

DEVELOPMENT STUDIES RESEARCH GROUP

Working Papers

THE DIVISION OF LABOUR IN
SOUTH AFRICA, 1969 - 1977.

C.E.W. Simkins and D. Hindson.

DSRG Working Paper No. 7.

**University of Natal
Pietermaritzburg
Department of Economics**

ACE 1988

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THE DIVISION OF LABOUR IN SOUTH AFRICA, 1969 - 1977.

I. INTRODUCTION

In recent years several authors writing on South Africa's pattern of development have discussed changes in occupational structure.¹ The discussion under this head displays two features:

- (a) The *evidence* brought to bear suffers from at least one of two defects:
- (i) It is unsystematic or lacks comprehensiveness. For example, Adam quotes a survey of the manpower situation in commerce and allied services undertaken by the Association of Chambers of Commerce in 1970 and Legassick and Innes discuss the deskilling of loom tuners at Berg River Textiles. Illuminating as these detailed studies may be, they do not enable one to draw conclusions about what is happening in the economy as a whole.
 - (ii) It is inclined to be speculative, e.g. Bromberger discusses a *projection* for 1980 made by Dr. C.H. Myndham of the Human Sciences Laboratory of the Chamber of Mines.

The reason for this lies in the unsatisfactory nature of empirical studies of occupational structure; detailed work on small sectors of the economy coexist with across-the-board studies too crudely aggregated to allow for a precise assessment of a changing situation.

- (b) *Interpretations* of evidence adduced differ between authors. The question of what forces bring about the changing occupational structure and racial division of labour and how this in turn influences political and ideological relations raises controversial issues which are at the centre of the debate on the nature of South African development. Some of these have been considered by Adam who argues that the changing occupational structure may be explained by technological developments within the most rapidly expanding sectors, particularly manufacturing and services. Economic growth creates a demand for a more skilled, better educated and residentially stable labour force; a demand which must increasingly be met by the African work force. This structure of demand comes into conflict with features of Apartheid, although, in Adam's view, it does not automatically or necessarily lead to their breakdown.² Schlemmer arrives at a similar conclusion from an approach which focuses on the relationships between occupational position, social prestige, class and political power. He argues that the social

mobility resulting from occupational advancement among Africans '... will strain the legitimation of the system within the ambit of the orientation of the white political elite ...'¹³ Legassick, on the other hand, argues that the institutions of Apartheid, far from being in opposition to the changing occupational structure are 'specifically designed to encourage this trend in a regulated manner.'¹⁴

Another related question is to do with the inter-action between educational and occupational structure on the one hand and wage discrimination on the other in the formation of income distribution. Knight and McGrath suggest that inequality in earnings may result from factors external to occupational position itself such as job reservation or (less importantly) a 'taste for discrimination.'¹⁵

These observations will have served their purpose if they indicate that occupational structure and the racial division of labour matter when it comes to discussing the larger questions about the pattern of South African development. What determines them and what they determine are questions which we, ourselves, leave aside in this paper.¹⁶

II. REVIEW OF EXISTING EMPIRICAL STUDIES

Of the few attempts to construct meaningful occupational categories from the official published material, three unpublished works are of particular importance.¹⁷ These may be discussed as follows:

(a) Pienaar has projected sectoral employment by occupation for 1985¹⁸ using (i) a fixed coefficient model which 'denies the possibility of increases in average labour productivity or the substitution between occupational groups within economic sectors'.¹⁹ As a subcase, he relaxes 'slightly the constancy assumptions and assumes that although the occupational structure by sector remains undisturbed there is a continuous increase in labour productivity due to factor substitution and technical advance'.²⁰

(ii) a flexible coefficient model which 'in order to incorporate shifts in the occupational distribution due to factor substitution and technical advance ... extrapolates ... trends in input coefficients to 1985'.²¹ Two estimates, based on low and high output projections are produced.

Table I summarises Pienaar's results.

TABLE I - *Projected Occupational Structures - 1985 (%)*

Occupation	1970	(1)	(2)	(3)	(4)
Professional	4,5	4,8	4,7	4,9	5,2
Administrative	1,0	1,1	1,1	1,0	1,0
Clerical	7,9	8,2	8,1	10,8	11,3
Sales	4,5	3,5	4,5	5,7	5,6
Service	17,1	17,6	17,7	18,7	19,7
Farm	31,4	24,8	28,4	32,1	28,1
Production	33,6	40,0	35,6	26,9	29,1
Total	100,0	100,0	100,1	100,1	100,0

Source: Pienaar, *op. cit.*, p.106.

