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The Black Industrial Worker A Social Psychological Study

A PRELIMINARY REPORT

Y. GLASS

NATIONAL INSTITUTE FOR PERSONNEL RESEARCH

G.P.-S.

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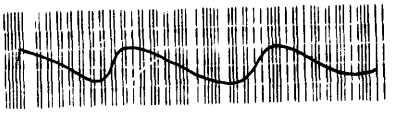
SOUTH AFRICAN COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH.
NATIONAL INSTITUTE FOR PERSONNEL RESEARCH.

THE BLACK INDUSTRIAL WORKER

A SOCIAL PSYCHOLOGICAL STUDY.

Y. Glass.

This study has been prepared at the request of the Government of the Union of South Africa as a contribution to C.C.T.A./ C.S.A. Joint Project No.5 : An Investigation into Absenteeism and Labour Turnover in Africa.



A Preliminary Report. July 1960.

This study was directed by Dr. S. Biesheuvel.

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Without the interested co-operation of the management and workers of the industries on which the study is based we could not have made this contribution to the Inter-African project.
We wish to thank them for their participation and assistance.

C O N T E N T S.

---oOo---

658.381.6+658.312.6] (6 = 963)

S U M M A R Y.

An investigation into absenteeism and labour turnover in 11 South African industrial units has indicated that :

1. Absence and turnover levels compare favourably with those in industrial communities outside Africa.

2. Age, marital status, length of service and nett earnings are associated with absence rates and separation indices. Greater absence and separation proneness is found among young, unmarried, short-service, low earning men.

3. The greater the degree of urbanisation, the lower the incidence of separations.

4. Workers' rating on supervisors, supervisory practices and security can only be assessed in relation to the specific combination of managerial practices and supervisor adequacy obtaining in each particular industry.

5. A case study approach explains the particular pattern of absence and turnover rates in each enterprise. This approach also indicates that industrial stability, adequate remuneration and positive managerial interest are associated with stable work behaviour.

6. Absenteeism/...

6. Absenteeism and labour turnover cannot be major factors detracting from productivity in South African industry. Facts concerning the actual level of productivity in the Union are a first requirement. Research into the factors determining this level is also needed. Recommendations for the planning of such research are formulated.

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1. BACKGROUND TO THE STUDY.

This report is a preliminary statement of the South African findings on C.C.T.A./C.S.A. Joint Project No.5, an Inter-African study on Absenteeism and Labour Turnover. These two aspects of industrial instability had been selected by the Inter-African Labour Conference for investigation as factors likely to contribute to the low productivity of African industrial enterprises. The National Institute for Personnel Research, commissioned by the Union Department of Labour, designed a research project which would

(a) describe the dimensions of the problem,

(b) relate the phenomena to "their causal human factors".

The Institute was guided, in the first instance, by the Technical Plan drawn up by the Committee of Experts at the Salisbury Meeting, November 1956. The extent to which the Institute investigated the factors indicated in the Technical Plan has been detailed in the Second Progress Report. The major requirements of the Committee were embodied in the study.

The Institute, however, went beyond the requirements of this Committee. The additional aspects that were included were concerned with the attitudes, aspirations, motivations and values of the industrial labour force that was investigated. In earlier studies, in both the United Kingdom and the United States, it had been established that a man's work behaviour, in this instance absenteeism and turnover, were associated with his attitudes towards

his/...

his job, his company and his supervisor. We could be guided by such findings but we could not replicate our study along identical lines. We could not assess how colour distinctions in the social and occupational sphere would influence work attitudes or behaviour. We were not able to evaluate, a priori, the extent to which the Black industrial worker was an urban dweller committed to industrial employment or a rural - oriented peasant compelled by economic pressures to enter industrial employment for varying lengths of time. We considered that the answers to these problems were essential in understanding the facts of work behaviour and productivity. Since there were no earlier studies in the Union which were concerned with these problems, it was necessary to prepare extensive interviewing programmes on these aspects. We were not able to short-circuit this fact-gathering since no one item was meaningful without relating it to other items, either on the same aspect or on other aspects. One cannot effectively study the degree to which the Black worker is integrated with urban industrial life, and the work attitudes and satisfactions to which such integration has given rise, without paying some attention to managerial policies and responsiveness towards their Black employees. This introduced an additional fact finding investigation, involving interviews with management, executives and supervisors. These interviews served the added purpose of checking attitudes against the stated facts of policy, and assessing, as policy moved down the line, the changes which occurred in its implementation. We considered that a total evaluation of the work environment was necessary to the understanding of any one process or factor in that situation.

The present/...

The present report, however, does not include the total range of material available for analysis. The reasons are that

(a) this report has been drawn up on conformity with the plan for the presentation of common data to the Inter-African Labour Conference, as agreed upon at the Paris meeting in May, 1960 [1];

(b) insufficient time is available to complete an analysis of all the data by the target date set in Paris.

The information which has been collected in this study is, we believe, of fundamental importance. Its value extends beyond the immediate purpose of this industrial investigation. Our findings will give an insight into the motives and aspirations of a large segment of the Union's population which is being rapidly industrialised. Comparisons with the populations of other industrial areas both within and outside Africa will be made possible. These comparisons will indicate the nature and extent of the similarities and differences between our industrial populations and those in other areas.

2. LIMITATIONS OF THE STUDY.

The pattern of the study was determined by the requirement to complete the field investigations within the cycle of one year and the presentation of a first report by the middle of the following year. Immediately preceding the study year it was necessary to make contact with industry,

to plan/...

[1] Appendix A.

to plan the research design, to draw up the record cards, to pre-test the interview schedules, and to recruit and train additional staff. Though the major part of all the preliminary arrangements was concluded between the date on which we were commissioned by our Government to participate in the study, and the meeting of Research Directors[1], field investigations could not start until the common terms of reference had been agreed upon at that meeting. The limitation of time and resources, therefore, greatly influenced the development of the plan of research.

The fundamental need was to gain the co-operation of enterprises for participation in the study. With more adequate time resources a wider selection would have been possible. Under the pressure of a deadline the selection could not be systematic. A large number of factors had to be considered when deciding whether to include or reject an industry.

The primary problem was that of willingness to co-operate. Through this "willingness to co-operate", we believe, an immediate bias entered into the sampling of enterprises. Recent investigations in the United Kingdom have indicated that there is a significant difference between the attitudes of industrial units, where management and ownership are separated, and those in which there is no separation between these two functions. The first type of enterprise is more aware of the rôle and value of scientific managerial and personnel policy, the second more inclined to the idea that the owner-manager is in the best position to make judgments on all matters

within/...

[1]Brazzaville. February 2nd - 6th, 1959.

within his enterprise. On the whole, though not entirely, the companies studied by us are of the public ownership type, or are moving in that direction. Their attitudes to scientific industrial investigations are sophisticated. They accept the need for, and the results of, such investigations.

"Willingness to co-operate" had a number of implications for the industries which were included. It became necessary for them to grant facilities at many levels. An indirect cost was implicit in our need for taking men off the plant floor for interview purposes. Administrative aid was frequently necessary in the abstraction of information, other than absence and turnover data, from the firms' records. Assistance was required in organising men's absences for interviewing periods. Personnel officers, secretaries,managers and supervisors had some additional duties to perform as a result of our entry into the industry. Once this co-operation was agreed upon then certain other criteria were considered before a decision was taken whether or not to include that enterprise in the investigation.

These criteria were :

(a) reasonable and foreseeable stability i.e. the industry was not contemplating any large scale re-organisation during the period of the study year;

(b) that the record system maintained by the company was adequate for, or could be adjusted to, the requirements of our abstraction of absence and turnover data;

(c) that the unit, on a preliminary investigation, satisfied the needs of the research design in these items : (i) the incorporation of a small sample

of coastal/...

of coastal factories,

(ii) the necessary skill differentiation,

(iii) the adequacy of numbers for the selection of the interview sample;

(d) that, other than the coastal group, the industries should lie within a reasonable travelling distance from the Institute.

This contained a major portion of the study within the limits of Johannesburg, Pretoria and the Reef.[1]

The second limitation refers to the interviewing programme. Though the interviewing was extensive, it was not complete. We were unable to question every informant on each aspect of managerial policy or on every facet of motivation and aspiration. Group discussions were industrially not practical, as the groups had to be selected according to the stratifying principles. Our resources could not meet an extension of the three-hour individual interview. The alternatives were either to limit the range of questions or apply sectors of schedules to selected groups of informants, thereby covering the total area of investigation. Since the circumstances surrounding the employment and background of Black industrial workers were poorly documented, and since we did not know which of these circumstances were most relevant and pertinent, we decided that a comprehensive study was preferable.

We would have chosen, with greater resources and time, to interview each stratum of the white hierarchy from management down to charge-hands. This would have given a detailed picture of company policy and of the points of consolidation or of recasting in the course of its implementation/...

[1] An industrial and mining complex stretching to the East and West of Johannesburg.

implementation. It would have elucidated the total lines of communication within each industry. Since such a complete investigation was impossible, we selected key-positions in the structure : top-management, factory executive and first-line supervisor. Though time was generously given at all levels, some aspects required more than industry could allocate or the Institute could meet from its available man-power.

Finally, we consider that no project of this nature is complete without a systematic observational study. We have collected a mass of data on what men say about many aspects of their industrial environment. These attitudes should be validated against observed fact on the factory floor. An observational study would also serve the useful goal of knitting together the diverse and varied items which give the industrial unit its coherence and continuity. We were not able to carry out such a systematic study.

