector.

4.3. Occupational Mobility. There seems to be a fairly high degree of occupational mobility in construction as indicated by the occupational background of the sample. From 40 to 60 percent of the workers held jobs different from their present occupations. Some of the jobs were also in construction but a larger proportion was in varied blue-collar skill categories. Almost 50 percent of previous jobs of masons was outside construction, 31.5 percent for welders and 30.4 percent for carpenters. (Table 13) We expect that the new entrants to an occupation who have other job experiences will tend to learn faster than inexperienced workers. The former bring to the new job traits which are conducive to faster learning such as work discipline and habit of following instruction. Those making the change within the construction industry are expected to learn even faster since they have been familiarized by the various tasks in the industry.

4.4. Geographic Mobility. We tried to find out whether geographic mobility intensified over the last two years by asking the sample about their work location in the last 12 months and two years ago. Table 14 shows a fairly mobile workforce. Note that the survey was conducted in Metro Manila (NCR or National Capital Region) but only 53 percent resided permanently in the city and 22 percent in the outlying Region IV. In the last 12 months, a large majority of the sample worked outside their province of residence (95.6 percent). The movement seems to be less earlier (two years ago) as indicated by a smaller proportion (62.3 percent) who worked outside the province of residence. In the Philippines,

geographic movement is assisted by the culture of extended family. This together with the rapid intracountry migration that has been taking place for several decades widen geographic links among the population and allow for better dissemination of labor market information.

Another indicator of mobility is employment in different companies. The sample reported having worked in about two companies on the average in the last 12 months. This is a considerable shifting among employers as compared to other occupations.

The foregoing seems to indicate a fairly mobile labor force in the construction industry as indicated by the short length of training period or fast promotion from level to level, by occupational shifts and by geographic mobility.

Next we try to find out about tightness in the construction market as revealed by the wage level and the unemployment rate of workers and by the experiences of foremen. A qualitative question to the workers on whether it is easier for them to find employment this year than two years ago gave a large majority yes answer (70.7%). The answer varies between occupations, it is highest for carpenters (82.0%) and masons (78.4%) and lowest for electricians (45.9%). Except for plumbers, the most skilled or master workers find the market to be tighter this year than last year. The unskilled have a much lower positive perception than the skilled. Finally, we note that the wage rates given are quite close to the national levels given earlier.

The sample was asked if they have applied for work abroad. Twenty-eight percent have applied mostly to the Middle East. Of this, an equal percentage is in the master and middle level categories. This is understandable since foreign jobs generally require experience.

4.5. Foremen's Characteristics and Experience. The foreman's position is the highest position in blue-collar workforce of the construction industry. In the Philippines, foremen usually come from the ranks and are promoted to the position on the basis of their production and organizational skills. The survey shows they are much older than the average worker, 50 years, and that most have attained the master quality in at least two construction skills. When asked about shortages or difficulty of recruitment, three out of the 14 sample encountered no problems. The rest find difficulty recruiting one or two particular skills. The skills mentioned are not uniformly the same occupational categories, some mention carpenters, some welders, and so on. This may be interpreted to mean that the shortage does not prevail in any one skill.

Recall that the workers sampled come from a fairly wide geographic area, but the foremen recruited their workforce mostly in Metro Manila, only one recruited in Laguna, another in Pampanga, both neighboring provinces of Manila. Apparently the labor force moves around to find employment rather than for recruiters to search for workers. Recruitment is mainly by word of mouth through workers with only two foremen using, in addition to word of mouth, advertisement. Another indicator about the condition of the market is the length of time to hire and organize a workforce for a construction job. The majority of foremen took one week to recruit their work force while four foremen took from two weeks to one month to recruit

skills they identified to be of short supply. This is not a problem for construction tasks are planned ahead and recruitment for each task can be done well in advance.