Headings: (1) Fixed input coefficients
(2) Fixed input coefficients with increase in labour productivity
(3) Variable coefficients - low estimate
(4) Variable coefficients - high estimate.

Two things may be observed about Table I:

- (i) The projections one gets depend substantially on the assumptions one makes. One may see this particularly in the case of production workers; the lesson to be learned is that arguments based on projections need to be scrutinised carefully for their assumptions.
- (ii) The occupational categories are crude - production workers include supervisors, artisans, semi-skilled and unskilled workers. One would need to see this category disaggregated before drawing conclusions about what changes in occupational structure might amount to. The same is true, but to a lesser extent, for clerical, sales and service workers. The degree of aggregation is dictated by Pienaar's data sources, namely the 1960 and 1970 Population Censuses. The Industrial Censuses use similar occupational categories and so are of similar limited usefulness in this field.

(b) Terrington has studied a selection of industries over the period 1949-1973.¹² His data sources are reports based on Wage Board investigations. The 'industries' covered were limited in geographical scope to metropolitan areas and comprised sixteen subsectors of manufacturing, three of retail trade and one service (laundry and dry-cleaning). Terrington divides the period into three subperiods within each of which at least one investigation into each industry took place. This enables him to calculate changes in the proportion of broad occupational categories within each industry from one period to the next and changes in the proportions of Whites, Coloureds, Asians and Africans occupying positions in various categories.

Since he was unable to aggregate the industries, his measures of the overall impact of occupational change were very rough. Despite this limitation, the study does provide important insights into the processes underlying the changing racial division of labour in the manufacturing sector. His results are summarised as follows:

'The empirical evidence available from the Wage Board industries covered in this study suggest, in general, that the labour force in the major urban areas has remained strictly segregated as between Africans and Whites, although Coloureds and Asians are entering occupations formerly dominated by Whites, especially qualified male clerks and, to a small extent, artisans. The managerial/professional/technical level remains completely White.

The most conspicuous change in the occupational wage structure has been the ... growth in the number of (lower) semi-skilled African workers. Skilled and higher supervisory posts remain dominated by Whites although Asians and Coloureds are making advances in these fields. Africans dominate the lower levels of skill ... A marginal degree of entry of Africans into skilled and clerical occupations can be detected'.¹³

(c) Davies's statistical investigation of occupations is based on the Population Censuses taken between 1918 and 1970.¹⁴ Only the White section of the labour force is dealt with. Since Davies is concerned to trace the changing class places occupied by Whites, he attempts to distribute occupations into the following broad classes: bourgeoisie, traditional petty bourgeoisie, new petty bourgeoisie, productive and unproductive manual workers. The results of this exercise enable him to draw two conclusions:

- (i) '... throughout the period the large majority of the 'economically active' White population has occupied bourgeois and petty bourgeois class places.¹⁵
- (ii) '... the proportion of Whites occupying new petty bourgeois and manual worker places both increased, the latter faster than the former, up until 1936. This was at the expense of bourgeois and traditional petty bourgeois places in agriculture. After 1946, the proportion of Whites occupying manual worker places appears to have declined while ... the proportion occupying new petty bourgeois places increased'.¹⁶

Apart from the sources already discussed, there exist a series of Manpower Reports published by the Department of Labour. These reports deal with surveys taken between 1969 and 1977 and present the number of people employed in each race-sex group in each of a large number of highly disaggregated occupational categories. The degree of disaggregation appears to have posed somewhat of a barrier to much use of these statistics: some authors (e.g. Knight and McGrath) use them in an illustrative way,¹⁷ while others (e.g. Sadie) use them to tackle problems of limited scope,¹⁸ but to our knowledge no comprehensive analysis of occupational change on the basis of this source has yet been carried out. The object of this paper is to present the results of such an investigation of occupational change and the racial division of labour.