3. DESIGN OF THE STUDY[1].

The final plan of enquiry consisted of three parts:

I. the collection of absence and turnover records on the non-white labour force in 18 selected enterprises for the period 1.1.59 - 31.12.59;

II. the collection of demographic, sociological, industrial and psychological data from a sample of 1200 black male subjects selected from 12 of the 18 enterprises;

III./...

[1]. For a detailed report statement see Progress Report 1.5.59 - 31.10.59.

III. the collection of factual and attitudinal data on personnel practices and the black industrial worker from a selected sample of managerial, executive and supervisory staff in the same 12 selected enterprises.

The interview sample was stratified according to

(a) skill grade,

(b) enterprise.

(a) Skill grade.

At the present stage of industrial development, the definition of skill, as applied to apprenticed and qualified artisans, could not be generally applied to a black labour force. Nevertheless we were aware, from our previous industrial experience, that differentiation did exist. We decided to conduct, within each industry, a simplified job evaluation. Each operation in each industrial unit was investigated and assigned to a three point scale.

An operation is considered to be

(i) manipulative or skilled when the process involves a free use of tools requiring judgment and appraisal in carrying out the sequence of the operation;

(ii) mechanical or semi-skilled when the process is pre-set by the nature of the machine and requires only lever-pulling or button-pressing;

(iii) manual or unskilled when it falls within the range of routine manual labour.

This system has provided a uniform method of assessment of skill grades, and has made possible

both /...

both intra- and inter-factory comparisons.

(b) Enterprise.

We have indicated the reasons for our inability to select a systematic sample of enterprises. Enterprises were divided into two or three skill factories. Six units of each type were included. The coastal units were only of a two-skill type. Our preliminary investigations indicated that the higher skilled jobs appeared to be carried out more frequently by Asians.

Within each enterprise forty men were interviewed in each skill grade. These men were selected only from departments directly concerned with the production process :

(i) production
(ii) maintenance
(iii) stores
(iv) dispatch.

Eleven of the twelve enterprises which we included in the interviewing programme have been analysed for this report. These units are :

1. Building and Construction.
   1.1 A company operating one coastal and one inland branch.
2. Secondary Industry.
   2.1 Metal works operating one coastal and one inland factory.
   2.2 Glassworks operating two inland factories.
   2.3 Motor Assembly Plant operating inland.
   2.4 Textiles operating one coastal and one inland factory. The coastal factory consists of four units.

2.5/...

2.5 Textiles (Cotton Mills) operating one inland factory of two units.

2.6 Metal Works (Holloware) operating one inland factory.

The total number of record cards analysed for this report is 4477. This number is smaller than had been envisaged since the turnover rates proved to be lower than we had anticipated.

The skill grade breakdown is :

Skill grade I	881
Skill grade II	1369
Skill grade III	2227

4. INTERPRETATION OF THE DATA.

The findings presented in this study should not be assessed as definitive or conclusive. The data should be rated as a pilot study of all the material available. It is the base from which further analysis is possible. We have limited ourselves to a survey-type examination of the information. This has indicated what would be the most valuable and meaningful approach to the subject matter. The conclusion we have reached is that human attitude towards and action at work can best be understood by means of the case study approach.

The case study approach is one in which each

industry is examined as a functional unit. Numerous factors combine to determine absence and turnover behaviour. Some of these factors relate to the background of the workers, others to their work motivations, still others to the work environment including managerial practices and interpersonal relations. A survey such as we have conducted, in which the relevance of each of these factors for absenteeism and turnover is investigated either separately or in simple combination, does disclose correlations. It is difficult, however, to arrive at causal relationships. In order to do so, the interaction between all these factors should be determined. Since the situation is far too complex to lend itself to a variance analysis design, the case study provides the best approach.

From a series of such intensive case studies, covering various industries, it would be possible to derive certain general rules concerning behaviour in industrial situations. This in turn would enable us to predict what is likely to happen under particular circumstances. We would draw on such knowledge in the formulation of personnel policies to increase human productivity, which is the ultimate objective of this study.

In the interpretation of the present data caution should be exercised in extending these findings to a larger sample. We state this limitation since :

(i) our factory sample may be biased in favour of those which are more aware of the importance of personnel practices;

(ii) the study of absence and turnover fluctuations over only one year may not give a true indication

of the /...

of the situation over a number of years. Certain variations suggest that these fluctuations are due to specific, identifiable and possibly non-repetitive circumstances.

5. THE FINDINGS.

1. Absence Rates.

Absence rates have been calculated according to the accepted formulae[1]. Three rates are available :

1.1 Group Time-Lost Rates.
- 1.1.1 Group Gross Time-Lost Rates.
- 1.1.2 Group Accident and Sickness Time-Lost Rates.
- 1.1.3 Group Other Time-Lost Rates.

1.2 Individual Time-Lost Rates.
- 1.2.1 Individual Gross Time-Lost Rates.
- 1.2.2 Individual Accident and Sickness Time-Lost Rates.
- 1.2.3 Individual Other Time-Lost Rates.

1.3 Individual Absence Frequency Rates.
- 1.3.1 Individual Gross Absence Frequency Rates.
- 1.3.2 Individual Accident and Sickness Absence Frequency Rates.
- 1.3.3 Individual Other Absence Frequency Rates.

All these rates have been calculated on both an annual and a monthly basis, for each enterprise and for each skill grade within the enterprise.

The annual enterprise rate is most useful for making inter-factory and inter-country comparisons. An examination of monthly fluctuations within each skill grade in each enterprise is, however, the only meaningful approach to an understanding of those events which have produced each unique pattern, since there appears to be

very little/...

[1]See First Progress Report.

very little similarity in pattern, either between factories, or between grades within factories or over enterprises. In previous studies which the Institute conducted among both male and female white operatives we found that there were marked upward trends during the winter months. Except in isolated grades these findings are not repeated in the present study. This more detailed examination of the rates makes it possible to establish whether different grades might not be making a differential contribution to the total picture, or whether diametrically opposite trends might not, in fact, lead to an inaccurate assessment of the situation within an enterprise. Since the purpose of this study is both to state the dimensions and attempt to elucidate the causes of the problem, detailed evaluation of these data is required.

We have approached the analyses of our findings in this manner; but since we were limited in time we have applied this method only to the Group Time-Lost Rates. Because of the generally low absence rates, it did not appear worthwhile to apply it generally, except in those enterprises where absence rates constitute a major industrial problem. When this situation is demonstrated then our original intensive scrutiny is required.

We are presenting the findings on the three Group Time-Lost Rates, both for enterprises[1] and grades within enterprises[2]. A tabulation[3], based on comparative rates from Australia and the United Kingdom, is also

presented/...

[1] Appendix B Table 1.1
[2] Appendix B Table 1.2
[3] Appendix B Table 1.3

presented, together with estimated rates from the United States. The most valuable comparisons are from Australia as regular surveys and spot checks are available since 1942. The Australian rates give support to our contention that one year is not an adequate period in which to collect this type of data. There are marked trends and fluctuations from year to year. We have selected an average rate for comparative purposes.

The evidence is that the black industrial worker in the Union of South Africa does not differ very strikingly from the Australian, British or American operative. If the Australian rate of 4% is used as a base-line, then four of our industries exceed that limit. If other rates are used then only two are higher than would be expected on the basis of rates in other industrialised areas. There are none as high as those found among a group of white South African operatives.

These findings would suggest that the industrialist in the Union, to the extent that the industries included in the survey reflect the total situation, is faced with an absence problem of the same dimensions as is management in other countries. The question, which he must ask, but which we cannot attempt to answer in this study, is : What is an acceptable absence level? He should, however, feel reassured in knowing that he has not to meet a phenomenon which is unique in its dimensions and that he can find a common comparative basis for his assessments.

2. Labour /...

2. Labour Turnover Rates.

Indices of turnover have been calculated according to the formula accepted at the Salisbury Meeting. This index, which is a compound of accessions and all types of separations, is extremely difficult of interpretation without reference to the component parts. In order to supplement the original rate we have calculated :

2.1 Turnover Rates (the original formula).

2.2 Accession Rates.

2.3 All Separation Rates (Separation Rates A).

2.4 True Separation Rates, including both dismissals and resignations (Separation Rates B).

2.5 Dismissal Rates.

2.6 Resignation Rates.

A fairly accurate assessment of Retrenchment Rates may be arrived at by subtracting Separation Rates B from Separation Rates A. All these rates have been calculated on both an annual and a monthly basis, for each enterprise and for each skill grade within the enterprise.

The value of and the relationship between annual and monthly rates are of the same nature as is indicated in the absence tables. We have found that the most rewarding analyses emerged from an inspection of Accessions, Separations A and Separations B, grade-by-grade and month-by-month. By means of such an analysis we were able to arrive at some assessment of the relative stability of an industry and of the workers within the industry. We have reached the conclusion that an unstable work situation, either within a total industry or for any particular skill grade within an enterprise, attracts an unstable labour

force/...

force. The insecure industrial situation, interacting with the mobile work group, results in more frequent separations. Firms or skill grades having higher than average redundancy rates also have higher dismissal and resignation rates. High dismissal and resignation rates further appear to be linked together, without necessarily reflecting a high retrenchment level. Retrenchment figures in the secondary industry units are generally low.

We are presenting the summarised findings on all turnover indices, both for enterprises[1] and grades within enterprises[2]. A tabulation based on comparative British, American and Australian rates is also given[3]. The most valuable comparative statistics are those given by the United States Bureau of Labour Statistics.