The foremen were asked their views about the length of training period to qualify from level to level in each skill category. It is interesting to note that all foremen estimate the training period in the lowest two levels to be very much shorter than the period of stay stated by the sampled workers. Half of the foremen think that peons can qualify to assistant level in three to six months, and from assistant to middle level, one-half to one year. This is true for all occupational categories. However, they estimate the qualification for a master to be rather long, majority said 2-3 years, one said 5-6 years. Recall that the workers also stated a relatively long period for getting promoted from middle to master level. This fact complicates the consequences of migration. There has been an excess supply of applicants from foreign jobs. Recruiters can therefore be selective and hire the best applicants. As a whole the better trained workers would have a higher probability of landing a foreign job. Our survey in fact shows that a higher proportion of the more senior workers have applied for foreign jobs. The master craftsmen among these workers are more difficult to replace given their longer training period. More importantly, they are the trainors of lower level workers, including the unskilled. Their departure therefore creates a vacancy not just in the production process but in the training process as well. Their departure would tend to slow down the flow of training and therefore the process of adjustment in the whole industry.

The findings suggest special concern for the outflow of the highly skilled craftsmen.

Concluding Remarks

There is good reason to regard migration positively. It is especially welcome during this period of high unemployment and serious balance of payment. It is well appreciated in the nation that our workers' remittances have become the largest foreign exchange source, contributing as much as 20 percent of total earnings. At the micro level, the remittances have helped raise the standard of living of the workers' families. Migration has eased the unemployment problem though not enough to remove the remaining high unemployment rate. So far the outflow of workers does not seem to have created any serious dislocations in the labor market. We argue that this is largely due to the fairly strong mobility of the nation's labor force. Aggregate data indicate substantial movement of the labor among occupational categories. It is argued that such mobility is very much determined by the cost (including time) of training. The lower the cost of training in a particular skill or occupation the larger the manpower that can move into that skill or occupation. The case of the construction market evidences this phenomenon.

The construction industry is not a very large sector and the departure of a large number of its workers could have disrupted its market. Yet, it continued to have high unemployment rate which results from the large annual increment of its labor force. Our study looked into the training process of construction skills and geographic mobility in order to explain the ease

of labor adjustment in this sector. Training cost appears to be low. Training is mainly on the job and takes a fairly short period. Foregone earning and out-of-pocket cost are practically zero for on-the-job training. We want to note an exception to the argument, that for master craftsman. Their training period is fairly long so that it will not be as easy to replace them as other workers. Master craftsmen are also the trainors of the less skilled workers so that if a shortage of master is allowed to develop, the supply of lower skills will also be reduced.

Problems in migration will tend to develop in skills that are difficult to produce and that also determine the supply of other workers and therefore their mobility. The migration of high level manpower including those whose training/education is lengthy and costly, and those requiring relatively scarce special abilities will create economy-wide disruption. The consequences of migration cannot therefore be generalized. Future research and policy need to be focused on crucial high cost skills.

The methodology used is an indirect way of analyzing labor market adjustment that is centered on training cost and gestation period. The methodology is particularly suited to skills that are acquired from non-formal channels. This may not be exactly fitted to the analysis of professional and scientific manpower. Its research technique will have to focus on instructional variables, financial constraints and ability requirements. It is hoped that this exploratory study is followed up by a more comprehensive study from which generalizations can be made.

Appendix A

SURVEY NOTES

Selection of Respondnet-Firms

A list of construction firms employing 100 or more workers was drawn up from the NCSO 1978 List of Establishments. From this list, 30 establishments were originally picked out based on their accessibility and size. Six large firms with known job-sites in Metro Manila were considered since the schedule of field work was limited.

Conduct of Field Work

To verify the addresses of on-going projects and to secure authority to visit these sites, the main offices of the firms were visited before proceeding to the job-sites.

Most of the firms granted permission to interview their workers during lunch breaks only and this made one-on-one interviews virtually impossible. Group interviews were instead conducted with one researcher guiding 6 to 10 respondents in accomplishing the questionnaires. In some instances, questionnaires had to be left behind after instructing the workers on how to fill them up and picked up the following day.

A total of 6 job-sites, one for each company selected, were visited and 311 respondents (297 workers, and 14 foremen) accomplished the questionnaire. The survey was conducted in the last two weeks of September, 1982.

