

Industrial Labour in Karachi

by

MOHAMMAD IRSHAD KHAN*

INTRODUCTION

The purpose of this paper is to examine some characteristics of the urban industrial labour-force. The study of industrial labour-force in Karachi, a newly developed industrial centre¹, may reveal how industrial labour-force is built up during the process of industrialization and economic growth. Information was collected on the occupational and industrial structure of employment, wage differentials by size of firm and skill mix, characteristics of the labour market, the mobility of workers, permanence of the worker's job, labour turnover, and absenteeism of Karachi's industrial labour-force.

The source of the data for this study is an industrial survey in Karachi conducted by the Institute of Development Economics in 1959². The sample for this survey consisted of 530 establishments in four industries (textiles, light engineering, plastics, and leather and leather goods); 534 workers were also interviewed separately for collecting information on various aspects of labour. The sample covered about 50 per cent of the establishments employing more than 20 workers (all the firms employing more than 100 workers were included in the sample) and 4 per cent of the establishments employing less than 20 workers³. The sample thus achieved better coverage of large-scale firms. The sample of 534 workers with which we are working is 1.3 per cent of the labour force of the sampled firms and less than one per cent of the total labour force in these industries.

Our study is based on the information provided in the employer's as well as in the workers' schedules. Section II of the paper is descriptive in content and

* The author is a Staff Economist at the Institute of Development Economics, Karachi. He is deeply indebted to Dr. Stephen R. Lewis, Jr., Research Adviser at the Institute, for his many helpful suggestions and guidance. He is also grateful to Dr. Gustav Ranis, a former Joint Director of the Institute, for his guidance at the initial stages of data collection and writing of a preliminary draft.

¹ Karachi is the major industrial centre in Pakistan and almost all the industries in Karachi originated after 1947.

² Two monographs, based on the results of this survey, have already been published by the Institute:

i) Gustav Ranis, *Industrial Efficiency and Economic Growth*. (Karachi: Institute of Development Economics, 1961).

ii) Gustav Ranis, *Urban Consumer Expenditure and Consumption Function*. (Karachi: Institute of Development Economics, 1961).

³ For a complete statement on sampling frame and methodology for this sample survey, see, *Industrial Efficiency and Economic Growth*, op. cit., Appendix A, pp. 43-50.

relies heavily on the workers' schedules. We examine the origin and composition of the industrial labour-force in Karachi and also discuss the occupational background of the workers and their families. Section III of the paper turns its attention to the wage-and-skill structure of the labour force, particularly the often-noted differentials in wage rates among different-sized firms. Some light is shed on the reason for these differentials by examining the permanence of jobs, the rate of labour turnover and absenteeism in relation to firm size. Finally, we suggest a hypothesis on the creation of an industrial labour-force consistent with the findings of the study. An appendix on the family-size firm appears at the end.

II. WORKERS' RESPONSE

The analysis in this section is based primarily on the information provided by the workers, and is mainly concerned with workers' mobility. The primary reasons for including it are that the information *i*) is descriptive of Karachi's development, and *ii*) is corroborative of several generalizations about characteristics of the labour force in developing countries.

At the outset, we should note the distribution of sampled workers in various categories. Table I shows that the interviewed workers are 10 per cent engineers, 79 per cent skilled workers, 8 per cent unskilled labourers and 3 per cent office clerks.

TABLE I
CLASSIFICATION OF WORKERS INTERVIEWED

	(per cent)
Engineer	10
Skilled worker	79
Unskilled labourer	8
Office clerk	3

There appears to be a considerable bias in the selection of workers for interview purposes. The distribution of workers interviewed is quite different from the distribution given by the employers⁴. Since a majority of the workers report to be skilled workers (semi-skilled are included in skilled), our analysis may be essentially an analysis of the characteristics of skilled workers in Karachi.

⁴ The classification of workers into engineers, skilled, unskilled and office clerks, as done here, is not identical with the classification used in the employers' schedule. For example, of the nonproduction workers in the employers' schedule person like watchman, attendants, bearers, etc., are included in unskilled workers in the workers' schedule and, similarly, the semi-skilled and apprentices have been grouped with skilled in the workers' schedule. The skill mix of the total labour-force is given at the beginning of Section III.

Migration to Karachi

Geographical mobility is sometimes caused by political events (like partition of British India)⁵ and economic forces, but it is also affected by attachment to ancestral homes, ignorance about opportunities and some cultural factors like inability to speak the language of the place to be migrated to. Table II shows place of birth and place of initial employment of the workers interviewed. Only 5 per cent of the total workers in the survey were actually born in Karachi. The bulk of the workers (69 per cent) have immigrated from India. Other parts of Pakistan (excluding Karachi) have supplied 25 per cent of the total workers. The total male population of Karachi in 1959 consisted of 15 per cent natives, 21 per cent *in*-migrants and 63 per cent immigrants, and total male labour-force in Karachi was composed of 15 per cent natives, 26 per cent *in*-migrants and 57 per cent immigrants in the same year⁶. Migrants (*in*-migrants as well as immigrants) form the major portion of the population (84 per cent), of total labour-force (83 per cent) and of industrial labour-force (94 per cent) in Karachi.

TABLE II
GEOGRAPHICAL ORIGIN OF KARACHI WORKERS

Place	Born	Initially employed
<i>I. Urban areas</i>	81	96
1. Karachi	5	50
2. Urban Pakistan	16	13
3. Urban India	59	32
4. Foreign	1	1
<i>II. Rural areas</i>	19	3
1. Rural Pakistan	9	2
2. Rural India	10	1

The bulk of the Karachi population migrated from urban India as a direct result of partition and the ensuing upheaval. Thus, a previously urbanized population having some industrial experience (and presumably some connection or acquaintance with the employers, most of whom also originated from urban

⁵ In 1947, British India was divided into India and Pakistan on the basis of religious composition of the population. Muslim-majority areas formed Pakistan while Hindu-majority areas comprised India. As a result of this partition, there was large-scale migration of Muslims from India to Pakistan. The results of this migration are evident in what follows.

⁶ Masihur Rahman Khan, *The People of Karachi*. (Mimeographed, Karachi: Institute of Development Economics).