The evidence suggests that the black workers in South African industry do not differ from their white overseas counterparts. This of course does not apply to the migrant worker, who resides permanently in a rural area, and who generally lives in compounds whilst working in an urban area. He works for a specific period, often determined by contract. This mobility is a phenomenon of a different order from that commonly understood by turnover. It is certainly not preventable as long as the worker remains attached to his rural or tribal way of life.

The conclusions on the non-migrant labour force

are based /...

[1]Appendix B Table 2.1

[2]Appendix B Table 2.2

[3]Appendix B Table 2.3

are based on the comparative rates of 3% for British, 4.4% for Australian and 3.6% for American industries. The local separation movement is frequently lower than these in some of the enterprises studied. The exceptions are the two construction units, one glassworks and one textile enterprise. There is an inherent and universal insecurity in building and construction. The high levels in the other industries are attributable to easily defined causes which will be discussed in a later section on the total evaluation of each unit.

The closing question to this section, as for that on absenteeism, is : What is an acceptable turnover rate? There have been studies calculating the cost to industry of preventable turnover. It has also been suggested that too low a turnover figure reflects an unsound industrial situation in which workers are dominated by fear and indicates suppressed industrial unrest[1].

The South African findings in this study give evidence of an instability of no greater magnitude than is to be found in technologically advanced countries which operate with populations having a common industrial background. The South African industrialist should be able to approach problems of management, which require worker stability, with the knowledge that the average black industrial worker is not fundamentally more mobile than other industrial groups.

3. Biographical /...

[1] Woytinsky, W.S. and Associates
Employment and Wages in the United States.
New York 1953, The Twentieth Century Fund. p.385.

3. Biographical Factors.

Since certain circumstances concerning a man and his background may influence his work behaviour, a limited number of these biographical factors will be presented and related to absenteeism and labour turnover. The range of biographical data is limited to those factors which could be collected from factory records. We have a wider range of items on the interview sample. It is our intention in later reports to extrapolate from this limited sample to the total population.

We were not able to collect data simultaneously in all the units. In some industries we began our record-taking some months after the start of the observational year when a number of leavers reflected in the books of the companies had already dropped out. The data which were collected may be biased in favour of "stayers" from whom we were able to obtain supplementary information if the company records proved to be inadequate. We assume, however, that the characteristics of the "leavers" on whom we have no records are similar to the large number of "leavers" on whom information is available.

The biographical factors which we have included are :

Age
Marital Status
Length of Service
Nett Earnings
Ethnic Group.

Before relating these factors to absences and labour

mobility/...

mobility we wish to present findings on the composition of the labour force[1]. The picture which emerges is that of a young work group in which less than 14% are over the age of 44 years. The larger proportion are married (69%). A high percentage of these employees have been on their present job for two years and under (61%), and only 19% have been at their posts for five years and over. The average pay-packet for a full working week is under £3.10.0. for 52% of the group, with 14% earning £5. and over.

The limitation of all composite figures is that the wide range of variation which distinguishes human groups is submerged. Within the units investigated by us there are some which have an older age composition than the average, some with a younger one. In some enterprises, or skill grades, single men predominate, in others there is a higher than average married population. Some industries have a more mobile work force, others are almost completely stable units. In some the wage structure reflects the norm, in others it is better than or falls short of this figure.

It is evident from the list of items that many of them are linked together through the common element of age. It is reasonable to suppose that a young man is less likely to be married, will have a shorter period of service and will be earning less. Our evidence indicates that the average age is higher for men in the higher skill grades,

and that /...

[1] Appendix B Tables 3.1, 3.2, 3.3, 3.4, 3.5

and that all the absence rates drop as the skill grade moves higher. This evidence is consistent with findings that demonstrate that unskilled workers have more frequent absences than skilled men.

In a study conducted among white South African operatives we found that age dichotomised the group into young men with poor absence records and older men with good records. Similarly British and American studies have indicated that among younger men there is a regular trend for Other Time-Lost Rates to be higher than among older men. In general the same pattern has emerged among the population which we have studied in this investigation, i.e. older men have lower Other Time-Lost Rates. We consider that Other Rates give a more accurate indication of voluntary absence rates than Accident and Sickness Rates.

The other patterns which emerge are that long service, married and higher earning categories have lower Other Time-Lost Rates. It will be important in later statistical studies to determine whether these relationships exist independently, or whether they are primarily a reflection of the age factor.

Our findings on the association of these biographical factors with True Separation Rates indicate that there is a significantly higher proportion of separations among young, unmarried, short service and low-earning men. The findings on the behaviour of this black labour force is that its general movement patterns are in the same direction as those of men of similar age, marital and job status in other communities.

4. Urbanisation/...

4. Urbanisation.

In addition to the personal details which we have presented we expected that the degree of a man's urbanisation would also influence his work behaviour. The items which we selected to measure degrees of urbanisation were :

4.1 Place of birth, i.e. whether in a rural or urban area.

4.2 Present place of residence of wife and children (mother for unmarried men) i.e. whether in a rural or urban area.

4.3 Whether worker possesses land rights in a rural area.

4.4 Period of continuous residence in an urban area.

There is an added comment on item 4.4. We contend that urbanisation is a social and psychological condition which is not acquired during short and interrupted periods in urban centres. A man requires to be assimilated into the urban environment and to feel that he has taken root there. We followed Hellmann[1] and decided on an uninterrupted period of ten years as qualifying a man for such a socio-psychological transition. At the Paris Meeting it was indicated that this time period would, in other territories, result in a negligible number of men qualifying for urban status. In order to present common data with other territories we have, in this report, introduced a range of shorter periods. It is, however, our intention in later reports to revert to our initial

time /...

[1] Hellmann,E.in Social Implications of Industrialisation and Urbanisation in Africa South of the Sahara. Unesco. 1956. p. 730.

time qualification for urbanised status. We will also attempt to determine whether each of these items has equivalent value in assessing a man's degree of urbanisation.

The growth of modern industrial cities has been accompanied by the growth of urban populations. It has been assumed that men and their families will live in their areas of employment. For this reason the two phenomena - urbanisation and industrialisation - have generally been regarded as two facets of the same developing pattern. We believe that we have in South Africa a situation which goes counter to that general rule, that there exists a group of industrialised men who are nevertheless rural-oriented. We are not referring to the migrant worker who comes to urban industry for defined periods before returning home to participate for varying lengths of time in the traditional economic and social life. The men who are the subject of our comment are continuously employed in industrial work, generally not interrupting this employment and only returning home for the annual factory recess. They nevertheless retain strong links with the country and regard the rural environment as being their home. We will need to assess the reasons why they maintain their rural base. These reasons may derive from the rural orientation of the man and his family. They may be the result of restriction on movement or lack of adequate family accommodation in the areas of work.

It will further be necessary for us to measure not only a man's degree of urbanisation, but also that of his industrial integration. This dimension might be the

more important/...

more important in determining his attitude to or behaviour in his work environment. We will be required to examine the social, legal, industrial and psychological strands which envelop a man in his transition from rural peasant to urban industrial worker. In the present report we are concerned with the sociological criteria which we have defined. The number of men who are assessed on the urban - rural scale is 1011.

Though 55.8% of this population fall into the two highest urbanisation categories[1], there are marked differences between industries in the composition of their labour force. The three coastal units have decidedly lower urbanisation rates than all, but one, of the inland enterprises. Two of the inland enterprises have significantly more urbanised populations than all the other units[2]. Within the units there are not the same marked differences between grades[3]. Over the total population, however, the trend in relation to the skill grades is that as a group moves up in the skill category it also moves up the urbanisation scale[4].

The relationship between urbanisation and absence behaviour is not clearly defined. Though Individual Gross Time-Lost Rates and Accident and Sickness Rates decline as the degree of urbanisation increases - there

are no/...

[1]Appendix B. Table 4.1
[2]Appendix B. Table 4.1
[3]Appendix B. Table 4.2
[4]Appendix B. Table 4.3

are no differences for Other Rates - additional statistical tests are required before these tendencies may be regarded as significant. These tests should be concerned with isolating high absence groups and testing their relationship with urbanisation.

The association between urbanisation and turnover data depicts clearer trends. When all the industries are examined as one unit it is found that a higher proportion of men with low urbanisation ratings separate, and that these same men have a higher resignation rate than men who are more urbanised. The direction of this association is the one which would generally be expected. As men become more committed to urban employment it becomes more important for them to maintain themselves within that urban environment. Over and above their dependence on their urban earnings they frequently desire to emulate the new groups with whom they come into contact and this requires continued and uninterrupted employment in the industrial situation.

Another factor may be a reflection of a growing occupational interest. The newcomer from the rural area does not know what is available and requires to try his hand at several jobs before settling down. Since he is inexperienced he will only be given the more menial jobs at the beginning and the drifting about is inevitable under those circumstances.

The relationship of industrialisation, urbanisation, job satisfaction and motivation will be fully examined in later reports, since these may be important contributory factors in the stabilisation of this black labour force.

(5). The Workers Rate Supervision[1].

The importance of interpersonal relationships in the work situation has been increasingly demonstrated in industrial investigations. These human relation approaches assume greater significance in a multiracial work situation. The South African industrial environment is made more complex by the existing pattern of social relationships and the extent to which these are carried over into the work context.

The black workers in South African industries attach great importance to supervisor adequacy, fair supervisory practices and job security in their assessments of their work environment. Since these workers have a background which differs from that of the western industrial society into which they have been drawn, it is not enough to know the ratings which they give to varying aspects of managerial policy. It is equally important to know their reasons for attributing these values. There is no certainty that they will be the same as those given by operatives in other countries. In the same way the standards of satisfaction and dissatisfaction may be relative to what a man expects from any particular situation or relationship. For our understanding of the black worker it will, therefore, be necessary to go beyond the present approach in which we have rated attitudes on scales. The greater contribution

towards/...