III. THE METHOD OF THIS STUDY

(a) SOURCES: This investigation is based on five Manpower Surveys taken in April of 1969, 1971, 1973, 1975 and 1977. They cover all sectors of the economy except culture and domestic service. For each of the years the total numbers of *employees* (in each race-sex group) in each of many occupational categories are presented. An additional report is available for 1977 which further breaks the data down into 38 sectors. This makes possible an occupation by sector cross-classification.

The Department of Labour claims that the Surveys cover all enterprises with ten or more employees. In addition estimates are made for smaller enterprises on the basis of a sample.¹⁹ It seems unlikely, however, that urban 'informal' and particularly unregistered and illegal activities are included.

It appears that coverage fluctuates somewhat from survey to survey. This may be seen from Table II which compares Manpower Survey employment figures with employment figures arising from Simkins's unemployment studies.

TABLE II - Comparison of Manpower Survey and Simkins Employment Figures 1969-1977
(thousands)

	1969	1971	1973	1975	1977	
Total Employment (Simkins)	6812	7062	7433	7751	7977	(1)
Less agriculture (non-fishing)	1919	1833	1874	1858	1858	(2)
Less domestic service	938	974	1002	1042	1054	(3)
	3955	4255	4557	4851	5065	
Manpower Survey	3934	4570	4700	4990	5375	(4)
Difference (Simkins-Manpower)	+21	-315	-143	-139	-310	
% Difference	+0,5%	-6,9%	-3,0%	-2,8%	-6,1%	
% p.a.growth (Simkins)		3,7%	3,5%	3,2%	2,2%	
(Manpower)		7,8%	1,4%	3,0%	3,8%	
Total labour force (Simkins)	8250	8650	9163	9589	10099	(5)
% of labour force covered by Manpower Survey	48	53	51	52	53	
% of employment covered by Manpower Survey	58	65	63	64	67	

- Notes: (1) C. Simkins, Measuring and Predicting Unemployment in South Africa 1960-1977 in C. Simkins and D. Clarke, *Structural Unemployment in Southern Africa*, Natal University Press, 1978a, Table 20.
- (2) Simkins, *op. cit.*, Table 13.
- (3) Simkins, *op. cit.*, Table 17. 89,3% of employment in other community, social and personal services is taken as domestic service for the reason discussed on p.103 of C. Simkins, *African Unemployment in Urban and Rural South Africa*, in (ed) C. Simkins and C. Desmond, *South African Unemployment: A Black Picture*, DSRG/AIM, 1978b.
- (4) Manpower Surveys nos. 8,9,10,11,12 adjusted for working proprietors in wholesale and retail trade and for Transkei government employment (see paragraph (c) below).
- (5) Simkins (1978a) Table 9 adjusted as discussed on pp. 99 and 105 of Simkins (1978b).

That the coverage is variable in the Manpower Surveys can be seen from the growth rates in employment as measured by it. These fluctuate in a fashion unlikely to be explained in terms of the business cycle. From the last line of Table II it can be seen that the Manpower Survey covers about half the South African labour force. The rest are employed in agriculture, in domestic service or in the informal sector or are unemployed.

(b) AGGREGATION

1. OCCUPATIONS: Observations were initially aggregated into 14 occupational categories. These categories were a slight adaptation of those used by the Centre for Applied Social Sciences at the University of Natal in Durban.²⁰ Our only adaptation was to split categories 06 and 08 into two. A list of the categories follows:

- 01 Independent and high professional
- 02 Executive and high administrative in large organisations
- 03 Professional and salaried professional
- 04 Lower Executives and similar administrative in large firms, civil service and executives in medium firms
- 05 Semi-professional and creative
- 06A Owners and executives in small private firms
- 06B Senior clerical and white collar technical
- 07 Clerical/sales/representatives
- 08A Blue collar technical
- 08B Supervisory and inspectional
- 09 Skilled manual
- 10 Routine non-manual, ranks in services, street and market traders
- 11 Semi-skilled
- 12 Unskilled.