India⁷), has been the major source of labour supply to the newly established factories in Karachi. Our sample is also biased towards skilled labour, and skilled labour particularly that having some contact or acquaintance with the employers, is likely to be hired first. Therefore, the larger share of migrants in the industrial labour-force than in the total population is explained primarily by previous industrial training and contact with entrepreneurs in India. This explanation is well supported by the available information on recruitment methods of employers.

Table III gives an indication of the means used to recruit workers (both the employers' and the workers' responses have been recorded):

TABLE III
METHOD OF RECRUITMENT

Method	What is the usual method of recruitment? (employer's response) (.....in per cent.....)	How did you get the the job? (worker's response)
Direct contact (casual or purposive)	49	39
Recommended by fellows, relatives and friends	29	39
Family relation (employer and employee related to each other)	9	11
From own locality	5	—
Advertisement	3	—
Employment exchange	2	1
Recommended by previous employer	1	5
Other means	2	5
Total	100	100

A large proportion of the employers (78 per cent) give priority to direct contact and recommendations of fellow workers and relatives in the recruitment of employees. The workers seem to feel that recommendations of relatives and friends are equally important. Advertisement and employment exchange, manifestations of a centralized and organized labour-market, seem to play a very insignificant role in the recruitment of workers. Only 3 per cent of the employers give first importance to advertisement in the recruitment of their labour force and not a single worker reports that he was employed as a direct result of

⁷ Of the total entrepreneurs/managers surveyed, 74 per cent were born in India and migrated to Pakistan after Partition. Cf., *Industrial Entrepreneurship in Karachi*, a study being done at the Institute of Development Economics, Karachi.

an advertisement. The position of employment exchange is similar. The information regarding job opportunities is not widely disseminated through the public media of advertisement and employment exchange.

Rural-Urban Migration

From Table II it will be seen that 96 per cent of the workers initiated their employment careers in urban areas while 81 per cent were actually born in urban areas. On the other hand, only 3 per cent of the sampling group were initially employed in rural areas, whereas 19 per cent were born in rural areas and came to urban areas to seek their first jobs. However, the rural-urban movement in which we are primarily interested is the movement of workers from rural Pakistan to Karachi⁸. It can be seen from Table IV that only 9 per cent of the sampled workers were born in rural Pakistan and only 4 per cent came to Karachi directly from rural areas of Pakistan to seek their first employment.

TABLE IV
GEOGRAPHICAL MOBILITY
(From place of birth to place of first employment)

Place of birth Place of first employment	Karachi	Urban Pakistan	Rural Pakistan	Urban India	Rural India	Total
	(.....in per cent.....)					
Karachi	5	6	4	28	6	50
Urban Pakistan	—	6	1	5	0	13
Rural Pakistan	—	0	1	0	—	2
Urban India	0	2	1	25	3	32
Rural India	—	0	—	0	1	1
Total	5	16	9	59	10	100

N.B. In this and all the subsequent tables zero means less than 0.5 per cent while dash stands for nil. The totals in this table and the subsequent tables may not tally due to rounding off.

The participation of rural labour-force in the industrial labour in Karachi seems at first sight to be rather low in view of the phenomenal rise in the population of Karachi since 1947⁹ and the abnormal rate of industrial expansion in

⁸ The relevant rural areas where potential labour-supply is available are: *i*) East Pakistan (where a majority of Pakistan's population live, mostly in rural areas); *ii*) the Punjab and North-West Frontier in West Pakistan (where major population of West Pakistan is concentrated).

⁹ The population of Karachi increased by 161.1 per cent from 1941 to 1951 and by 79.6 per cent from 1951 to 1961. Office of the Census Commissioner, Ministry of Home and Kashmir Affairs, Government of Pakistan, *Population Census of Pakistan: District Census Report, Karachi*. (Karachi: Manager of Publications).

the city during the past decade¹⁰. Moreover, a significant portion of the population and total labour-force as well as the industrial labour-force in Karachi has, in fact, migrated to Karachi from areas in Pakistan¹¹. Further, the economic conditions prevailing in rural areas and the opportunities provided by urbanization and industrial growth in Pakistan offer considerable push and pull, respectively, to the rural labour-force to move to cities like Karachi¹². In view of all these factors, one might expect the labour force from rural Pakistan to form a more significant component of labour force in Karachi.

Various explanations may be given for this low participation of labour from rural Pakistan in the industrial employments in Karachi. First, a previously urbanized population having some industrial experience has been the major source of labour supply to the newly established factories in Karachi. Second, the journey from the rural areas (where surplus labour is to be found) to Karachi is long and costly¹³. Third, the population of the Punjab in West Pakistan has a fascination and respect for armed services which channels much labour into that activity. Finally, climatic conditions and surrounding social environments (particularly language)¹⁴ encountered in Karachi also discourage movement to that locality to some extent.

Summarizing the findings about the geographical origin of workers, it can be said that a previously urbanized population having some industrial experience has been the major source of supply of labour to the newly established factories in Karachi. The previous direct or indirect contact (through friends and relatives) with employers most of whom also migrated from urban India and the experience and training in industry received in India are the major factors responsible for the low share of formerly rural Pakistani labour in the industrial labour-force in Karachi.

¹⁰ The number of manufacturing establishments (employing more than 20 workers) in Karachi was 182 in 1951 Central Statistical Office, *Statistical Bulletin*, No. 1, March 1952, p. 29) which rose to 829 in 1958. Cf., Central Statistical Office, *Census of Manufacturing Industries, 1958*. (Karachi: Manager of Publications).

¹¹ The share of people migrating from areas in Pakistan to Karachi is 21 per cent in total population, 26 per cent in total male labour-force and 25 per cent in industrial labour-force (see page 596).

¹² For a detailed description of these factors operating in Pakistan, see, International Labour Organisation, *Why Labour Leaves the Land: A Comparative Study of the Movement of Labour Out of Agriculture*. (Geneva: La Tribune, 1960), pp. 133-137.

¹³ Journey to Karachi from East Pakistan is 3,000 miles by sea (costs more than Rs. 100) and from the former Punjab and former Frontier is between 500 and 1000 miles by train (costs Rs. 20 to Rs. 35).