[1]For the purposes of this present study this includes attitudes to supervisor, supervisory practices and security.

towards this understanding will be made by an examination of the underlying values, standards and expectations.

In the Second Progress Report we outlined an experimental approach for the handling of such data. We have used a selected number of these items to assess attitudes to supervision in the present report. These appraisals should be regarded as tentative until the total range of attitudes on the major managerial practices has been investigated and analysed.

Since many aspects converge on the interaction of men, supervision and work behaviour, we believe that the workers' rating of supervision, and the relationship between it and absence and turnover cannot be meaningfully described only in terms of correlations. Case studies are preferable, especially when samples are small, though the results obtained from them are suggestive, rather than conclusive.

In the present report the three attitudinal indices which are discussed are :

5.1 Index A : Attitude to Supervisor.
- 5.1.1 Treatment by Supervisor.
- 5.1.2 Attitudes towards Supervisor.
- 5.1.3 Attitudes towards working under Supervisor.
- 5.1.4 Satisfaction with race of Supervisor.

5.2 Index B. Evaluation of the company's Supervisory Practices.

5.3 Index C. Evaluation of degree of Security as reflected in the firing policy of the company.

Interfactory/...

Interfactory comparisons show no statistical differences in the ratings on Index A. This also applies to Index B. The average ratings on Index C in the two firms with the best absence and turnover records are decidedly better than those on the three lowest ranking units[1]. There are, however, no differences between skill grades on these ratings[1].

We have inspected the proportion of favourable attitudes on each index within each industry[2]. We have found that in ten firms between 60% and 88% of the workers rate their supervisors favourably. In the eleventh unit only 47% gave positive ratings. The existing supervisory practices were acceptable to the greater majority (53.8% - 97.5%) of the workers in ten factories. Only in one firm did the level fall to 20%. The security assessments were from 50% - 92.4% in eight firms. In three these fell to 15.4%, 34,2% and 44.7%. These findings clearly indicate a positive overall appraisal of supervision. These appraisals make it difficult to assess the influence of supervisory practices on absence and turnover rates, the more so since absences and turnover in this study have generally been demonstrated as low. This high rating of supervision may be characteristic of the industries which participated. Many of these companies are aware of the importance of personnel practices aimed at supervisor adequacy.

In relating /...

[1] Appendix B. Table 5.1 [2] Appendix B. Table 5.2

In relating the supervision ratings both to absence and to turnover indices, we find that there are no positive correlations. These findings were expected once the overall favourable patterns had emerged. Since there is little discrimination either within the attitude rankings or the work behaviour, the statistical relationship of supervision to absence and turnover could not be demonstrated.

Studies in Britain and the United States have, however, revealed a relationship between supervision, absence, turnover and productivity. A study on white South African operatives further indicated the importance of supervisor adequacy in influencing worker action. Since the groups used in this supervision section of the study are small[1], we are not hopeful that in applying the same statistical tests as recommended in urbanisation we will achieve different results. The alternative approach with small samples is to carry out intensive analyses relating all the relevant factors and deriving from these analyses the causal relationship between absence, turnover and supervision attitudes.

[1] Total n = 338.

6. THE CASE STUDIES.

We have stated the need for carrying out integrated and intensive analyses of the results in this study. A limited case study approach will be made on what has so far become available. Since much information still requires analysis these studies can only be looked upon as tentative. Data which have been presented in earlier sections of this study will be examined together with material drawn from managerial, executive and supervisor interviews. The interaction of company policy and work behaviour will be assessed, and an attempt made to state the general trends which emerge from these analyses.

1. Building and Construction (IB 3 CB 4)

The building industry is unable to offer the same degree of continuity of employment as is generally found in secondary industry. In evaluating the turnover in a building and construction company it is necessary to accept that men who enter the industry are fully aware of this limitation. Within this accepted frame of insecurity there are decided differences between the two branches of the company. The coastal branch which participated in our investigation is marked by an excessively high level of retrenchments, resignations and dismissals. In the inland branch, the retrenchment rate makes the greatest contribution to the turnover indices which, high as they are, are lower than the coastal unit.

The impression/...

The impression is gained that the coastal unit, because of the insecurity of the employment it offers, has to draw on an unstable labour force which, in its turn, makes a considerable contribution to the overall mobility. The inland workers appear to be, by comparison, more stable. Their turnover is mainly attributable to the completion of contracts and the retrenchment of men who could not be absorbed.

In the inland branch there were an increased number of resignations during the second half of the year. The indication is, that as retrenchment looms ahead, men attempt to find alternate employment for themselves. There is also an impression, gained from a comparative analysis of the record-card data, that a period of high retrenchment, or anticipated retrenchment, is accompanied by high Other Time-Lost Rates. Since both branches grant additional leave, or accept a certain level of unauthorised absences, men may use these opportunities to find alternative employment. The inland branch is rigid in regard to Monday absenteeism which is not tolerated and is a reason for dismissal. The coastal branch is reported to grant ploughing leave to certain of its employees.

The coastal branch has a predominantly rural labour force. This may be a further factor contributing to a more rapid turnover, since it has been established that the lower the urbanisation rating the greater the tendency to separate. Many of these men, from a study of their work histories, appear to be near-migrant in character. Many, since they are newly come to the towns, may be restricted to certain types of industries. The

rural/...

rural bias explains the adequate rating which this group has accorded to the security provided by their firm. Their need and desire for continuity in employment is not of the same order as that of their inland colleagues, who are primarily urban. The latter group gives an extremely low rating to their security in the industry. An added factor may be the degree to which management has succeeded, or not, in implementing policy for the more rational curtailing of the labour force. This, in turn, is linked with the problem of foreman autonomy in this industry.

The position of the building industry in the implementation of personnel policies is an extremely difficult one. Site foremen have, by tradition, a high degree of independence. Infringements of foreman rights are frequently resented and resisted. The right to hire and fire is jealously guarded. Though provision is made for the review of dismissals, the functioning of this requirement differs in the two areas, or the men view the results more critically in the inland unit.

The stereotype of the building foreman is that he is required to be tough. We were informed both by management and supervisors that building workers expected him to be so. The workers counter with the statement that harsh supervision superimposed on dangerous and heavy work makes the situation intolerable. Yet, for all their negative evaluation, the workers do not regard this firm as being amongst the worst construction companies.

Does /...

Does this company offer its workers any inducement to remain in its service? The wage structure in both units is very poor. This industry falls into the lowest ranking on our scale[1]. It has, in addition, a low ceiling for economic advancement. Only a very small percentage of men may advance to supervisory and clerical positions.

The company offers no fringe benefits. The first aid and sanitation facilities are minimal and rudimentary. There is no paid sick leave. The firm appears to offer no security to older employees. Protective clothing is issued only to workers who require it for the performance of specific tasks.

The first-line supervisors, in both units, believe that the company policy is aimed at keeping the workers contented. They appraise this policy as good, stating that the company does all it can for the workers. This evaluation by supervisors is important since it indicates a lack of awareness of the deficiencies in the company's personnel policy. Top management is more critical of the limitations. The supervisors' rating of company policy is a reflection of what they consider adequate for the workers. This standard differs from their expectation

for themselves, /...

[1] Appendix C. Table 6.1

for themselves, as was revealed in an earlier study which we conducted.

The workers in both units give their supervisors a medium rating. This would give support to the argument that workers entering the building industry either accept, or adjust themselves to, low standards of supervisor adequacy. We have no data at present, which indicate the directions in which building workers differ in their background or motivation from other industrial workers. The picture of a labour force employed on arduous work in an insecure industry, offering very little inducement, requires further examination. This extension of the analysis should indicate what circumstances draw the men to the industry and apparently hold them - especially inland - under unfavourable industrial and managerial conditions. It may also indicate whether, in contrast to other industrial sectors, this industry is only able to recruit and retain men who have failed in other enterprises or are legally not permitted to enter those industries. If the building industry wishes, within the limitations of its economic structure, to reduce its absence levels and preventable mobility, then it will be necessary for it to reorganise its personnel practices in order to offer greater security and attract a more stable industrial worker.

2. Textiles (TC12)

This company has an extremely low turnover rate which is a matter of proud and favourable comment on the part of both management and supervisors. We believe that there are many factors in the personnel policy which have contributed to this stable labour situation. The company offers both a short- and long-term security. It does not retrench, preferring to put men on short time if lower production is required. Except for pilfering, all dismissals must be approved at executive level, and with attempts to retain rather than dismiss. The men value this extremely highly. It is policy to retain old employees. This is facilitated by the light nature of the work.

The firm offers economic advancement in the form of regular bi-annual increments. The scale was extended when the first group of men reached the top. This gives added inducement to remain. The wage structure is better than average, and this firm falls within the highest range of our ranking system.

The firm provides opportunity for informal grievance procedures both for groups and individuals. The workers are encouraged to belong to an organisation which carries with it the indirect benefit of a sick fund.

Amenities /...

Amenities in the form of subsidised meals, social and recreational facilities, advances in time of distress and much valued protective clothing (overalls) have all resulted from managerial interest.

Supervisors assess that the firm takes positive action in attempting to keep the workers content, and that they are in agreement with the firm's overall policy towards the black workers. The men give high positive rating to both their supervisors and the firm's supervisory practices.