Two sets of further aggregations are then possible; 06A and 06B, and 08A and 08B can be added to reproduce the CASS twelve category *occupational status* scale. On the other hand, aggregations into *class as related to the means of production* can be carried out.²¹ Three basic classes are identified:

- I The Bourgeoisie: 02, 04, 06A
- II The Petty Bourgeoisie:
 - (a) Professional and Semi-professional : 01, 03, 05
 - (b) Clerical, White-collar Technical and other non-manual workers: 06B, 07, 10
 - (c) Supervisors: 08B
- III The Working Class:
 - (a) Skilled: 08A, 09
 - (b) Semi-skilled: 11
 - (c) Unskilled: 12

Certain problems were found at the level of allocating detailed occupations to the fourteen categories and at the level of grouping these into classes. Chief among these were:

- (i) Allocation among classes 02, 04, 06A depends on the size of the enterprises for which people are working. This is not always clear (or distinguished) in the Manpower Surveys.
- (ii) The petty bourgeoisie is the most problematical class and is identified as such only provisionally for the purposes of this working paper. It is recognised that it is controversial whether or not the occupations we have assigned to the petty bourgeoisie should be identified at all with this class, which has traditionally referred to small capitalists, shopkeepers, independent artisans and land-owning peasants. It is hoped that the class subdivisions will help in interpreting our results.
- (iii) The identification of the working class is also not without its difficulties. The categories do not necessarily identify a distinct place in relation to the means of production or a specific level of skill. It is well known, for example, that White 'artisans' have increasingly taken over supervisory functions in South African industry. Furthermore, lower supervisory functions, which are often in practice combined with productive functions, are usually not identified as such in the Manpower Surveys. These include positions referred to within industry as charge hands, group leaders, team supervisors, leading hands, indunas and line leaders.²² In our tables many people occupying these positions are probably included in the semi-skilled level of the working class. In some cases, however, we have felt justified in assuming that within a particular occupation Whites had

to be separated from Coloureds, Asians and Africans and placed in a different category in the fourteen division classification. Usually this involved the assumption that Whites in that occupation were likely to be supervisors while Coloureds, Asians and Africans were likely to be workers.

In addition, the meaning and measurement of 'skill' is problematical. In general, workers referred to as 'labourers', 'attendants', etc., have been classified as unskilled, while operators, machine workers and drivers have been classified as semi-skilled. There is, no doubt, little difference in either the mental demands or degree of physical dexterity required in some operative work and some 'general labouring' work. The division between unskilled and semi-skilled occupations is therefore to some extent arbitrary. On the other hand, the category of semi-skilled workers probably also contains a range of occupations in terms of skills, with some being as demanding as those within the skilled category. At best, then, these divisions must be treated as approximations only to the reality.

(iv) Sometimes an occupation as defined in the Manpower Survey (e.g. 631 - Firemen) stretched over two or more categories, in which case we assigned it to the category into which most of the relevant people were likely to fall.

Appendix I contains tables for converting the three-digit Manpower Survey Occupational Codes into the fourteen categories.

II SECTORS: The 38 sectors appearing in the 1977 crossclassified Manpower Report are grouped into nine one-digit Standard Industrial Classification Categories viz.

1. Fishing
2. Mining
3. Manufacturing
4. Electricity, Gas and Water
5. Construction
6. Commerce
7. Transport, Storage and Communication
8. Finance
9. Government, Personal and Community Services.

Details of this aggregation are also set out in Appendix I.

(c) ADJUSTMENTS: Two adjustments have been made to the Manpower Survey data:
(i) The Manpower Survey covers only *employees*. To these should be added working proprietors who constitute a significant proportion of the work force in wholesale and retail trade. The most recent count of these published in *S.A. Statistics 1974*²³ shows that these comprised 1,33% of people working in wholesale trade and 21,0% of those in retail trade. The race-sex breakdown is taken from the 1960 Population Census. These proportions are applied to *S.A. Statistics* figures for employment in these subsectors in the years of the surveys and resulting numbers are added to Manpower figures for sector 6 and occupational category 06A. There may be some uncounted working employers in other sectors (e.g. professional services) but no adjustment for these can be made.

(ii) The 1977 Manpower Survey excludes the Transkei. Comparing the last employment figure for Bantu homeland authorities which included the Transkei and the first which excluded it in the Quarterly Bulletin of Statistics for June 1978, we find that a figure of 36,9% should be added to employment under this head in the 1977 Manpower Survey as an estimate of public sector employment in the Transkei. No adjustment is made for the (small) private sector. Thus all our figures cover the whole of South Africa.