Table 1

NUMBER OF OVERSEAS WORKERS PROCESSED THROUGH THE BES/AND OEDB BY MAJOR OCCUPATIONAL GROUP AND YEAR, PHILIPPINES: 1975-81

Year	Major Occupational Group						
	Professional/ Technical and Related Workers	Managerial/ Executive and Administrative Workers	Clerical Workers	Sales Workers	Service Workers	Agricultural Workers	Production Workers
1975	6 688	71	225	14	2 797	1 518	1 876
1976	6 787	82	368	14	3 917	1 892	6 169
1977	6 658	208	932	30	4 584	121	23 792
1978	11 334	331	1 502	83	7 910	43	29 758
1979	18 125	513	3 443	202	13 918	163	57 120
1980	24 878	1 410	5 223	534	29 257	1 581	93 135
1981 (Jan.-June)	13 320	873	3 762	220	15 112	618	65 814
Total	87 770	3 488	15 455	1 097	77 495	5 936	277 664

Source: Labour Statistics Service Report.

Table 2

NUMBER AND PERCENT UNEMPLOYED BY NATURE OF UNEMPLOYMENT
1956 TO 1975

	1956	1961	1965	1971	1975	1976
LF	8,561	9,713	10,764	12,895	15,160	16,244
Employed	7,702	9,095	10,101	12,228	14,517	15,427
Open Unemployed	859	618	663	667	643	818
Experienced	389	327	228	325	375	411
Inexperienced	470	219	435	342	268	407
Underemployed	384	396	362	259	299	271
Unpaid family workers	1,842	2,096	2,212	2,634	3,295	3,487

Unemployment Rate	1956	1961	1965	1971	1975	1976
Open Unemployment	10.0	6.4	6.2	5.2	4.2	5.0
Experienced	4.5	3.4	2.1	2.5	2.5	2.5
Inexperienced	5.5	3.0	4.0	2.7	1.8	2.5
Underemployed	4.5	4.1	3.4	2.0	2.0	1.7
Total	14.5	10.5	9.6	7.2	6.6	6.7
Unpaid family workers	21.5	21.5	20.5	20.4	21.7	21.5

Source: NCSO, Labor Force Survey.

Table 3

LEVEL, GROWTH AND UNEMPLOYMENT OF EXPERIENCED LABOR FORCE IN SELECTED OCCUPATIONS AND INDUSTRIES
AUGUST, 1971-1976

Labor Force (000)						Unemployment Rate (%)						Growth Rate of Labor Force (%)				
1971	1972	1973	1974	1975	1976	1971	1972	1973	1974	1975	1976	1971-72	1972-73	1973-74	1974-75	1975-76
708	620	709	755	811	873	2.0	1.9	1.9	0.6	0.8	1.3	-12.4	17.6	3.6	7.4	7.6
146	142	157	150	148	144	0.9	0.6	0.0	0.6	0.3	1.0	- 2.7	10.5	-4.6	- 1.3	- 2.7
512	454	508	522	591	607	3.5	5.3	6.0	2.5	5.9	5.1	-11.3	11.9	2.8	13.2	2.7
1,460	1,397	1,423	1,388	1,441	1,664	2.3	3.1	3.0	2.0	2.2	2.5	- 4.3	1.9	-2.5	4.2	15.1
6,016	6,885	7,637	7,704	7,826	8,218	1.8	1.8	1.2	0.9	1.4	1.8	14.4	14.9	0.9	1.6	5.0
492	454	465	448	503	534	9.6	11.4	13.4	3.1	9.4	8.0	- 7.7	- 6.7	-3.7	12.3	6.1
523	531	574	557	516	572	3.7	5.2	5.5	5.7	4.5	3.8	1.5	8.1	-1.3	- 0.7	10.9
1,293	1,099	1,247	1,271	1,372	1,543	2.8	3.6	3.8	3.0	2.7	2.7	-15.0	13.5	-2.4	12.7	12.7
655	650	766	708	807	809	3.2	3.9	3.0	2.4	3.0	2.0	- 0.8	17.8	-0.8	14.0	0.2
293	312	268	269	288	289	4.4	7.0	5.6	2.0	5.6	4.5	6.5	-14.1	0.4	7.1	0.3
12,550	13,007	14,276	13,965	14,892	15,840	2.6	3.1	2.7	2.1	2.5	2.6	3.6	9.7	-2.2	6.6	6.4

ies, NCSO Labor Force Survey.