¹⁴ Urdu is the main language in Karachi. The main language in the rural areas of East Pakistan, the Punjab and Frontier is Bengali, Punjabi and Pushto respectively.

Generational Origin

We now turn to the subject of forefather's occupation and its influence upon occupational decisions. Table V indicates that the decisions of the workers to adopt a particular occupation does not seem to be very much influenced by the occupation of their fathers and grandfathers. Only skilled workers show a tendency to follow the same occupations as their fathers and grandfathers; the fathers of 24 per cent of skilled workers and grandfathers of 29 per cent of them did the same type of work. The most frequently reported occupations of the fathers and grandfathers of our sampled workers are agriculture, business, skilled work and government service. Family occupation of engineers seems to be mostly business or agriculture (probably landlord). The bulk of the unskilled labour is composed of sons and grandsons of agriculturists (probably owner-cultivators, tenant-cultivator or agricultural labourer). This is a predictable result in view of the basically agricultural nature of the economy. It is also consistent with the basic structural changes that entail industrialization.

The lack of family background in the occupational set-up of our sampled labour-force may be influenced by the availability of jobs (to sons) that may not have been available to their forefathers. For example, if the number of positions available in engineering is three times the number of positions available in unskilled job during the working age of fathers, a son is three times as likely to become an engineer as an unskilled worker irrespective of his father's occupation. Since there is a structural change in favour of more highly skilled jobs during development, we should net out the effect of job availability on the occupational movement of workers. This was done by calculating "social-distance mobility" in which variation in the demand factor (number of jobs available) is ruled out. The social-distance mobility is a ratio between actual movement made by sons into any occupation from their father's occupation and the "expected" movement of the sons into that occupation as measured by the ratio of the number of positions in the occupation to the total number of positions in all occupations¹⁵. The formula for obtaining social-distance mobility is

$$S_{dm} = \frac{X_{ij}}{R_i} \div \frac{C_j}{N}$$

where

S_{dm} = Social-distance mobility

X_{ij} = Number of sons moving from father's occupational class 'i' to occupational class 'j'

¹⁵ For a detailed description of social-distance mobility, see, Natalie Rogoff, *Recent Trends in Occupational Mobility*. (Illinois: Free Press, 1953), pp. 31-32.

- R_i = Number of fathers in occupational class 'i'
 C_j = Number of positions (sons) in occupational class 'j'
 N = Total number of positions (or sons or fathers)

The results are shown in Table VI where each cell records social-distance mobility coefficient. If occupational selection was completely random, all entries would be unity. A coefficient of less than one means that the sons did not make as much movement as "expected" because of various social, economic or other factors. A coefficient greater than one represents less difficulty in moving to the particular occupation.

TABLE VI
SOCIAL-DISTANCE MOBILITY COEFFICIENTS

Worker's occupation Father's occupation	Engineer	Skilled worker	Unskilled worker	Others
Engineer	1.32	1.10	—	—
Skilled worker	.055	1.14	0.84	—
Unskilled worker	—	0.97	2.28	—
Others	1.25	0.95	0.98	1.48

The social-distance mobility coefficients computed here show that a son's entry into a particular occupation is relatively easier if his father was in that occupation. For example, the cells along the main diagonal for engineers, skilled workers and unskilled workers give a coefficient of greater than one, which may indicate that entry of sons in these occupations was facilitated because of their fathers being in the same occupation. Thus, after eliminating the effect of job availability on occupational movement, there is more indication that workers follow the same occupations as their fathers. The coefficients also indicate that the workers move out of their father's occupation with greater difficulty if they move upward in occupational status. For example, sons of skilled workers had greater difficulty (coefficient = 0.55) while the sons of unskilled workers were totally prevented (coefficient = 0) from moving to an engineer's status. The effect of father's occupation on the occupations of the sampled workers seems to be quite important.

Interoccupational Movement

The next characteristic studied is the pattern of interoccupational movement for the workers themselves. Table VII shows that most of the workers who change their jobs do not necessarily change occupation. This is particularly true of skilled workers.

TABLE VIIa

OCCUPATIONAL MOBILITY

Occupation immediately preceding the latter occupation	Engineer	Skilled worker	Unskilled labour	Private service	Business or manufacturing	Profession (doctor, lawyer, etc.)	Agri-culture	Service	Un-employed	Total
Present occupation (.....in per cent.....)										
Engineer	24	32	10	17	5	—	2	—	10	100
Skilled worker	1	78	9	5	4	0	0	2	1	100
Unskilled labourer	—	18	35	23	6	—	6	12	—	100
Office clerk	—	9	9	55	9	18	—	—	—	100

N.B. The sample size is 416 workers.

TABLE VIIb
PREVIOUS OCCUPATIONAL MOVEMENT OF KARACHI WORKERS

Occupation moving from	Engineer	Skilled worker	Business or manufacturing	Professional people (doctor, lawyer, teacher, etc.)	Private service Non-technical	Agriculture	Unskilled Labour	Service	Unemployed	Total
Engineer	53	32	—	—	15	—	—	—	—	100
Skilled worker	—	83	4	1	5	1	5	1	0	100
Business or manufacturing	14	50	18	14	—	5	—	—	—	100
Professional people	—	—	—	33	67	—	—	—	—	100
Private service	—	13	13	—	67	4	4	—	—	100
Agriculture	—	—	—	—	—	100	—	—	—	100
Unskilled labourer	—	9	5	—	19	5	49	12	2	100
Service	—	13	—	—	12	25	37	13	—	100
Unemployed	30	40	—	—	30	—	—	—	—	100
Total	3	67	5	1	11	2	9	2	0	100

N.B. The sample size is 487 workers. All the past movements have been consolidated in this table.

Of the total skilled workers who came in the present job from a previous job, 78 per cent were skilled workers in that job too. Similarly, 24 per cent of engineers and 35 per cent of unskilled workers were engineers and unskilled workers respectively, in their previous jobs. A skilled worker seems to have better chance to become an engineer; 32 per cent of the engineers report to be skilled workers in their previous jobs. Very few of the engineers and skilled workers report to be unskilled worker in their other jobs. Some of the skilled workers (1 per cent) and unskilled workers (18 per cent) report to be engineers and skilled workers, respectively, in their previous job.