(d) STATISTICAL METHOD: After two-way aggregation, one arrives at a 14 x 9 cross-classification of occupations by sectors for 1977. For preceding years, the Manpower Reports yield only 14 occupational totals. For these years, 9 sectoral employment totals may be arrived at using other sources as follows:

<u>Sector</u>	<u>Source</u>
1 (Fishing)	Same figure as in 1977 Manpower Report
2 Mining	Quarterly Bulletin of Statistics figures for appropriate months
3 Manufacturing	Quarterly Bulletin of Statistics figures for appropriate months
4 Electricity, gas and water	Quarterly Bulletin of Statistics figures for appropriate months (for electricity) multiplied by a factor of 1,905 which is the Manpower Report 1977 total for this sector divided by the QBS electricity figure for April 1977. This adjustment allows for employees in gas and water

<u>Sector</u>	<u>Source</u>
5 Construction	Quarterly Bulletin of Statistics figures for appropriate months
6 Wholesale and retail trade, etc	Quarterly Bulletin of Statistics figures for appropriate months (Wholesale trade, retail trade, Control boards, motor trade, licensed accommodation) with working proprietors added in.
7 Transport, Storage and Communication.	Quarterly Bulletin of Statistics figures for appropriate months (for S.A. Railways and Harbours and the Post Office) multiplied by a factor of 1,407 which is the Manpower Report 1977 total for this sector divided by the QBS subtotal for April 1977. This adjustment allows for employees in non-enumerated parts of the transport sector (mostly private transport).
8 Finance	Quarterly Bulletin of Statistics figures for appropriate months (for banking, building societies and insurance)
9 Services (excluding domestic service)	Quarterly Bulletin of Statistics figures for appropriate months (for central and provincial government, local authorities, sundry statutory bodies, Bantu homeland authorities and universities) multiplied by a factor of 1,514 which is the Manpower Report 1977 total for this sector divided by the QBS subtotal for April 1977. This adjustment allows for employees in non-enumerated parts of this sector.

In general, the totals based predominantly on the Quarterly Bulletin of Statistics (the 'provisional totals') do not tally exactly (though they come close) to the Manpower Survey all-sector totals. In order to reconcile the sectoral employment totals with the occupational employment totals, a further adjustment is made for each year by multiplying each sectoral figure by the Manpower Survey total and dividing it by the provisional total.

A note is necessary here on the implications of the quality of the sources, the aggregation procedure, the adjustments and the statistical method for the interpretation of our results.

Given sampling fluctuations (the extent of which it is impossible to calculate), we must expect there to be fluctuations reflecting nothing but estimation errors in our computed allocation of the labour force to various occupational groups. Some researchers report large fluctuations in individual Manpower Survey categories; the advantage of aggregation is that it can be expected to reduce these in proportional terms so that the larger the class, the more likely to be reliable is the estimate of the proportion of the labour force in it. A further problem lies in the fact the sectoral employment figures obtained from the Quarterly Bulletin of Statistics are not likely to tally exactly with the weight of the various sectors in the pre-1977 Manpower Surveys, so that sectoral occupational figures are more unreliable than those for the labour force (the part of it under consideration) as a whole. The upshot is that in interpretation one cannot attach weight to year-to-year fluctuations; one should rather look for the existence of *trends* over all the years under consideration.

Table III sets out the sectoral totals obtained for each year.

TABLE III - Sector employment totals

A. NUMBERS					
Sector	1969	1971	1973	1975	1977
1	4501	4856	4849	4680	4774
2	596627	664678	694765	616894	656287
3	1028124	1222614	1279831	1223044	1477346
4	39337	46315	54639	59765	72769
5	288806	389702	390724	435100	436849
6	606581	685089	720350	785545	822883
7	366898	414426	417843	435914	453967
8	82282	92461	101515	104720	132928
9	920801	1050123	1035830	1324764	1317191
	3933957	4570264	4700076	4990426	5374994

B. PERCENTAGES					
Sector	1969	1971	1973	1975	1977
1	0,11	0,11	0,10	0,09	0,09
2	15,17	14,54	14,78	12,36	12,21
3	26,13	26,75	27,23	24,51	27,49
4	1,00	1,01	1,16	1,20	1,35
5	7,34	8,53	8,31	8,72	8,13
6	15,42	14,99	15,33	15,74	15,31
7	9,33	9,07	8,89	8,74	8,45
8	2,09	2,02	2,16	2,10	2,47
9	23,41	22,98	22,04	26,55	24,51
	100,00	100,00	100,00	100,01	100,01

It is worth noting from Table III that the sectoral composition of employment among the part of South African work force we are considering has changed little over the eight year period. The clearest trend is the downward movement of the share of mining employment. (Some of the observed fluctuations, no doubt, arise from a method of estimation which is less than completely satisfactory.) It follows that change in occupational structure may be more the result of intra-sectoral change than the result of shifts in the sectoral composition of employment.