Management attributes high abilities to their workers and believes that they are capable of learning new skills and undertaking supervisory responsibilities. Though there are no formal procedures, upward communication is permitted and management believes that there is good direct management-worker communication.

The firm is generous and understanding in the granting of additional leave which accounts for a medium absence rate. Since the group is characterised by more responsible workers - older, married and long service men - many with families living in a rural area, the firm recognises a need for granting such additional leave.

The conditions of work in this unit are probably further improved by the presence of a large group of men who have come from the same rural area and are bound together by links of family and a common background. It would appear that the adequacy of managerial policy has retained a group of stable men, who in their turn maintain the low mobility level in the industry.

3. Glassworks /...

3. Glassworks (GW8 GP9)

A glassworks was studied which has two branches in different parts of the Transvaal. These two branches of the same company offer interesting contrasts. Management policy is frankly production- rather than employee-oriented. Personnel practices aimed at higher production and leading to a bigger pay-packet are their goals, since they believe that the level of monetary reward is the employees' primary concern. In respect of turnover the company has achieved relative success only in one unit. We will examine the factors contributing to the situation in each unit.

In both units heat and noise are intrinsic to the continuous production process which requires a shift-work organisation. The shift-change at night imposes hardship on the men. The company has attempted, within the legal limitations permitted, to ease this situation. The hazards associated with the glass making process are allowed for in an active and positive manner. One unit has extended facilities to include a full-time nurse. Both units offer limited amenities but no fringe benefits. Both provide regular increments with a low ceiling and opportunity for promotion to skilled levels. Both have machinery for reviewing dismissals. The workers assess their security as moderate in one unit, and low in the second due to the lack of positive action by the Compound Manager. Older workers are accommodated by transfer to non-production jobs. This problem of ageing is less important among the rural-oriented group in the compounded unit. They retire to the rural areas. The white supervisors in both units assess that

the company/...

the company has a fair policy towards its black workers.

One unit is characterised by a medium turnover index and a low absence rate. The unskilled grade makes the greatest contribution to the separation level, but it cannot be judged as an unstable group. This same group has the highest Gross and Other Time-Lost Rates with a peak in December. This December peak is a characteristic of all grades and may probably be ascribed to the fact that this firm has no Christmas recess. The personal details concerning the workers reflect the composite labour force, with a medium urbanisation index. They rate their supervisors moderately and the supervisory practices as good.

This firm is given a low average rating within our scale. This standard is reached through the payment of a group production bonus to certain categories of workers. There are also a number of jobs from which men may derive positive satisfaction as they are able to view their contribution to the finished product.

There are no factors in either managerial policy or the composition of the group that should give rise to any striking trends in work behaviour. This picture of normal stability is reflected in the turnover rates and absence indices.

There are several features in the second unit which provide contrasts to the first branch. This second branch has a low absence rate and a high turnover index among the semi- and unskilled grades. The low absence rate may, in part, be attributed to the fact that about one third of the labour force is housed in a compound. From the

composition /...

composition of the labour force we would predict a high turnover rate. It has a higher than average proportion of young, single and rural-oriented men. The men with low urbanisation indices are of two types : relatively stable skilled men who work for fairly long periods before terminating their service to return home, and short-term migrants. This second group, together with the locally recruited men, contribute to the firm's instability. The poor wage structure, with no production bonus, interferes with the recruiting of a suitable labour force. There is a rapid turnover among inadequate men, or a loss of potentially good men who seek more rewarding employment. The pattern which emerged in the building industry is repeated in some grades of this branch : an inadequate wage structure reinforced by few inducements attracts an unstable and frequently unsatisfactory labour force.

4. Metalworks

4. Metalworks (IM1 CM6)

This company is sophisticated in its approach to scientific management. Its policy is both production- and employee-oriented. It aims at decentralisation of authority. Branch managers are granted independence to the degree that they are willing to accept such autonomy. Since the company's production is geared to meeting specific orders and not to stock-piling, there are fluctuating labour demands. The personnel practices of this company have as a goal the rationalisation of retrenchments. The solution is the maintenance of a considerable hard-core group and a peripheral casual labour force. Though management adheres to the wage determination of that industrial sector, granting increments up to a low ceiling, and paying long service allowance, nevertheless, this firms falls within a high average ranking on our scaling system. Security, as this reflects the firing policy, is high in both units. All dismissals are reviewed and the very high rating of the workers reflect satisfaction with the implementation of this policy.

The company's supervisory practices are rated as good, supervisors as moderately adequate. The firm does not tolerate ill-treatment of black employees and insists that such treatment should be reported. The discrepancy between the workers' rating of the firm and of the supervisors is an indication that interpersonal relations have not, as yet, attained the level that is envisaged by the personnel policies of the firm.

The two /...

The two branches will be evaluated against the general background of implemented company policy. There is one important regional difference. The coastal secondary industries employ Asian workers, often at supervisory level. With few exceptions these men are resented by the black workers, who claim that they are clannish and practise a constant nepotism. Other group tensions are, however, eased by the fact that the black workers have a common ethnic background, all belonging to the Nguni group.

The coastal unit has a generally low turnover rate. Contrasted with this is a high absence level for all grades. The firm grants authorised unpaid leave and tolerates a fair degree of unauthorised absences. The granting of authorised leave should be appraised against the rural links of many of the workers, and the particular events during the year of the study. Torrential floods in many rural areas necessitated men returning home to assess and repair the damage. The firm granted leave for this purpose. Hence the observed absence rates are probably an over-statement of the normal absence levels.

The firm offers a limited number of amenities including membership of a medical scheme and the issuing of protective clothing (overalls), laundered by the firm, to all workers. Interest free loans for housing are granted and there are company-sponsored recreational facilities.

The labour force is composed of two quite distinct groups. The semi-skilled grade has a higher than average number of older, married and long-service men. It is also

considerably /...

considerably more urbanised than the unskilled group. The composition of this group is posing a new problem for the industry. It is reluctant to dismiss these men as they become less productive. They are, therefore, making attempts to accommodate them within the existing framework. As these men are not predominantly rural and there are no social security arrangements, the company is now also turning its mind to that problem. The unskilled grade is younger and less urbanised, and within a stable industry-worker environment is only slightly less stable than the other grades.

The inland unit has both a medium turnover and absence rating. The greatest turnover is in the unskilled grade, with retrenchments contributing to the separation levels. These retrenchments occurred during one period in the year, and were followed by a period of accessions. There are no marked absence fluctuations.

The composition of this labour force differs from the coastal group. It tends to be younger with shorter service records. It is also more highly urbanised. The factory executive attitude to older men is not as clearly defined as in the coastal unit. This is attributed to the younger overall level in this branch, where age is not, as yet, a problem.

This branch also offers limited amenities including a visiting medical officer and the issuing of overalls. It has no recreational facilities. It offers assistance of distress to trusted long-service employees. The factory is sited near a black township.

The impression/...

The impression gained is that the personnel policy of this firm, including upward communication and the preparedness to investigate grievances, has been most successfully implemented by the officer assigned to these duties. In fact, the general conclusion reached in evaluating this company, in relation to the levels of absence and turnover, is that it is pursuing a managerial policy which has as a goal a stable and contented labour force.

5. Textiles /...

5. Textiles (IT 2 CT 5)

The major appraisal of this company will be made on the coastal branch. The inland unit was reorganised during the year of the investigation. We will attempt to assess, in light of the evaluation of the coastal unit, the influence both of company policy and reorganisation on the work behaviour of the inland group.

The coastal branch is characterised both by a low turnover and a low absence record. There are several factors which should produce a completely contrary trend. The basic wage structure is low. This branch is rated as poor on our scale. A small group of high earners only achieve this level with regular and continuous overtime. There is a limited increment scale with a low ceiling and few promotional opportunities. Though all dismissals require confirmation at managerial level, the men only give security a moderate rating. There are few amenities or fringe benefits, other than membership of a medical scheme. There are no specific provisions for ageing workers, since the majority still find their old age security in the rural areas.

Since the absence of positive personnel practices has not led to any instability in the labour force, we have looked for special circumstances that may have contributed to this stability. We believe that the primary factor is the low degree of urbanisation of this group. We have, however, indicated that low urbanisation is associated with high separation rates. At the same time we pointed out

that the /...

that the length of industrialisation was also a factor to be considered in relation to urbanisation and stability. These workers qualify as industrial workers though they retain their rural connections. Since, however, they are less advanced their work expectations are lower and they are more readily satisfied. This rural group is reacting favourably towards a paternalistic situation which is the firm's heritage from its founder. Such an environment is highly acceptable to a tribal group. The continued association of current managerial practices with good turnover and absence records will depend on management's ability both to recruit the same type of man and to provide him with the desired paternalistic atmosphere.

The inland branch has high turnover and a medium absence record. The unskilled grade is particularly unstable and has a higher absence index than the other group. There is, in the context of this grade, a repetition of the pattern of industrial insecurity and worker instability. This may be due to the reorganisation which occurred. There are, however, factors which indicate that this situation may be perpetuated. The basic wage structure is low and this branch also falls within the poor scale interval. As in the coastal branch, there is a small group of high earners who achieve this through overtime. The industry offers few amenities or inducements for a worker to stay with the firm. The local workers are resentful of the alleged preferential treatment given to a group brought from the coast. It is suggestive that the company has instituted in the inland area a personnel policy that has proved adequate in the coastal unit. The success of this policy at the coast

was due/ .....

was due to a clearly defined set of circumstances which do not obtain inland. Hence it can hardly be expected to have the same favourable effect.