The data suggest that the pattern of mobility in job change of an individual is similar to the pattern of mobility between generations. In other words, the entry into a particular occupation is more difficult for those persons not previously in that occupation. There may be social barriers in entering a particular occupation, or the restricted interoccupational mobility may be the result of economic factors. To become engineer or skilled worker one has to be fully trained through some formal education as well as through the training on the job. The lack of education and training is a major factor restricting mobility of the unskilled worker to the status of engineer or skilled worker. In summary, the generational and occupational movement both suggest that there is much less than perfect mobility in the upward direction, which is certainly consistent with findings of other investigations of labour mobility.

Finally, it is often maintained that workers in underdeveloped countries are not responsive to economic incentives. If we examine the median income of workers who changed their jobs/occupations once, twice, thrice and four times, it reveals a higher median income in the occupation/job moved to in comparison with the income in occupation/job moved from. For example, Table VIII shows that the worker who changed job/occupation four times, is now 45 per cent better off in terms of money income than he was in his fourth job/occupation.

TABLE VIII
INCOME MOBILITY

Occupation	Median income (Rs. per month)	Index
P = Present occupation	110	145
P-1 = Previous to occupation P	90	118
P-2 = Previous to occupation P-1	85	112
P-3 = Previous to occupation P-2	80	105
P-4 = Previous to occupation P-3	76	100

The changes in jobs and occupations as reported by Karachi workers suggest that the workers in Karachi may be responsive to economic incentives.

Job Aspiration

Table IX shows that among the occupations most desired for themselves and offspring, agriculture ranks lowest (only 7 per cent desire agriculture for themselves and 2 per cent for their sons and sons-in-law). This is quite understandable in view of the socio-economic status of the farmers, in spite of the fact that most of the workers are themselves the sons and grandsons of farmers. Business and more highly placed technical jobs rank first for those who want change in job, while skilled work, engineering, government-service and business are the most preferred occupation for their offsprings (Table IX). For skilled workers, the income is not as high as in other occupations mentioned; but in preferring this for their offsprings, the skilled workers are motivated both by the desire that their offspring should follow their footsteps and by the availability of opportunity; availability of opportunity seems to motivate some of the engineers (20 per cent) to want their offspring adopt skilled work¹⁶. It is realistic for the sons of unskilled workers to become skilled workers since no prolonged schooling is involved and such a preference for skilled work was registered. Government service is preferred because it is relatively more secure.

None of the workers (Table IX), not even the unskilled, want their sons and sons-in-law to become unskilled manual labourers. This is as expected in view of the fact that occupational aspiration is related to economic motivation and social prestige that accompanies the occupation. The unskilled labourers have neither sufficient income nor any social prestige. It is a further indication of abhorance for manual labour which is considered to be very inferior by Pakistani people. Only a few workers wish their sons to become professional people like doctors, lawyers, and teachers, although the income and prestige in these occupations are relatively high compared with other occupations. This is understandable in light of the costs involved in acquiring the necessary education and training for these occupations.

We may summarize the findings on occupational mobility in the following manner. Upward mobility in the occupational structure is more unusual than downward mobility, and staying in the same occupation is most common at all stages, whether viewed from the point of view of family background in the occupation or occupational change by the individual. Job aspiration of the surveyed workers were found to be realistic with one notable exception: although

¹⁶ If the share of skilled labour in the total labour-force of the sampled industries is any index to measure job availability for skilled work, the job availability for skilled work seems to be very large.

movement from the position of an unskilled worker is most unusual in light of past experience, all of the unskilled workers wished some other occupation for themselves and their children.

III. EMPLOYERS' RESPONSE

This section examines the occupational and industrial structure of the labour-force in Karachi and analyses the wage structure, particularly the wage differential by size of firm. Some additional characteristics of the labour-force are examined to shed light on the reasons for the observed wage differentials.

Occupational and Industrial Structure

Table X shows distribution of different categories of workers in the sampled industrial-establishments according to employers' responses. The 530 establishments surveyed in Karachi employed a total of 41,429 workers, 93 per cent of whom were production workers. Of the latter, 30 per cent were designated as skilled, 34 per cent as semi-skilled, 27 per cent as unskilled and 2 per cent as supervisors¹⁷. The proportion of skilled to total production workers is greatest in leather and engineering industries and lowest in the textile industry. The bulk of the labour-force of the four industries surveyed is employed in the textile industry where, it is interesting to note, the relative requirements for supervisory and skilled talents are the lowest.

TABLE Xa
OCCUPATIONAL AND INDUSTRIAL STRUCTURE OF KARACHI WORKERS

Strata by number of workers	0-9	10-19	20-49	50-99	100-over	Total
	(.....in per cent.....)					
Type of workers						
All Industries						
<i>I. Production</i>	92	85	86	86	94	93
Supervisor	4	4	4	4	2	2
Skilled	42	49	43	36	28	30
Semi-skilled	26	21	28	27	35	33
Apprentice	6	2	1	2	0	1
Unskilled	14	10	10	17	29	27
<i>II. Nonproduction</i>	8	15	14	14	6	7
Textile Industry						
<i>I. Production</i>	95	86	86	88	94	94
Supervisor	2	4	5	4	2	2
Skilled	40	47	32	27	24	28
Semi-skilled	30	17	34	30	36	35
Apprentice	4	3	1	1	0	0
Unskilled	19	16	15	25	29	29
<i>II. Nonproduction</i>	5	14	14	12	6	6

(continued)

¹⁷ The classification of jobs by skilled, unskilled, etc., was done at the Institute and the employers were asked to provide information according to the prearranged classifications.