We may generate cross-classification tables for 1969, 1971, 1973 and 1975 from the 1977 cross-classification table and the marginal occupational and sectoral totals for the earlier years. To do this we make the assumption that the matrices for the earlier years are *biproportional* to the 1977 matrix (cross-classification table)²⁴. This is the simplest method of adjusting matrix elements in such a way as to yield given marginal totals; it was first devised for the updating of input-output tables from limited information and has generally been found to work well in that field. It avoids wild changes in matrix elements which is desirable if one expects (as in this case) them to be fairly slow to change over time.

Matrix A is biproportional to matrix B if they have the same dimensions (say $m \times n$) and there exist row and column multipliers r_i and s_j such that

$$a_{ij} = r_i b_{ij} s_j \quad i = 1, \dots, m, \quad j = 1, \dots, n$$

Matrix B can be interpreted as the 1977 matrix and a_{ij} the entries for the year under consideration. To find these we have to find values for the 14 row multipliers r_i and the 9 column multipliers s_j . This is done by noting that

$$\sum_j r_i b_{ij} s_j = O_i \quad i = 1, \dots, 14 \quad (1)$$

$$\sum_i r_i b_{ij} s_j = S_j \quad j = 1, \dots, 9 \quad (2)$$

where O_i and S_j are the marginal occupational and sectoral employment totals.

Equation sets (1) and (2) constitute 23 nonlinear equations in 23 unknowns; a computer programme LSURV was written to solve them and so to generate the complete matrices for earlier years.

IV. PRESENTATION OF RESULTS

The discussion of the results of our empirical work is divided into two parts. The first deals with the changing occupational structure and the second with the racial allocation of roles.

A. THE OCCUPATIONAL STRUCTURE

Tables IVA to IVE (on pp. 16-20 below) present the complete 14x9 occupational by sector cross-classifications obtained for 1969, 1971, 1973, 1975 and 1977. We shall base our interpretation on four sets of tables derived from this reference set, viz. Table V on p.15, Table VI on pp. 21-24, Table VII on p.26 and Table VIII on pp. 28-29.

(a) The evolution of classes: Table V summarises the percentages of the workforce considered in each of the seven sub-classes identified above for each year from 1969 to 1977.

TABLE V - *Percentage distribution of the workforce covered by this study into classes 1969 - 1977*

<u>Class</u>	<u>1969</u>	<u>1971</u>	<u>1973</u>	<u>1975</u>	<u>1977</u>
I	3,11	3,55	3,78	3,95	3,95
IIa	4,77	5,08	5,32	5,75	5,71
IIb	18,77	19,87	19,92	20,48	20,93
IIc	1,88	1,91	1,96	2,34	2,45
II - total	25,42	26,86	27,20	28,57	29,09
IIIa	9,80	10,53	10,45	10,83	10,98
IIIb	16,98	16,76	16,79	16,90	16,56
IIIc	44,68	42,29	41,76	39,74	39,42
III - total	71,46	69,58	69,00	67,47	66,96

These figures suggest that by far the largest part of the labour force under consideration is made up of workers. The proportion would be substantially increased if the labour force in capitalist agriculture were included. Between 1969 and 1977, the proportion of bourgeoisie and all subdivisions of the petty bourgeoisie grew. Within the working class the proportion of skilled workers grew, the proportion of semiskilled workers remained roughly constant and the proportion of unskilled workers declined.