6. Motor Assembly Plant/...

6. Motor Assembly Plant (MA 11)

The particular motor assembly plant that was studied has medium turnover and low absence rates. It offers a contrast with other industries since its unskilled grade displays the characteristics generally associated with higher levels. It is older, has longer service, is more stable and less absence prone. We believe that the explanation for this is to be found in an incremental system with a high ceiling. This proves attractive for unskilled men whose incremental chances in other industries are negligible or low. A high proportion of skilled men - the largest group in this industry - do not appear to stay long enough to enjoy the advantages of this system. In consequence this firm is rated as poor on our earning scale.

The industry does not rate itself as offering continued stable employment, and states that tremendous pressure is placed on production workers. During the year of the study employment opportunities were expanding. The workers rate their security low and, though there is a right of appeal, they feel that no effort is made on their behalf, especially if they are unskilled workers. The industry offers good promotional opportunities to skilled work, and there are many jobs in which men may derive a great deal of satisfaction. On the other hand the intrinsic nature of a limited number of semi-skilled jobs leads to an excessively high turnover rate.

Management rates the workers' productivity as adequate, their ability to learn and to supervise as good.

Supervisors/...

Supervisors evaluate the firm's treatment of non-whites as particularly good, though the workers as a group only give it medium rating, as they do the supervisors. The skilled workers in this industry are particularly critical of, and antagonistic towards, their supervisors since they consider that they are unqualified for their jobs. This appraisal is of both their calibre as leaders and as technicians. They state that they are inadequate at every level.

This company gives a longer paid leave period than the statutory provision. It has a resident nurse, provides subsidised meals, and assists in time of distress. Contacts with officials are eased through company intervention. It is sited near a housing settlement, eliminating long hours of travelling. From a description of this company's personnel practices, we would have anticipated a greater degree of worker satisfaction and a higher evaluation of management practices. The firm achieves only a moderate rating instead of the higher assessments theoretically expected. With the data which we have at present available we are unable to appraise at which levels of policy implementation there is a failure to achieve the company's intended goal.

7. Metalworks /...

7. Metalworks. (MH 10)

This firm is production-oriented. The responsibility for the level of worker production lies both with the white and black supervisors. Supervisor bonus earnings are dependent on worker results. If supervisors are motivated the company's targets will be attained. The white supervisors approve of the company's policy. The workers, however, give low ratings to their supervisors and despise the black first-line supervisors whose positions are most unwanted. This poor evaluation is related to the primary function of the supervisors. The supervisory practices of the firm and security, defined in terms of the firing policy, are only given moderate ratings.

The firm is stable and expanding. The incremental system has a low ceiling and advancement is possible to skilled level. The company regards the workers as productive and able to attain high levels of skill. There are also a number of jobs from which men may derive a positive occupational satisfaction.

The company offers only limited amenities, but is sited near an extensive housing scheme. Older workers are retained on less strenuous jobs.

When this company is reviewed in terms of the men's evaluations and its own statement of policy, there appears to be little reason other than its stability, for the low absence and turnover rates. Our appraisal is that this

company/...

company has retained its labour force through an adequate system of financial incentives. This firm is rated as good in terms of our criteria since a large percentage of men attain a high wage level. The existing system, despite their attitudes, is acceptable to the workers due to the ultimate economic rewards.

The first and most striking conclusion to be drawn from these case studies is that direct and consistent causal relationships between worker stability, certain aspects of the factory environment and the socio-economic background need not arise. Turnover and absence behaviour are the resultant of many factors that may occur in diverse combinations. They must be studied in real life situations where controls cannot be imposed, and the use of statistical methods which take the many interactions into account is difficult. No single factor outweighs all others, but there are indications that stable industrial conditions, adequate economic returns and positive managerial interest are all primary requirements associated with labour stability. Yet a modification in respect of any one of these may be compensated for by intrinsic job satisfaction, or by particular expectations on the part of an inexperienced, industrially unsophisticated labour force, or of one which has set low targets. However, an industry lacking in the primary requirements for low turnover and absence rates, would have to meet a number of these compensatory conditions before achieving stability.

7. ABSENTEEISM. /...

7. ABSENTEEISM, LABOUR TURNOVER AND PRODUCTIVITY.

Our preliminary findings indicate that absenteeism and labour turnover are not the major contributory causes to, what is believed to be, low productivity in South African industry. Our rates compare favourably with those reported for other industrial communities, whose productivity is generally accepted to be higher than ours.

We stated in the opening sections that many of the participating industries were aware of the need for positive managerial policy towards the black labour force, and we considered the possibility that our sample may have been biased. If we have, in this way, chosen firms whose stability is high because their personnel policies are relatively sound, the first step that should be taken by South African industry generally to reduce poor attendance and high mobility immediately suggests itself, namely the adoption of a positive personnel policy. But we have demonstrated further that a positive policy requires to be reinforced with industrial security and adequate remuneration. Further, the more urbanised and industrialised the labour force, the more predictable will be the effects of management's policy and other conditions of service.

Our findings have not, however, been directly concerned with productivity as such, measured in terms of output or cost structure. This problem of assumed low productivity - for the facts still need to be stated - requires further investigation.

We submit/...

We submit that low productivity is the result of multiple causes. The abilities, work attitudes, job satisfactions and motivations of the black industrial worker are only one facet in the study of production rates in Africa. We cannot accept that only a more complete knowledge of the black worker will provide the key to this problem. We contend that other investigations are also required if we are to arrive at an appraisal of the root causes of this phenomenon.

The choice of absenteeism and labour turnover was prompted, both by the belief that these were highly important phenomena, likely to constitute serious problems in Africa; and by the knowledge that they could be relatively easily and consistently measured. We have shown that the general belief regarding the critical importance of labour turnover and absenteeism was not well founded. We are now compelled to consider the other factors that must account for the lower African productivity level, assuming that this is indeed a fact.

We should in the first place carry out a comparative study, surveying industrial development, production indices and their determinants, before we formulate a detailed research plan. This plan should incorporate studies of similar industries both in Africa and highly productive communities. Within Africa there should be studies of industries which have made attempts to rationalise their production processes and those that have made no use of scientific management.

Research should be extended to all levels of employment including top management, and in fact to the entire industrial situation. The complete range of possible factors should be dealt with, such as economic problems related to capital expenditure and the cost structure, managerial organisation and competence, technical skill and the production processes, supervisor adequacy, and worker attitudes, standards, motivations and satisfactions. These are all necessary fields of study for the understanding of low productivity on the African continent.

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APPENDIX A.

Extent to which the National Institute of Personnel Research has met the requirements for the presentation of standard data as set out in Doc C.C.T.A./C.S.A. L (60) 59.

1. INDICES OF ABSENTEEISM.

2.1 Group Gross Time-Lost Rates and Individual Gross Time-Lost Rates have been calculated on both a yearly and monthly basis. Individual Frequency Rates have been processed but are not available for presentation in this report.

2.2 This requirement has been met in terms of 2.1

2.3 Age, marital status, ethnic group, nett earnings, length of service and skill grade have been associated with Individual Time-Lost Rates, Individual Accident and Sickness Rates and Individual Other Rates on an annual basis.

2.4 These optional variables are not included

2.5 Group Accident and Sickness Time-Lost Rates, Group Other Time-Lost Rates, Individual Accident and Sickness Time-Lost Rates Individual Other Time-Lost Rates have been calculated on both a yearly and monthly basis.
Individual Accident and Sickness Frequency Rates Individual Other Frequency Rates have been processed but are not available for presentation in this report.

Tests of significance have been included in all calculations except those relating to Group Rates.

INDICES/...

2. INDICES OF LABOUR TURNOVER.

3.1 Gross annual and monthly turnover rates have been calculated for each enterprise.

3.2 Accession, All Separation, True Separation (dismissals and resignations), Dismissal and Resignation Rates have been calculated for each enterprise on both an annual and a monthly basis.

3.3 This is not included.

3.4 True Separation, Dismissal and Resignation Rates have been correlated with age, marital status, length of service, ethnic group, nett earnings and skill grade.

Tests of significance have been applied.

3. STATISTICAL SIGNIFICANCE OF LABOUR TURNOVER.

Tests of significance have been applied.

4. 5.1 Urbanisation.

Items 5.1.1, 5.1.2, 5.1.3, 5.1.4 have been included and associated with the three Individual Time Lost Rates, True Separation and Resignation Rates.

5.2 Quality and Nature of Conditions of Service.

The relevant information has been included in the case studies. Extensive experiments in attempting to convert these criteria into indices indicated that the items had little relevance, outside the context of the enterprise, only representing a symbol. It was decided that a more pertinent appraisal could be made by the integration of these items into the individual case studies.

5.3/...

5.3 Quality and Nature of Supervision.

Though the major portion of this material is available we have only been able to include the supervisor's attitude to managerial policies.

Soundness of policy is an integral part of the individual analyses.

5.4 Attitude of Workers toward Management.

Items 5.4.5 and 5.4.8 have been included in the section on "The Workers Rate Supervision".

These items have been associated with the three Individual Time-Lost Rates, True Separation and Resignation Rates.

5. PRESENTATION OF TABLES.

8.1 Relevant tables are : Tables 1.1, 1.2, 1.3
8.2 Relevant tables are : Tables 2.1, 2.2, 2.3
8.3 Relevant tables are : Tables 3.1, 3.2, 3.3, 3.4, 3.5.
8.4 Relevant tables are : Tables 4.1, 4.2, 4.3
Tables 5.1, 5.2.