TABLE Xa (continued)

OCCUPATIONAL AND INDUSTRIAL STRUCTURE OF KARACHI WORKERS

Type of workers	Strata by number of workers					
	0—9	10—19	20—49	50—99	100—over	Total
	(.....in per cent.....)					
Engineering Industry						
<i>I. Production</i>	91	82	86	86	87	87
Supervisor	4	5	4	3	3	4
Skilled	44	55	42	37	33	37
Semi-skilled	22	17	28	29	23	25
Apprentice	10	1	2	3	0	2
Unskilled	12	3	10	14	28	20
<i>II. Nonproduction</i>	9	18	14	14	13	13
Plastic Industry						
<i>I. Production</i>	89	87	84	78	90	86
Supervisor	2	4	5	2	2	3
Skilled	78	41	28	51	8	32
Semi-skilled	9	39	34	—	42	32
Apprentice	—	—	—	2	—	0
Unskilled	—	3	18	22	38	19
<i>II. Nonproduction</i>	11	13	16	22	10	14
Leather Industry						
<i>I. Production</i>	91	84	88	84	—	88
Supervisor	8	3	3	3	—	4
Skilled	34	52	66	60	—	60
Semi-skilled	38	17	16	12	—	17
Apprentice	—	—	1	3	—	1
Unskilled	11	12	2	6	—	6
<i>II. Nonproduction</i>	9	16	12	16	—	12

TABLE Xb

DISTRIBUTION OF WORKERS IN INDUSTRIES AND SCALES OF OPERATION

Industries	Strata	0-9	10-19	20-49	50-99	100-over	Total
		(.....in absolute numbers.....)					
Textiles		330	307	680	802	32,261	34,380
Engineering		494	211	845	1,118	2,833	5,501
Plastics		46	110	254	54	131	595
Leather		98	61	538	256	—	953
All Industries		968	689	2,317	2,230	35,225	41,429

There appears to be a reasonably close relationship between the requirements of skilled personnel and scale as measured by the number of workers employed. Excluding the firms in 0-9 scale¹⁸, the requirement of skilled personnel decreases with the rise in the scale of operation in textile and engineering industries. In the leather industry, large-scale firms seem to have higher demands for skilled labour although there is not a uniform relationship. There is no such relationship in the plastic industry¹⁹. The variation of skill mix with the scale of operation in our sampled industries is important to the following analysis.

Differential Wage-Structure

In a perfect market the wage rate for the same class and grade of labour must be equal in all employments. Since labour is not homogeneous, the price of labour differs from industry to industry and within the same industry from firm to firm depending upon the type of labour hired. In addition, it is usually argued that firms of different size may pay different wage for the same grade of labour, so that wage differentials are due not only to different skill mixes but also to imperfections in the labour market.

As Table XI indicates, the average rate of wages per manhour differs in Karachi between industries and within the same industry between firms of different sizes.

¹⁸ These are largely family enterprises in which workers are self-employed. For most of the purposes in our analysis, these firms shall be excluded as it is often felt that a different economic calculus is used in family enterprises. A separate analysis of the characteristics of firms, employing 0-9 workers, is presented in the Appendix.

¹⁹ In the plastic industry, the sample is very small (i.e., 23 firms) and there is only one firm in each of the scales with 50-99 and 100-over workers. See, for details, *Industrial Efficiency and Economic Growth*, op. cit., p. 50.

TABLE XI

WAGE RATE PER MANHOUR

Industry	Strata						Total
		0—9	10—19	20—49	50—99	100-over	
Textiles		0.51	0.72	0.72	0.70	0.80	0.70
Engineering		0.53	0.73	0.94	1.03	1.12	0.80
Plastics		0.48	0.67	0.41	1.39	0.70	0.46
Leather		0.55	0.75	0.83	0.83	—	0.65
All Industries		0.53	0.69	0.81	0.87	0.91	0.73

Large-scale firms tend to pay their workers higher wages per hour than do the small-scale firms. For all the industries combined, the wage rate per man-hour shows a very clear increase with the rise in the size of firms. It has been noted above that the ratio of unskilled labour to total labour-force increases with the rise in the scale of operation (Table X). Therefore, the wage differentials between firms in the same industry cannot be explained by skill differentials, since the proportion of unskilled labour is higher in the high-wage firms. The wage differential may be an indication of nonhomogeneous labour-supply in each firm of the same industry. A given class and grade of labour in the same industry may not be homogeneous for each firm in that industry due to characteristics other than skills. It is not unlikely that the worker having more training and experience will be more productive than the one who has relatively little experience and training, although both may be doing the same kind of work.

Table XII (based on workers' responses) shows that the same class of labour gets different monthly wage-payments in firms of different sizes within the same industry. The average monthly wage rates for skilled, unskilled workers and office clerks increase with the rise in scale of operation of all the industries combined together. Engineers also seem to get higher salaries in larger firms although the pattern is not consistent in all industries. Similarly, skilled workers get higher pay as the scale of operation increases in engineering and leather industries. Unskilled workers do not follow any consistent pattern as regards their wage rates except in plastics, where the average wage rate of unskilled workers rises with a rise in scale. Office clerks get higher salaries with a rise in the scales in all the industries separately as well as grouped together.

Since the proportion of skilled labour is smaller in large firms than in small firms (Table X), it may be that large firms pay higher wages than do small firms in order to secure a different kind of labour service. In other words, large-scale firms may pay higher wages in order to employ and retain labour which is different from those employed in small firms in terms of experience

TABLE XII

WAGE RATES OF DIFFERENT CATEGORIES OF WORKERS

Industry	Strata	0—9	10—19	20—49	50—99	100-over	Total
		(.....in rupees).....)					
All Workers							
Textiles		106	136	138	150	154	138
Engineering		108	140	180	193	206	156
Plastics		160	78	133	80	262	129
Leather		100	105	144	160	—	129
All Industries		108	127	155	167	174	144
Engineers							
Textiles		—	200	250	222	238	234
Engineering		213	208	284	227	202	259
Plastics		—	70	128	—	—	116
Leather		80	120	300	—	—	226
All Industries		168	183	245	225	257	235
Skilled Workers							
Textiles		110	133	144	151	134	132
Engineering		114	139	176	192	198	152
Plastics		197	95	152	80	262	150
Leather		109	60	134	170	—	129
All Industries		114	129	154	168	159	141
Unskilled Worker							
Textiles		55	117	101	110	87	95
Engineering		43	50	92	70	98	82
Plastics		—	30	60	—	—	45
Leather		—	—	—	—	—	—
All Industries		48	78	95	97	93	87
Office Clerk							
Textiles		—	125	—	125	188	150
Engineering		—	—	138	200	320	215
Plastics		50	50	—	—	—	50
Leather		—	—	120	126	—	124
All Industries		50	100	129	155	231	148

and training (both formal and on-the-job). An alternative, or additional, explanation is in terms of the commitment of the labour force in larger-versus-smaller-scale firms. It is to this alternative explanation that we now turn.