TABLE IVA - Occupation by sector April 1969

Occupational category	Sector									TOTAL
	1	2	3	4	5	6	7	8	9	
01	0	50	93	11	28	55	43	50	16404	16736
02	15	804	6071	274	1574	13275	4789	4240	9743	40783
03	4	975	5244	461	2775	1607	1235	785	23914	36999
04	4	406	4048	9	527	9937	615	1086	1830	18462
05	0	738	6490	309	559	3799	1830	702	119517	133944
06A	4	268	913	84	180	53619	882	2454	4474	62879
06B	16	2457	6888	89	1566	14077	6325	8370	29684	69473
07	67	16068	39472	1532	4884	83455	27403	36912	56289	266081
08A	6	8975	4866	269	848	3125	8868	239	57079	84275
08B	14	14294	33376	1245	5221	5048	6622	112	8152	74084
09	150	23182	96207	5604	47996	35238	34048	661	58323	301409
10	79	4996	50319	1426	3644	141209	49169	16322	135703	402865
11	3520	13277	410008	3011	58149	60123	61170	1563	57323	668144
12	622	510136	364133	25013	160856	182015	163899	8785	342366	1757825
TOTAL	4501	596627	1028128	39337	288806	606581	366898	82282	920801	3933961

TABLE IVB - Occupation by Sector April 1971

Occupational category	Sector									TOTAL
	1	2	3	4	5	6	7	8	9	
01	0	70	135	15	47	71	58	62	21522	21979
02	21	1158	9092	407	2694	17645	6666	5398	13265	56346
03	5	1262	7059	616	4269	1920	1545	898	29264	46837
04	5	591	6128	14	912	13352	866	1398	2519	25784
05	0	948	8670	410	853	4504	2272	798	145153	163608
06A	5	371	1314	120	297	68464	1179	3002	5852	80604
06B	21	3291	9593	123	2492	17400	8188	9910	37586	88606
07	81	20212	51631	1990	7301	96881	33316	41044	66937	319392
08A	7	11493	6480	355	1290	3693	10975	270	69094	103657
08B	15	16543	40163	1487	7181	5391	7407	114	8918	87220
09	176	28470	122857	7103	70050	39937	40413	718	67711	377434
10	98	6510	68174	1917	5642	169791	61917	18799	167147	499994
11	3768	14839	476481	3473	77234	62010	66073	1544	60562	765983
12	653	558920	414838	28285	209442	184032	173552	8507	354593	1932820
TOTAL	4856	664678	1222614	46315	389702	685089	414426	92461	1050123	4570263

TABLE IVC - Occupation by Sector April 1973

Occupational category	Sector									TOTAL
	1	2	3	4	5	6	7	8	9	
01	0	81	155	20	52	81	64	72	22792	23317
02	25	1467	11475	576	3268	22130	8069	6923	15381	69314
03	5	1308	7287	713	4236	1970	1529	942	27753	45743
04	4	505	5221	13	747	11305	708	1210	1972	21686
05	0	1135	10347	549	979	5343	2601	967	159162	181084
06A	6	407	1436	147	312	74351	1236	3333	5875	87103
06B	21	3398	9868	143	2465	17788	8078	10359	35522	87642
07	86	22362	56921	2461	7738	106145	35227	45982	67796	344718
08A	8	12689	7129	438	1364	4038	11580	302	69835	107382
08B	16	17729	42892	1781	7372	5722	7587	124	8750	91972
09	175	29792	128109	8310	70221	41386	40417	761	64866	384035
10	98	6818	71147	2245	5661	176099	61975	19936	160258	504236
11	3760	15556	497753	4071	77563	64377	66199	1640	58123	789042
12	647	581519	430090	32901	208748	189615	172573	8963	337746	1962602
TOTAL	4849	694765	1279831	54369	390724	720350	417843	101515	1035830	4700075

TABLE IV D - Occupation by Sector April 1975

Occupational category	Sector									TOTAL
	1	2	3	4	5	6	7	8	9	
01	0	52	103	16	41	63	48	53	21340	21715
02	22	1269	10313	612	3492	23361	8117	6887	19495	73569
03	4	1133	6561	759	4535	2083	1541	939	35238	52973
04	4	477	5116	15	870	13010	776	1312	2724	24305
05	0	940	8897	558	1000	5396	2503	921	192991	213205
06A	5	378	1382	167	357	84076	1332	3552	7977	99226
06B	17	2765	8343	142	2478	17662	7644	9693	42349	91093
07	83	21085	55747	2848	9011	122099	38617	49841	93638	392968
08A	7	11817	6896	501	1569	4588	12539	323	95270	133511
08B	18	20243	50869	2497	10396	7970	10072	163	14634	116862
09	161	26734	119412	9153	77824	45308	42168	785	85266	406811
10	85	5777	62624	2335	5924	182054	61060	19421	198929	538209
11	3692	14909	495508	4789	91806	75271	73765	1806	81598	843144
12	580	509316	391272	35372	225798	202605	175732	9025	433315	1983015
TOTAL	4680	616894	1223044	59765	435100	785545	435914	104720	1324764	4990425