A P P E N D I X B.

INDEX OF TABLES.

Table 3.4. /...

A P P E N D I X B.

CODES FOR IDENTIFICATION OF ENTERPRISES.

These code numbers will be used to identify each enterprise in the tables.

Inland Metal Works	IM 1*
Inland Textiles	IT 2*
Inland Building and Construction	IB 3*
Coastal Building and Construction	CB 4*
Coastal Textiles	CT 5*
Coastal Metal Works	CM 6*
Glassworks	GW 8
Glassworks	GP 9
Metal Works (Holloware)	MH10
Motor Assembly Plant	MA11
Textiles (Cotton Mills)	TC12

* These are the two-skill units in the interview sample. Since absence and turnover records were collected on all production workers in each enterprise, the highest skill grade, in these units, is included whenever the sample is adequate.

TABLE 1.1. ANNUAL GROUP TIME-LOST RATES FOR ALL ENTERPRISES.

ENTERPRISE[1]	GROSS RATES	ACCIDENT AND SICKNESS RATES	OTHER RATES[2]	Gross Rates[3] expressed as no. of days
MA11	.020	.008	.012	4.9
GP 9	.027	.009	.018	6.6
CT 5	.029	.021	.007	7.1
MH10	.030	.009	.020	7.4
GW 8	.033	.009	.024	8.1
IM 1	.036	.023	.013	8.8
IT 2	.037	.017	.020	9.1
TC12	.046	.018	.028	11.3
IB 3	.050	.025	.025	12.3
CB 4	.058	.015	.043	14.2
CM 6	.060	.050	.011	14.7

1. Ranked according to Gross Rates.

2. Other rates include both authorized and unauthorized absences.

3. It is estimated that the worker is exposed to an average of 245 working days each year.

APPENDIX B

TABLE 2.1. AVERAGE[1] ANNUAL TURNOVER INDICES FOR ALL ENTERPRISES.

Enterprise[2]	Turnover Rates	Accession Rates	All Separation Rates (A)	True Separation Rates (B)	Dismissals	Resignations.
TC12	.4	.4	.6	.6	.1	.4
CT 5	1.3	3.9	1.3	.8	.1	.7
CM 6	1.2	2.6	1.2	.9	.2	.6
MH10	1.9	2.5	1.9	1.8	.7	.9
IM 1	3.7	5.2	3.7	2.1	.9	1.2
GW 8	2.6	2.6	3.3	2.4	1.0	1.4
IB 3	6.1	9.6	6.1	3.2	1.6	1.6
MA11	3.9	7.3	3.9	3.8	2.5	1.3
IT 2	6.2	9.3	6.2	5.4	2.8	2.6
GP 9	6.4	7.0	6.4	5.6	2.0	3.6
CB 4	14.3	16.4	14.3	8.2	3.7	4.2

1. Formula : $\frac{\text{Annual Total}}{12} \times 100 =$ Average monthly turnover per hundred men.

2. Ranked according to True Separation Rates (B)

TABLE 1.2 ANNUAL GROUP TIME-LOST RATES FOR ALL ENTERPRISES FOR EACH SKILL GRADE

Skill Grade / Rates / Enterprise	Grade I			Grade II			Grade III		
	Gross	Accident and Sickness	Other	Gross	Accident and Sickness	Other	Gross	Accident and Sickness	Other
MA 11	.017	.005	.012	.029	.015	.014	.032	.023	.009
GP 9	.022	.008	.014	.025	.010	.016	.031	.008	.023
CT 5	.005	.004	.001	.022	.016	.006	.038	.028	.010
MH 10	.027	.010	.017	.030	.007	.023	.032	.012	.020
GW 8	.028	.006	.021	.026	.010	.016	.042	.011	.031
TM 1	.021	.016	.006	.030	.019	.011	.044	.029	.015
IT 2	.022	.007	.015	.029	.013	.016	.048	.023	.025
TC 12	.025	.009	.016	.058	.018	.034	.051	.025	.026
IB 3	.081	.001	.079	.045	.020	.025	.051	.027	.024
CB 4	.016	.002	.014	.054	.023	.031	.062	.011	.051
CM 6	.020	.017	.003	.053	.045	.007	.069	.056	.013

APPENDIX B

TABLE 1.3. COMPARATIVE ANNUAL TIME-LOST RATES

Source	Annual Rates	Annual Rates expressed as number of days
Australia [1]	4%	9.8
United Kingdom [2]	4.9% - 6.4%	11.0 - 15.7
United States [3]	3 - 6%	6.4 - 14.7
South Africa [4]	7.03%	17.15

1. Gate J.B. "Absence from Work in May and June" Personnel Practice Bulletin, Sept. 1955 Vol. x (3), 39 - 43.

Industrial Service Division. " Absence Spot Check". Personnel Practice Bulletin, Sept. 1959 Vol. xv(3), 21 - 22

2. "Surveys of Absenteeism" J. of Institute of Personnel Management. Nov.-Dec. 1950, Vol.XXXII (No. 312), 302.

Behrend H. "Absence Under Full Employment" 1951, University of Birmingham, Studies in Economics and Society, Monograph A.3.

3. Moore F.G. Manufacturing Management. 1954, Homewood, Illinois, Richard D. Irwin, Inc.

Yoder, D. Personnel Management and Industrial Relations. 1946, New York, Prentice - Hall, Inc.

4. Group of white operatives employed in a large undertaking. (1947)

A P P E N D I X B

TABLE 2.2 AVERAGE ANNUAL TURNOVER INDICES FOR ALL ENTERPRISES FOR EACH SKILL GRADE

ENTER-PRISE.	GRADE I					
	Turn-over Rates	Accession Rates	All Separation Rates (A)	True Separation Rates (B)	Dismissals Rates	Resignations Rates
TC12	.3	.3	.7	.5	.3	.3
CT 5	0	0	.5	0	0	0
CM 6	0	.5	0	0	0	0
MH10	.7	.8	.7	.6	.3	.2
IM 1	0	0	2.7	1.4	1.4	0
GW 3	.5	.5	1.7	1.0	.5	.6
IB 3	3.1	3.1	3.1	0	0	0
MA11	3.7	7.3	3.7	3.6	2.4	1.2
IT 2	2.4	5.6	2.4	2.4	1.6	.8
GP 9	2.9	2.9	3.6	3.5	.3	2.7
CB 4	2.9	2.9	2.9	2.9	0	2.9

GRADE II/.....

ENTER-PRISE.	GRADE II					
	Turn-over Rates	Access-ion Rates	All Separation Rates (A)	True Separation Rates (B)	Dismissals Rates	Resignations Rates
TC12	.3	.3	.4	.4	.2	.2
CT 5	.4	.4	.7	.6	.1	.5
CM 6	.4	.4	.5	.3	.1	.2
MH10	2.1	3.2	2.1	1.8	.7	1.0
IM 1	2.5	2.5	2.2	1.6	.8	.8
GW 8	1.1	1.1	2.0	1.8	.8	.9
IB 3	4.0	5.7	3.9	2.2	1.1	1.1
MA11	9.4	18.0	9.4	9.4	7.2	2.3
IT 2	2.3	4.1	2.3	1.6	.5	1.1
GP 9	6.3	9.2	6.3	6.0	2.2	3.8
CB 4	6.4	8.5	6.0	1.9	.3	1.6

GRADE III /.....

ENTER-PRISE.	GRADE III					
	Turn-over Rates	Access-ion Rates	All Separation Rates (A)	True Separation Rates (B)	Dismissals Rates	Resignations Rates
TC12	.5	.5	.8	.8	.2	.7
CT 5	2.0	7.7	2.0	1.0	.1	.9
CM 6	1.8	4.3	1.8	1.3	.4	.9
MH10	2.4	2.8	2.4	2.3	1.0	1.2
IM 1	4.9	9.4	4.9	2.5	.9	1.6
GW 8	5.6	5.6	5.7	4.1	1.7	2.4
IB 3	6.6	10.8	6.6	3.5	1.8	1.7
MA11	3.1	4.1	3.1	2.6	1.5	1.1
IT 2	10.6	15.3	10.7	9.8	5.3	4.5
GP 9	6.3	6.8	7.9	6.4	2.5	3.9
CB 4	19.1	21.3	19.0	11.5	5.8	5.6

A P P E N D I X B

TABLE 2.3 COMPARATIVE AVERAGE ANNUAL RATES

SOURCE	All Separations	Dismissals	Lay-offs	Resignations	Other
Victoria[1]	4.8	-	-	.9	3.9
Australia N.S.W.	4.4	-	-	3.6	0.8
United Kingdom[2]	3	-	-	-	-
United States[3] (1958 Average)	3.6	.4	2.3	0.9	-
South Africa[4]	4.7	-	-	-	-

1. Industrial Service Division.

   "Spot Check of Labour/Turnover September 1959."
   Personnel Practice Bulletin, December 1959.
   Vol. XV (4), 17.

2. British Ministry of Labour.

   "Labour Turnover Rates in Manufacturing Industries, five weeks ended 30th November 1957."
   Ministry of Labour Gazette January 1958 (H.M.S.O.)

3. U.S. Department of Labour, Bureau of Labour Statistics, Monthly Labour Review, April 1960.

4. Group of White Operatives in a large undertaking (1947).

TABLE 3.1 FREQUENCY DISTRIBUTION BY AGE FOR ALL ENTERPRISES FOR EACH SKILL GRADE.