Table 1

LEVEL, GROWTH AND UNEMPLOYMENT OF EXPERIENCED LABOR FORCE IN SELECTED OCCUPATIONS AND IN
AUGUST, 1971-1976

	Labor Force (000)						Unemployment Rate (%)						Grow	
	1971	1972	1973	1974	1975	1976	1971	1972	1973	1974	1975	1976	1971-72	19
Occupations:														
. Professional, technical	708	620	709	755	811	873	2.0	1.9	1.9	0.6	0.8	1.3	-12.4	
. Administrative, executive	146	142	157	150	148	144	0.9	0.6	0.0	0.6	0.3	1.0	- 2.7	
. Clerical & related workers	512	454	508	522	591	607	3.5	5.3	6.0	2.5	5.9	5.1	-11.3	
. Sales & related workers	1,460	1,397	1,423	1,388	1,441	1,664	2.3	3.1	3.0	2.0	2.2	2.5	- 4.3	
. Farmers, fishermen & related workers	6,016	6,885	7,637	7,704	7,826	8,218	1.8	1.8	1.2	0.9	1.4	1.8	14.4	
Industries:														
. Construction	492	454	465	448	503	534	9.6	11.4	13.4	3.1	9.4	8.0	- 7.7	
. Transport, storage & communications	523	531	574	557	516	572	3.7	5.2	5.5	5.7	4.5	3.8	1.5	
. Gov't, community, business & recruitment service	1,293	1,099	1,247	1,271	1,372	1,543	2.8	3.6	3.8	3.0	2.7	2.7	-15.0	
. Personal service	655	650	766	708	807	809	3.2	3.9	3.0	2.4	3.0	2.0	- 0.8	
. Domestic help	293	312	268	269	288	289	4.4	7.0	5.6	2.0	5.6	4.5	6.5	
T O T A L	12,550	13,007	14,276	13,965	14,892	15,840	2.6	3.1	2.7	2.1	2.5	2.6	3.6	

Source: August series, NCSO Labor Force Survey.

Table 4

RATIOS OF SOME OCCUPATIONS' WAGES TO THOSE OF LABORERS FOR 40 OR MORE-HOUR-WORK-WEEK, 1960 TO 1981

	1960	1963	1966	1969	1971	1973	1976	1981
I. Manual Workers								
1. Carpenter	1.19	1.28	1.06	1.16	1.16	1.51	1.21	1.16
2. Electrician	1.42	1.73	1.52	1.61	1.53	1.53	1.38	1.47
3. Painter	1.37	1.55	1.24	1.46	1.50	1.45	-	-
4. Plumber	1.62	1.61	1.33	1.58	1.40	1.36	-	1.27
5. Mechanic (I)	1.44	1.76	1.32	1.51	1.48	1.28	1.44	1.24
6. Driver	1.32	1.60	1.39	1.56	1.39	1.33	1.32	-
7. Janitor (III)	1.10	1.21	1.30	1.30	1.32	1.10	-	1.11
8. Laborer	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Annual Money Wage	₱1331	₱1442	₱1960	₱2051	₱2708	₱3259	₱4315	₱9528
II. Clerical								
1. Corporate Bookkeeper (II)	2.07	2.28	2.15	2.53	2.24	2.20	-	-
2. Cashier (I)	2.59	2.46	2.11	2.72	2.63	2.28	-	-
Cashier (II)	-	-	-	-	-	-	2.78	2.59
3. Clerk (I)	1.43	1.66	1.55	1.74	1.97	1.49	1.43	1.31
4. Telephone Operator	-	-	-	-	1.83	1.85	1.86	1.66
5. Acctg. Machine Operator	-	-	-	-	2.52	1.70	1.83	1.76
6. Stenographer	-	-	-	-	2.00	1.73	1.83	1.53
III. Professional								
1. Corp. Accountant	3.48	3.59	3.21	3.74	3.55	3.66	3.18	2.73
2. Civil Engineer	3.11	3.37	3.21	2.90	3.16	3.18	-	-
3. Mech. Engineer	-	-	-	2.77	2.54	2.67	2.77	2.30
4. Architect (II)	-	-	-	3.68	2.98	2.89	2.41	2.33
5. Chemist	-	-	-	2.23	2.03	2.13	2.26	1.83
6. Programmer	-	-	-	-	3.22	3.50	3.05	2.54
7. Trial Atty.	3.45	3.57	3.97	3.72	3.01	4.50	-	-
8. Clinic Physician	3.40	3.17	3.67	3.90	3.74	2.09	3.93	2.56
9. Dentist	2.33	2.54	2.93	3.26	2.98	2.38	2.53	2.25
10. Nurse	1.02	1.59	1.40	1.47	1.53	1.40	1.50	-
11. Midwife	1.04	1.31	.94	1.00	1.13	.97	-	-
12. Pharmacist	1.62	1.67	1.58	1.82	1.78	1.46	1.60	1.33
13. Instructor (I)	-	-	-	4.06	2.73	2.79	2.50	1.63
14. Elem. Sch. Teacher	-	-	-	1.63	1.56	1.63	1.62	1.31
15. H.S. Teacher	-	-	-	1.57	1.43	1.52	-	-