Labour-Force Commitments

It is often maintained that the factory workers in underdeveloped countries are only partially committed to the industrial employment²⁰. Among the phenomena mentioned as being universally present at the onset of industrialization are "high rates of lateness, absenteeism, and turnover; mass desertion from the factory during the harvest season when workers return to the ancestral homes to help bring the crops in; the backward-bending supply curve, resulting from a preference for leisure over income once customary real standards of living are achieved"²¹. The extent of commitment to the industrial pattern of life is difficult to gauge. However, some indication can be obtained through an examination of the ratio of permanent to temporary workers and the level of labour turnover and absenteeism.

Job Permanence

Table XIII indicates that of the total strength of the labour force in the four industries surveyed, 63 per cent of the workers were reported by employers to be permanent. Slightly more than one-third of the labour, on the other hand, would seem to have no job security since they are classed as temporary.

TABLE XIII
NATURE OF JOB OF KARACHI WORKERS

Industry	Textile		Engineering		Plastics		Leather		All industries	
	Perma- nent	Tem- po- rary	Perma- nent	Tem- po- rary	Perma- nent	Tem- po- rary	Perma- nent	Tem- po- rary	Perma- nent	Tem- po- rary
Strata by number of workers	(..... in per cent.....)									
0—9	66	34	71	29	76	24	63	37	69	31
10—19	36	64	36	64	34	66	41	59	36	64
20—49	40	60	44	56	55	45	22	78	39	61
50—99	47	53	67	33	63	37	63	37	59	41
100—over	65	35	74	26	67	33	—	—	66	34
Total	63	37	66	34	56	44	39	61	63	37

²⁰ Oriental labourers are sometimes characterized as "casual" and "repugnant to alienation from the village community". Cf., J.H. Boeke, *Economics and Economic Policy of Dual Societies*. (New York, 1953), pp. 144, 145.

In a survey in India, it was found that 71 per cent of the Bombay textile-workers visited their village at least once a year. (Pendhari Nath Prabhu, "A Study of the Social Effects of Urbanization on Industrial Workers Migrating from Rural Areas to City of Bombay", in *The Social Implications of Industrialization and Urbanization. Five Studies in Asia*. (Calcutta: UNESCO Research Centre on the Social Implications of Industrialization in Southern Asia), p. 80.)

²¹ Walter Galenson, *Labour and Economic Development*. (New York: John Wiley, 1959), p. 2.

This phenomenon can be explained, at least in part, as a result of the employer's desire to avoid certain welfare expenditures mandatory under the Factories Act. An additional explanation is the firm's desire to shift the burdens of short-run cyclical or seasonal uncertainty on to the workers. The data exhibit a pattern of temporary labour by size of firm in three of the four industries and for the aggregate. Excluding firms with 0-9 workers (which are mostly family enterprises), the proportion of temporary labour varies inversely with the size of firm in all the industries (except leather) individually and in the aggregate. The commitment to labour is relatively higher in the larger firms compared with smaller firms. This might indicate that due to cyclical or seasonal variation in the business, small-scale firms hire primarily temporary labour.

Labour Turnover

The pattern of turnover, as presented in Table XIV, could also be an indicator of cyclical or seasonal sensitivity. The pattern of turnover is closely related to the distribution of workers by permanent and temporary status.

TABLE XIV

LABOUR TURNOVER

[Percentage Ratio of Workers Separated to Total Workers (at the beginning of the year) in 1957 and 1958]

Strata	Industry									
	Textiles		Engineering		Plastics		Leather		Total	
	1958	1957	1958	1957	1958	1957	1958	1957	1958	1957
0—9	23	23	23	23	52	75	26	27	26	26
10—19	18	21	29	29	29	25	43	37	27	26
20—49	34	30	29	27	23	25	65	57	38	36
50—99	25	22	145	12	10	12	7	6	37	14
100—over	18	11	32	5	22	17	—	—	18	11
Total	19	12	37	13	26	50	44	48	21	13

Those firms and industries that report a higher ratio of temporary labour to total labour force (Table XIII) also report a high rate of turnover. The inference that small-scale firms keep mostly temporary labour (Table XIII) because of cyclical fluctuations in their business is consistent with the higher rate of turnover found in these firms (Table XIV).

One is also tempted to conclude that turnover is high for skilled workers. For example, the leather industry, which reports a high proportion of its workers as skilled workers (Table X), also reports a high rate of turnover. On the

other hand, the textile industry, which has the lowest ratio of skilled to total labour, gives also the lowest rate of turnover. Within industries, most of the firms that report high ratio of skilled to total labour (Table X) also report a high rate of turnover. But this could reflect either or both of the two causes. First, the firms and industries where requirement of skilled labour is high, face a fluctuating demand for their products. Second, skilled workers seem to manage to get better jobs in respect of pay, *etc.*, because of their skill and experience while the unskilled worker may be reluctant to leave a job because of his inability to secure a better job. The first possibility seems to be more likely as the pattern of temporary labour (kept temporary because of cyclical fluctuation) is consistent with the pattern of turnover.

Contrary to the beliefs of many writers, labour turnover in many firms and industries is relatively low in comparison with the experience in some advanced countries. For example, our data for textile industry²² show a lower turnover than the three-to-four per cent monthly figures for the same industry in United States²³. In other words, inspite of the ties with the village, the workers in underdeveloped countries may try to hold on to their jobs at all costs because of urban unemployment and vast rural underemployment²⁴.

Absenteeism

An average of 26 days per worker per year is lost through absenteeism according to employers' response, while 19 days per worker per year are lost according to workers' response as shown in Table XV. This high rate of absenteeism seems to apply to all industries, but it is relatively low in large-scale firms in comparison with small-scale firms. The rate of absenteeism as reported here is much higher than in more-advanced industrial countries²⁵. As would be expected, employer's estimation of absenteeism is somewhat higher than employee's. Whichever is correct, these figures indicate a possible 10-per-cent loss in output per year due to absenteeism. Such a phenomenon can be interpreted as another manifestation of only partial commitment to industrial employment. This partial commitment leads to the recruitment of

²² Turnover of 12 per cent in 1957 and 19 per cent in 1958 (Table XIV) for the textile industry in Karachi comes to about 1.00 to 1.5 per cent per month on the average.