Skill Grade	Gr. I		Gr. II		Gr. III		Total.	
Age Group	n	%	n	%	n	%	n	%
Under 25 years	217	29	171	18	451	31	839	27
25 - 34 years	247	33	354	37	503	34	1104	35
35 - 44 years	204	28	280	29	284	20	768	24
45 - 54 years	62	8	117	12	161	11	340	11
55 years and over	13	2	35	4	55	4	103	3
Total	743	100	957	100	1454	100	3154	100

Total n = 3154

TABLE 3.2 FREQUENCY DISTRIBUTION BY LENGTH OF SERVICE FOR ALL ENTERPRISES FOR EACH SKILL GRADE.

Skill Grade	Gr. I		Gr. II		Gr. III		Total.	
Length of Service	n	%	n	%	n	%	n	%
Under 6 months	188	23	230	18	881	42	1299	31
6 months - under 1 year	107	13	155	12	329	16	591	14
1 year - under 2 years	101	12	192	15	360	17	653	16
2 years - under 5 years	199	25	268	22	390	18	857	20
5 years and over	216	27	418	33	148	7	782	19
Total	811	100	1263	100	2108	100	4182	100

Total n = 4182

TABLE 3.3 FREQUENCY DISTRIBUTION BY MARITAL STATUS FOR ALL ENTERPRISES FOR EACH SKILL GRADE.

Skill Grade	Gr. I		Gr. II		Gr. III		Total.	
Marital Status	n	%	n	%	n	%	n	%
Single	243	33	237	25	494	35	974	31
Married	501	67	712	75	937	65	2150	69
Widowed/Divorced	1	0	3	0	5	0	9	0
Total	745	100	952	100	1436	100	3133	100

Total n = 3133

TABLE 3.4 FREQUENCY DISTRIBUTION BY ETHNIC GROUPS FOR ALL ENTERPRISES FOR EACH SKILL GRADE.

Skill Grade	Gr. I		Gr. II		Gr. III		Total.	
Ethnic Group	n	%	n	%	n	%	n	%
Unknown	43	5	79	6	40	2	162	4
Southern Nguni	48	6	77	6	165	9	290	8
Northern Nguni	210	26	510	41	950	52	1670	43
Ndebele	11	1	73	6	117	6	201	5
Shangane-Tonga	22	3	64	5	74	4	160	4
Southern Sotho	320	39	92	8	125	7	537	14
Western Sotho	43	5	83	7	103	6	229	6
Eastern Sotho	46	6	95	8	101	6	242	6
Other Sotho	55	7	83	7	95	5	233	6
Venda	17	2	75	6	45	3	137	4
Lemba	0	0	0	0	0	0	0	0
Rhodesian	1	0	1	0	1	0	3	0
Nyasa	0	0	3	0	5	0	8	0
Total	816	100	1235	100	1821	100	3872	100

Total n = 3872

TABLE 3.5 FREQUENCY DISTRIBUTION BY WEEKLY NETT EARNINGS FOR ALL ENTERPRISES FOR EACH SKILL GRADE.

Skill Grade	Gr. I		Gr. II		Gr. III		Total.	
Weekly Nett Earnings	n	%	n	%	n	%	n	%
Under £3	272	33	284	22	768	37	1324	32
£3.0.0. - £3.10.0.	99	12	112	9	626	30	837	20
£3.10.1. - £4.0.0.	101	12	169	13	410	20	680	16
£4.0.1. - £4.10.0.	81	10	192	15	146	7	419	10
£4.10.1. - £5.0.0.	77	9	187	15	81	4	345	8
£5.0.1. - £5.10.0.	70	9	175	14	38	2	283	7
£5.10.1. - £6.0.0.	46	6	114	9	7	0	167	4
£6.0.1. and over	69	9	36	3	5	0	110	3
Total	815	100	1269	100	2081	100	4165	100

Total n = 4165

TABLE 4.1 FREQUENCY DISTRIBUTION BY URBANISATION CATEGORIES FOR ALL ENTERPRISES FOR EACH SKILL GRADE[1]

	All Enterprises		Grade I		Grade II		Grade III	
Urbanisation Category	N	%	N	%	N	%	N	%
1	11	1.09	3	1.64	3	0.75	5	1.17
2	120	11.88	25	13.66	38	9.45	57	13.38
3	194	19.11	26	14.21	86	21.39	82	19.25
4	122	12.08	14	7.65	56	13.93	52	12.21
5	223	22.18	45	24.59	79	19.65	99	23.24
6	341	33.66	70	38.25	140	34.83	131	30.75
TOTALS	1011	100.00	183	100.00	402	100.00	426	100.00

1. RANKED FROM LOWEST TO HIGHEST DEGREE OF URBANISATION.

TABLE 4.2 MEAN URBANISATION INDICES FOR EACH ENTERPRISE AND EACH SKILL GRADE[1]

ENTERPRISE	GRADE 1	GRADE 2	GRADE 3	WHOLE ENTERPRISE.
MA11	13.3	14.0	13.6	13.5
IM 1	-	13.2	13.6	13.4
MH10	12.2	12.7	12.6	12.5
IT 2	-	12.1	12.0	12.0
IB 3	-	12.0	11.3	11.6
TC12	10.9	11.2	11.8	11.3
GW 8	12.3	11.4	10.3	11.3
GP 9	9.05	9.57	10.9	9.86
CT 5	-	9.9	9.11	9.52
CM 6	-	10.1	8.56	9.35
CB 4	-	9.55	8.95	9.25

[1]RANKED ACCORDING TO MEAN URBANISATION INDEX.

TABLE A.3 MEAN URBANISATION INDICES FOR ALL ENTERPRISES AND EACH SKILL GRADE.

	Mean Urbanisation Indices
All Enterprises x All Skills	11.3
All Enterprises x Sk. Gr. I	11.6
All Enterprises x Sk. Gr. II	11.3
All Enterprises x Sk. Gr. III	11.2

TABLE 5.1 MEAN SUPERVISION INDICES FOR ALL ENTERPRISES AND FOR EACH SKILL GRADE.

ENTERPRISE[1]	INDEX A			
	Gr. I.	Gr. II.	Gr. III.	Enterprise
IT 2	-	14.8	15.6	15.2
TC12	14.2	14.6	14.2	14.4
GP 9	13.3	14.5	13.9	13.9
IM 1	-	12.4	15.2	13.8
GW 8	14.4	12.5	14.1	13.7
MA11	13.1	13.7	14.2	13.7
CM 6	-	13.5	13.5	13.5
CT 5	-	12.4	14.3	13.2
IB 3	-	14.2	12.3	13.2
CB 4	-	13.2	12.5	12.9
MH10	11.5	11.5	14.5	12.4

[1] Ranked according to highest index on Index A.

Index B /.....

ENTERPRISE	INDEX B			
	Gr. I	Gr. II	Gr. III	ENTERPRISE
IT 2	-	2.42	2.54	2.45
TC12	3.0	2.86	3.0	2.97
GP 9	1.92	2.69	1.83	2.14
IM 1	-	2.4	2.9	2.65
GW 8	3.0	1.91	2.5	2.50
MA11	2.3	2.33	2.5	2.36
CM 6	-	2.6	2.7	2.65
CT 5	-	2.69	2.64	2.65
IB 3	-	2.0	2.1	2.05
CB 4	-	1.0	1.3	1.42
MH10	1.9	2.5	2.33	2.23

Index C /.....

ENTERPRISE	INDEX C.			
	Gr. I.	Gr. II.	Gr. III.	ENTERPRISE
IT 2	-	3.25	3.62	3.46
TC12	3.54	4.29	4.08	3.98
GP 9	2.15	2.31	2.67	2.39
IM 1	-	3.6	3.5	3.55
GW 8	3.31	3.64	3.25	3.40
MA11	2.71	2.6	2.7	2.67
CM 6	-	4.1	4.7	4.38
CT 5	-	3.0	3.73	3.32
IB 3	-	2.8	2.1	2.42
CB 4	-	2.9	3.2	3.06
MH10	2.5	2.8	3.25	2.86

TABLE 5.2 FREQUENCY DISTRIBUTION OF FAVOURABLE RESPONSES ON THREE SUPERVISION INDICES FOR ALL ENTERPRISES.

ENTERPRISE	Index A	Index B	Index C
	%	%	%
IT 2	88.0	72.0	60.0
TC12	70.0	97.5	37.5
GP 9	60.0	57.9	34.2
IM 1	65.0	80.8	77.0
GW 8	69.0	75.0	59.3
MA11	68.0	68.4	44.7
CM 6	61.0	80.8	92.4
CT 5	71.0	83.3	66.7
IB 3	61.0	53.8	15.4
CB 4	60.0	20.0	56.0
MH10	47.0	63.2	50.0

A P P E N D I X C.

TABLE 6.1 RANKING OF INDUSTRIES ACCORDING TO AVERAGE NETT EARNINGS.

RATING	INDUSTRY
Very Good	TC 12
Good	MH 10
High Average	IM I, CM 6
Low Average	GW 8
Poor	IT 2, CT 5, MA 11
Very Poor	IB 3, CB 4, GP 9

The industries have been ranked according to the "take-home" pay packet for a normal working week.

Nett Earnings were scaled, in the first instance, on eight points. These eight points were reduced to a three-point scale described as high, medium and low. The final ratings given to the firms are based on :

1. Percentage of men falling in the high earning category in each firm. This percentage is given a weight of 2.
2. Percentage of men falling in the medium earning category in each firm.

In rating industries we have not taken into account the formal wage structure, nor the system of increments, nor the existence of a bonus incentive system. We have been concerned with the average nett earnings for a full working week derived from all sources.