Table 5

RATIO OF AVERAGE CASH EARNINGS IN SELECTED OCCUPATIONS AND INDUSTRIES TO AVERAGE CASH EARNINGS OF MANUAL WORKERS 1971-76*

	1971	1972	1973	1974	1975	1976	% Growth of Earnings 1971-76
1. Professional	2.05	2.21	2.09	1.86	2.34	2.31	57.1
2. Clerical occupation	1.71	1.72	1.78	1.47	1.98	1.82	49.6
3. Sales occupation	1.12	1.09	1.31	1.07	1.26	1.19	47.8
4. Manual workers and laborers	1.00	1.00	1.00	1.00	1.00	1.00	39.0
5. Construction industry	1.17	1.25	1.31	1.10	1.38	1.35	60.4
6. Transport and communications industry	1.39	1.42	1.43	1.28	1.54	1.54	54.4
7. Government, community, business and recreational service	1.78	1.86	2.00	1.64	1.98	1.95	52.1
8. Personal service	1.02	0.98	1.02	0.83	1.06	1.18	59.5
9. Domestic service	0.27	0.28	0.33	0.28	0.36	0.37	90.9
10. Total employed	1.22	1.23	1.31	1.10	1.42	1.40	60.0
Manual workers weekly cash earnings	₱ 41	₱ 43	₱ 42	₱ 58	₱ 50	₱ 57	
% growth of earnings 1971-75							

*The figures used are for those who worked 40 hours or more during the survey week.

Source: August series of the NCSO Labor Force Survey.

Table 5a

PHILIPPINE MANPOWER BY EMPLOYMENT STATUS

	1977	1978	1979	1980
Population 15 years and over	26 072	26 873	26 067	28 677
Labour force	15 200	16 715	17 233	17 608
Employed	14 470	16 013	16 544	16 657
Agricultural	7 452	7 830	7 875	8 745
Non-agricultural	7 018	8 183	8 669	7 912
Unemployed	730	702	689	951
Unemployment rate (%)	4.4	4.2	3.9	5.4

[1]Third quarter data of Integrated Survey of Households of National Census and Statistics Office.

Between 1979 and 1980: Labour force increased by 2.1 percent; the number of employed persons increased by 0.6 percent; unemployment went up by 38 percent.

Source: Labour Statistics Service current statistics.

Table 6

PERCENTAGE DISTRIBUTION OF COLLEGE GRADUATES BY FIELD OF SPECIALIZATION, 1951-1955 TO 1971-1975

e & ss	Liberal Arts & Sciences	Teacher Training	Engineering	Medical Sciences	Law & Foreign Service	Music & Fine Arts	Food & Nutrition	Nautical Science	Agri-culture	Chemistry	Total In No.	Total In %
	12.4	56.7	4.5	6.7	3.6	.3	0.5	.6	0.4	0.2	208,582	100.0
	17.2	20.2	8.3	12.3	6.7	.6	1.4	.9	0.8	0.6	176,095	100.0
	9.4	40.2	7.6	8.3	3.6	.5	2.2	.7	1.1	1.1	252,950	100.0
	10.9	50.9	5.8	4.9	1.6	.6	1.1	.7	0.7	0.5	431,194	100.0
	16.6	20.0	5.9	6.1	2.2	.8	1.0	.6	0.5	0.3	418,536	100.0
	9.1	8.5	11.8	27.1	1.7	1.2	2.0	2.4	7.4	.6	105,191	98.5[b/]

s year's data are available.

ribution excludes graduate degrees so they do not sum to 100.0%.

ne Statistical Yearbook, 1980, 1982.