³ See, in this connection, Charles A. Myers, "India", in *Labour and Economic Development*, *op. cit.*, pp. 30-31.

²⁴ As we have seen above, most of the workers in Karachi came from India and they are now settled in Karachi. Therefore, the question of ties with the village may be irrelevant. But the workers coming from India are mostly skilled workers and we have noted that skilled workers seem to have high rate of turnover. Unskilled workers are expected to be drawn from rural areas in Pakistan. A low rate of turnover in those industries and firms where the ratio of unskilled to total labour is high may, therefore, suggest such a conclusion.

²⁵ Typical post-War American rates of absenteeism for manufacturing vary between 2 to 4 per cent. Cf., Charles A. Myers, *op. cit.*, p. 50.

TABLE XV
 AVERAGE NUMBER OF DAYS LOST IN ABSENTEEISM PER WORKER PER YEAR ACCORDING TO
 EMPLOYER'S (EMPL.) AND WORKER'S (WORK.) RESPONSE

Strata	Industry	Textiles		Engineering		Plastics		Leather		Total	
		Empl.	Work.	Empl.	Work.	Empl.	Work.	Empl.	Work.	Empl.	Work.
0-9		25	26	27	20	19	10	36	16	27	21
10-19		31	20	20	37	23	23	25	25	36	26
20-49		22	13	19	15	18	17	46	25	26	18
50-99		15	13	24	13	30	—	17	20	20	14
100-over		22	17	22	21	10	—	—	—	22	17
Total		25	19	25	19	20	18	37	20	26	19

substitute labour to serve as temporary replacements for the absentees, which in turn leads to a casual labour-market and high turnover rates for some firms. Since combined figures indicate a tendency for absenteeism to be higher in small-scale firms, the absenteeism figures are consistent with the findings regarding turnover and permanence of employees' status. An explanation for the entire phenomenon, however, remains more elusive.

Summary

The discussion in Section III may now be summarized. Since the wage differentials cannot be explained by skill differentials, we raised the question of imperfection of the labour market and different characteristics of the labour in firms of different sizes. Large-scale firms reported a high proportion of their labour force as permanent and lower rates of turnover and absenteeism in comparison with small-scale firms. These are all consistent with a hypothesis about fluctuations in demand for the products of firms at lower scale of production and the employment of different kind of labour by firms of different sizes.

The above analysis, based on employers' responses, indicates that the proportion of skilled labour and rates of turnover as well as absenteeism vary inversely with the variation in scale while the ratio of permanent to total labour and wage rates increase with the rise in the scale of operation of the industries. Thus, it would appear that smaller firms hire labour on temporary basis at a lower pay because of their inability to cope with any short-run cyclical uncertainty. The cyclical fluctuation for the smaller firms is so important that it is difficult for these firms to attract the sort of full-time permanent labour force found in larger firms, which in turn leads to a high rate of absenteeism and, consequently to a high rate of turnover.

IV: DEVELOPMENT OF INDUSTRIAL LABOUR-FORCE

Formal training courses for industrial jobs are rare in underdeveloped countries, and they are limited to a very small segment of the population. A major source of supply of a trained and experienced labour force for large-scale firms may well be the smaller-scale firms in the same or related industries. A new entrant to the industrial labour-force might have an opportunity to be trained and gain experience with factory work in small firms. This would suggest a general hypothesis concerning the development of an industrial labour-force in which the small-scale firms serve as the training centres for labour-force entrants, and after the workers have been trained and received some experience, and perhaps become accustomed to industrial discipline, they would move on to higher paying, and perhaps more highly skilled, jobs in larger firms.

The information collected and its analysis as presented above are consistent with this general line of reasoning on the development of the industrial labour-force :

- i) large firms pay higher wages ;
- ii) secure a more permanent labour-force that has a) lower turnover and b) less absenteeism than small-scale firms ;
- iii) there appears to be considerable job mobility ; and
- iv) this mobility results in higher income to the worker who changes his job.

The high rates of turnover and absenteeism in smaller firms and the high proportion of permanent labour-force in larger firms are fully consistent with the hypothesis that labour moves from the cyclically unstable small firms to the larger firms that have a demand for a trained, experienced and permanent labour-force at higher wages, after receiving initial experience in those small firms. Naturally, this hypothesis is very crude at the present stage. But it provides further reason to suggest that more attention should be paid to the position of the small- and medium-size firms and their role in industrial development²⁶.

SECTION V: CONCLUSION

In this paper, we have explored the size and skill mix of the labour-force, wage differentials, recruitment methods, workers' job status, turnover, absenteeism, workers' mobility and their job/occupational aspiration for themselves as well as for their offsprings. The conclusions derived from the analysis of industrial labour in Karachi may now be stated briefly.

The industrial labour-force in Karachi seems to be mostly drawn from urban areas of the Indo-Pak subcontinent. Partition and the consequent movement of urban Muslim population from India to Pakistan is largely responsible for this. However, the fact that many workers reported that their fathers/grand-fathers were agriculturists is consistent with the basic structural-change in the economy during the process of industrialization and economic growth. The occupation/job of an individual seems to be very much influenced by the father's occupation. Most of the workers also preferred, for their offsprings, the type of work they themselves are doing. The choice of workers with respect to job/occupation for themselves and for their sons is not isolated from reality. It can be said on the basis of past movements of the workers surveyed that the goals postulated are within the reach of the worker concerned.

²⁶ Other reasons for devoting attention to this size firm are explored by Dr. Ranis in his *Industrial Efficiency and Economic Growth. op. cit.*, and John H. Power, "Small Industrial Enterprises in Bombay, Delhi and Karachi", *Pakistan Development Review*, Vol. II, No. 3. Autumn 1962, pp. 433-447.