Table 6

PERCENTAGE DISTRIBUTION OF COLLEGE GRADUATES BY FIELD OF SPECIALIZATION, 1951-1955 TO 1971-1975

	Commerce & Business	Liberal Arts & Sciences	Teacher Training	Engineering	Medical Sciences	Law & Foreign Service	Music & Fine Arts	Food & Nutrition	Nautical Science	Agriculture
1951-55	14.1	12.4	56.7	4.5	6.7	3.6	.3	0.5	.6	0.4
1956-60	30.8	17.2	20.2	8.3	12.3	6.7	.6	1.4	.9	0.8
1961-65	25.3	9.4	40.2	7.6	8.3	3.6	.5	2.2	.7	1.1
1966-70	22.4	10.9	50.9	5.8	4.9	1.6	.6	1.1	.7	0.7
1971-75	46.2	16.6	20.0	5.9	6.1	2.2	.8	1.0	.6	0.5
1977-78[a/]	26.7	9.1	8.5	11.8	27.1	1.7	1.2	2.0	2.4	7.4

[a/] Only this year's data are available.

[b/] The distribution excludes graduate degrees so they do not sum to 100.0%.

Source: Philippine Statistical Yearbook, 1980, 1982.

Table 7

NUMBER OF SCHOOLS OFFERING EACH AREA OF SPECIALIZATION
1968-69 AND 1978-79

Schools	1968-69	1978-79
Agriculture	81	93
Chemistry	34	37
Commerce	424	376
Engineering	160	191
Food and Nutrition	65	89
Law and Foreign Service	73	62
Music	59	55
Liberal Arts	480	401
Medical Sciences	96	186
Nautical Sciences	9	27
Teacher Training	412	433

Source: Ministry of Education Statistical Bulletin.

Table 8

NUMBER OF SCHOOLS OFFERING VOCATIONAL/TECHNICAL TRAINING AND THEIR ENROLLMENT
1978-1979

	Public and Private Vocational Schools						
	1969-1970			1978-1979			% Δ 1969-70
	Public	Private	Total	Public	Private	Total	to 1978-79
Skill or Field:							
Agriculture	89	32	121	144	16	160	32.2
Fishery	43	3	46	71	na	71	54.3
Trade/Technical	92	116	208	145	207	352	69.2
Business and commerce		na	-	-	194	194	-
Beauty and fashion		501	501		301	301	- 40.0
Enrollment:							
Agriculture	33,307		33,307	70,110	-	70,110	110.5
Fishery	9,918		9,918	37,145		37,145	274.5
Trade/Technical	58,845	18,248	77,093	124,925	43,470	168,395	118.4
Business and commerce	-	33,477	33,477	33,477	50,037	50,037	49.5
Beauty and fashion	-	42,454	42,454	-	67,501	67,501	60.0

Source: Philippine Association for Vocational Education, Inc., Survey on Technical Vocational Education, Vocational Educators' Conference, Baguio City, May 26-28, 1981, Tables 2, 3, 5, 6.

Table 9

DISTRIBUTION OF WORKERS BY AGE GROUP AND BY OCCUPATION

Age Group	Total	OCCUPATION					
		Carpenter	Electrician	Mason	Painter	Plumber	Welder
Total Age Group	297	89	61	88	10	30	19
20 & Below	42	6	9	20	1	5	1
21-30	152	47	32	42	7	12	12
31-40	74	18	17	22	2	10	5
41-50	28	17	3	4	-	3	1
51 & Above	1	1	-	-	-	-	-
Median Age	27.5	28.7	27.2	26.2	26.2	28.8	27.6

Table 10

NUMBER OF WORKER RESPONDENTS BY HIGHEST EDUCATIONAL ATTAINMENT AND BY OCCUPATION

Educational Attainment	Total		Occupation											
			Carpenter		Electrician		Mason		Painter		Plumber		Welder	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Total	297		89		61		88		10		30		19	
ing	3	0.1	3	3.9	-		-		-		-		-	
y														
es I-V	16	30.6	6	44.9	4	16.4	3	28.4	1	50.0	2	23.3	-	5.3
. Graduate	72		34		6		22		4		5		1	
ol														
st-Third Year	108	36.4	33	37.0	12	19.7	46	52.2	3	10.0	6	20.0	8	42.1
School Graduate	69	23.2	8	9.0	20	32.8	16	18.2	2	20.0	16	53.3	7	36.8
st-Third Year	13		1	1.1	9	14.8	1	1.1	-		1	3.3	1	5.3
rth Year & Up	1		-		1	1.6	-		-		-		-	
lege Graduate	1	5.0	-		-		-		-		-		1	5.3
al/Technical	14	4.7	4	4.5	9	14.7	-		-		-		1	5.3

Table 10

NUMBER OF WORKER RESPONDENTS BY HIGHEST EDUCATIONAL ATTAINMENT AND BY OCCUPATION

Highest Educational Attainment	Occupation											
	Total		Carpenter		Electrician		Mason		Painter		Plumber	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	297		89		61		88		10		30	
No Schooling	3	0.1	3	3.9	-		-		-		-	
Elementary												
Grades I-V	16	30.6	6	44.9	4	16.4	3	28.4	1	50.0	2	23.
Elem. Graduate	72		34		6		22		4		5	
High School												
First-Third Year	108	36.4	33	37.0	12	19.7	46	52.2	3	10.0	6	20.
High School Graduate	69	23.2	8	9.0	20	32.8	16	18.2	2	20.0	16	53.
College												
First-Third Year	13		1	1.1	9	14.8	1	1.1	-		1	3.
Fourth Year & Up	1		-		1	1.6	-		-		-	
College Graduate	1	5.0	-		-		-		-		-	
Vocational/Technical	14	4.7	4	4.5	9	14.7	-		-		-	

Table 11

DISTRIBUTION OF WORKER RESPONDENTS BY OCCUPATION AND BY SOURCES OF TRAINING

Occupation	Sources of Training*							
	Father and Other Relative		On-the-Job Training and In-Plant		Vocational Training		Others (Friends)	
	N	%	N	%	N	%	N	
Total	117	12.9	178	50.0	46	12.9	15	4.2
Carpenter	45	13.3	49	47.1	8	7.7	2	1.9
Electrician	12	16.9	34	47.9	25	35.2	-	
Mason	38	36.9	49	47.6	3	2.9	13	12.6
Painters	4	40.0	6	60.0	-	-	-	
Plumbers	14	31.8	26	59.0	4	9.1	-	
Welders	4	16.7	14	58.3	6	25.0	-	

*No horizontal total because item is multi-response.

Table 12

AVERAGE NUMBER OF MONTHS/YEARS FOR WORKER RESPONDENTS TO ATTAIN PRESENT LEVEL OF SKILL BY OCCUPATION

Occupation	No. of Years from Mason to Master	Average No. of Months/Years to Acquire Skill					
		Peon to Assistant		Asst. to Middle Level		Middle Level to Master	
		No. of Resp.	Average No. of Months/Years	No. of Resp.	Average No. of Months/Years	No. of Resp.	Average No. of Months/Years
Carpenter	6.5	59	2 yrs. & 1 mo.	32	1 yr. & 11 mos.	17	2 yrs. & 6 mos.
Electrician	6.8	22	1 yr. & 5 mos.	19	2 yrs. & 2 mos.	7	3 yrs. & 3 mos.
Mason	6.9	54	1 yr. & 2 mos.	28	3 yrs. & 5 mos.	23	2 yrs. & 4 mos.
Painter	6.9	8	1 yr. & 2 mos.	3	1 yr. & 6 mos.	2	4 yrs. & 3 mos.
Plumber	5.9	18	1 yr. & 4 mos.	14	1 yr. & 10 mos.	4	2 yrs. & 9 mos.
Welder	6.2	7	1 yr. & 9 mos.	6	1 yr. & 9 mos.	5	2 yrs. & 8 mos.