It has been found that small-scale firms hire labour on temporary basis at a low wage-rate which, in turn, leads to absenteeism and high rates of turnover. Uncertainty due to cyclical or seasonal variations on the part of small-scale firms may be the reason why they keep most of their labour force on temporary basis. On the other hand, large firms are found to have relatively higher component of permanent labour in their labour-force. The rates of absenteeism and turnover are also relatively lower in larger firms. Large-scale firms pay relatively higher wages to their workers, perhaps in order to keep their labour-force permanently attached with and firmly committed to their employment. High wage-rates prevail in large-scale firms that report a low ratio of skilled labour to total labour. The same class of labour may be getting higher wages in larger firms because of its greater experience with the job and consequently higher productivity.

The allocation of industrial labour-force in Karachi seems to be heavily influenced by market forces. The inverse variation of absenteeism and turnover with wage rates, a high component of migrant labour in the industrial labour-force, considerable job changes and a positive change in income with changes in jobs/occupations as shown in this paper are the indications in this respect.

Appendix A

CHARACTERISTICS OF FIRMS EMPLOYING 0-9 WORKERS

The firms employing 0-9 workers are primarily family enterprises run by the owner-worker and his family members with or without some hired labour. Since for most of the purposes in our analysis is the paper these firms were omitted we shall give a separate analysis of the characteristics of these firms.

It is often felt that a different economic calculus is used in family enterprises. The governing rule in decision making may not be the one assumed in the usual analysis of the firm. Consideration of employment for the family members may overrule considerations of simple profit-maximization. The availability of family labour at zero or very low opportunity-cost leads to substitution of labour for capital to the maximum-possible limit. As a result, there is an intensive use of capital in these firms. Family enterprises, therefore, use simple tools and implements which assist labour and can be operated by hand; there is limited use of power-driven machines or equipments. Thus, the need for providing employment to family members may lead to identical conditions prevailing in the agricultural subsistence sector of the economy. In other words, these enterprises may also show permanent attachment of family labour to the firm resulting in underemployment and low productivity of labour.

Table A-1 depicts various characteristics of these firms along with a comparison with the similar characteristics of the total sampled firms in four industries. We have included in the table some additional information on factor use. It seems that the proportions of skilled and permanent labour are relatively higher in family enterprises. On the other hand, the average wage-rate per manhour as well as per month is relatively lower in these enterprises. Since the major portion of the labour force in family enterprises consists of family labour and family labour can acquire the necessary skill by watching and working in the concern from an early age, it is not surprising to find a high proportion of permanent and skilled labour in these firms. The owner-worker and family members working in his firm must be largely "permanent" and "skilled" workers. The low "wage-rates" in these firms reflect the low average productivity of labour. An exception to the rule of low average-productivity of labour is again provided by the plastics industry, but in general the average productivity of labour, the capital-output ratio and the capital-labour ratio are all substantially lower in the family firms. Considerations of maximum employment and *total* return to the family's resources overrule the considerations of maximum profit resulting in low output per person employed. Maximum employment is identical with maximum profit only if the usual profit-maximizing rules of the theory of the firm

TABLE A-1
CHARACTERISTICS OF FIRMS EMPLOYING 0-9 WORKERS

Characteristics	Textiles		Engineering		Plastics		Leather		All Industries	
	0-9	Total	0-9	Total	0-9	Total	0-9	Total	0-9	Total
Percentage ratio of skilled worker to total labour-force	40	28	44	37	78	32	34	60	42	30
Percentage ratio of permanent worker to total labour-force	66	63	71	66	76	56	63	39	69	63
Turnover (per cent separated)										
in 1958	23	19	23	37	52	26	26	44	26	21
in 1957	23	12	23	13	75	50	27	48	26	13
Absenteeism (days per worker per annum):										
employer's response	25	25	27	20	19	20	36	37	27	26
worker's response	26	19	25	19	10	18	16	20	21	19
Wage rates (rupees per hour)	0.51	0.71	0.53	0.80	0.48	0.46	0.55	0.65	0.53	0.73
Wage rate (rupee per month)	100	138	108	156	160	129	100	129	108	144
Capital per manhour (k/1) ^a	0.32	3.82	0.97	4.76	3.41	3.67	0.30	1.31	0.74	3.88
Capital value added ratio (k/v) ^b	0.63	3.44	0.97	3.72	1.35	3.45	0.34	1.12	0.87	3.42
Output per manhour (v/1) ^c	0.50	1.11	1.00	1.28	2.52	1.07	0.91	1.17	0.86	1.14

a) *Industrial Efficiency and Economic Growth*, op. cit., pp. 7, 8.

b) *Ibid.*, pp. 9, 10.

c) *Ibid.*, 18, 12.

dictate production at a point where all the family labour is absorbed. This can happen only *i*) if more capital is used, or *ii*) if capital-saving technological change is introduced, or *iii*) if a combination of both occurs²⁷.

These firms also report high rates of absenteeism and labour turnover. Since family labour is permanent and only a few outside labourers are hired in these firms, a high rate of turnover and absenteeism suggest that hired labour in these firms tends to be temporary and casual. With some increase in demand for their products, these firms hire outside labour and subsequently separate

²⁷ For a full discussion of this point, see, John C.H. Fei and Gustav Ranis, "Innovation, Capital Accumulation, and Economic Development", *American Economic Review*, June 1963, pp. 283-313.

them with the slackening of demand. And it may be that these firms also face more severe fluctuations in the demand for their products than do the larger-scale enterprises.

In summary, the information collected on the smallest-scale firms is consistent with the hypothesis that they are a part of the "traditional" sector even though they produce manufactured goods. The family nature of the enterprise provides a somewhat more skilled and permanent labour-force than is found in the nonfamily small firms. Consideration of maximizing total family-income leads to intensive capital-utilization and use of labour to the extent where its productivity is very low. Additional labourers are hired by the family firms on a casual basis at low wages whenever increases in demand for the family-firm output dictate. Thus, the characteristics of the large-scale firms differ from those of the small-scale nonfamily firms, and the smallest-scale family-firms differ from each of these, largely because of its family nature. While this conclusion is not surprising it is hoped that some concrete information on the smallest-scale firms and their characteristics will be of use in discussing certain aspects of industrial development.