Table 13

PREVIOUS OCCUPATIONS OF CONSTRUCTION WORKERS
(%)

	Carpenters	Electricians	Masons	Painters	Plumbers	Welders
Carpenters	60.8					
Electrician		69.7				
Masons			42.9			
Painters				50.0		
Plumbers					40.7	
Welders						52.6
Other Construction	8.7	12.1	8.9	25.0	33.3	15.8
Non-Construction	30.4	18.2	48.2	25.0	26.0	31.5
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Table 14

PERCENTAGE DISTRIBUTION OF WORKERS BY PERMANENT RESIDENCE AND BY JOB LOCATION

Respondents Permanent Address	Location of Work During the Last 12 Months				Location of Work Two Years Ago			
	Total	Same Province	Diff. Prov./ Same Region	Outside Region	Same Province	Diff. Prov./ Same Region	Outside Region	Not Stated
Total N	297	13	142	142	38	77	108*	74
Total %	100.0	4.4	47.8	47.8	12.8	25.9	36.3	24.9
Region I	6.4	.4	-	6.1	.7	.4	4.7	.7
Region II	.7	-	-	.7	.4	-	.4	-
Region III	9.4	.7	.4	8.4	2.0	.7	4.7	2.0
Region IV	21.9	1.7	1.7	18.5	4.4	2.4	9.1	6.1
NCR	53.2	1.7	45.5	6.1	4.7	20.9	12.8	14.8
Region V	3.4	-	.4	3.0	.4	.7	2.4	-
Region VI	1.7	-	-	1.7	-	-	1.0	.7
Region VII	.3	-	-	.4	-	-	.4	-
Region VIII	2.3	-	-	2.4	.4	.4	1.0	.7
Region IX	-	-	-	-	-	-	-	-
Region X	.7	-	-	.7	-	.7	-	-
Region XI	-	-	-	-	-	-	-	-
Region XII	-	-	-	-	-	-	-	-

*Includes 7 respondents who worked abroad (Saudi Arabia & Iraq).

Table 15

NUMBER AND PERCENT DISTRIBUTION OF WORKER RESPONDENTS BY THEIR PERCEPTION ON RELATIVE EASE OF FINDING WORK THIS YEAR THAN TWO YEARS AGO BY OCCUPATION AND SKILL LEVEL

Occupation	All Skill Levels		Peon		Assistant		Middle Level		Master	
	Total N	Yes %	Total N	Yes %	Total N	Yes %	Total N	Yes %	Total N	Yes %
All Occupations	197	70.7	57	61.4	95	68.4	54	70.4	91	79.1
Carpenters	89	82.0	18	72.2	27	96.3	20	75.0	24	79.2
Electricians	61	45.9	12	25.0	26	38.5	17	70.6	6	50.0
Masons	88	78.4	21	71.4	32	65.6	4	75.0	31	96.8
Painters	10	60.0	2	50.0	1	100.0	3	33.3	4	75.0
Plumbers	30	66.7	4	75.0	8	75.0	6	75.0	12	58.3
Welders	19	53.4	-	-	1	100.0	4	75.0	14	71.4

Table 16

NUMBER OF WORKER RESPONDENTS BY OCCUPATION TITLE,
BY SKILL LEVEL AND BY AVERAGE DAILY WAGE

Occupation	All Skill Levels		Peon		Assistant		Middle Level		Master	
	No.	Ave. Daily Wage	No.	Ave. Daily Wage	No.	Ave. Daily Wage	No.	Ave. Daily Wage	No.	Ave. Daily Wage
All Occupations	297	32	58	25	93	30	55	33	91	38
Painters	10	38	2	28	-	-	4	32	4	49
Plumbers	30	33	4	29	8	30	6	34	12	37
Electrician	61	31	12	29	26	30	19	33	4	38
Welders	19	38	-	-	1	30	4	34	14	39
Masons	88	31	21	22	32	29	3	34	32	39
Carpenters	89	31	19	26	26	30	19	32	25	35

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