TABIF IVF - Occupation by Sector April 1977

Occupational category	Sector									TOTAL
	1	2	3	4	5	6	7	8	9	
01	0	57	134	20	44	68	52	67	21316	21758
02	25	1380	13186	768	3676	24727	8661	8556	19141	80120
03	5	1232	8386	952	4772	2204	1644	1166	34592	54953
04	4	462	5829	17	816	12272	738	1453	2384	23975
05	0	1105	12303	757	1139	6177	2889	1237	204959	230566
06A	6	420	1808	215	384	91039	1454	4514	8013	107853
06B	20	3097	10986	184	2686	19255	8401	12403	42829	99861
07	97	24022	74683	3745	9938	135417	43175	64883	96340	452300
08A	10	15652	10740	766	2012	5915	16297	489	113951	165832
08B	20	21524	63602	3064	10701	8250	10509	198	14052	131920
09	169	27221	142969	10756	76711	44909	42134	913	78402	424184
10	95	6281	80058	2930	6235	192675	65143	24126	195306	572849
11	3690	14468	565432	5364	86248	71108	70247	2003	71510	890070
12	633	539366	487230	43231	231487	208867	182623	10920	414396	2118753
TOTAL	4774	656287	1447346	72769	436849	822883	453967	132928	1317191	5374994

(b) Occupational structure by sector: Tables VIA to VII present the occupational structure (grouped into seven classes) for each sector from 1969 to 1977.

TABLE VI - *Occupational structure by sector, 1969 to 1977*
(Percentages of sectoral totals)

A SIC 1 - Fishing

Class	1969	1971	1973	1975	1977
I	0,51	0,62	0,72	0,68	0,73
IIa	0,09	0,11	0,10	0,10	0,10
IIb	3,62	4,13	4,21	3,95	4,44
IIc	0,31	0,32	0,32	0,39	0,42
IIIa	3,45	3,77	3,77	3,60	3,75
IIIb	78,20	77,59	77,54	78,89	77,29
IIIc	13,83	13,45	13,34	12,40	13,26

B SIC 2 - Mining

Class	1969	1971	1973	1975	1977
I	0,24	0,32	0,34	0,35	0,34
IIa	0,29	0,34	0,36	0,34	0,36
IIb	3,94	4,52	4,69	4,81	5,09
IIc	2,40	2,49	2,55	3,28	3,28
IIIa	5,39	6,01	6,12	6,25	6,53
IIIb	2,23	2,23	2,24	2,42	2,20
IIIc	85,50	84,09	83,70	82,56	82,18

C SIC 3 - Manufacturing

<u>Class</u>	<u>1969</u>	<u>1971</u>	<u>1973</u>	<u>1975</u>	<u>1977</u>
I	1,07	1,35	1,42	1,37	1,40
IIa	1,15	1,30	1,39	1,28	1,41
IIb	9,40	10,58	10,78	10,36	11,22
IIc	3,25	3,29	3,35	4,16	4,31
IIIa	9,83	10,56	10,57	10,32	10,41
IIIb	39,88	38,97	38,89	40,51	38,27
IIIc	35,42	33,93	33,61	31,99	32,98

D SIC 4 - Electricity, Gas and Water

<u>Class</u>	<u>1969</u>	<u>1971</u>	<u>1973</u>	<u>1975</u>	<u>1977</u>
I	0,93	1,17	1,35	1,33	1,37
IIa	1,99	2,25	2,36	2,23	2,38
IIb	7,75	8,71	8,92	8,92	9,43
IIc	3,16	3,21	3,28	4,18	4,21
IIIa	14,93	16,11	16,09	16,16	15,83
IIIb	7,66	7,50	7,49	8,01	7,37
IIIc	63,59	61,07	60,51	59,18	59,41

E SIC 5 - Construction

<u>Class</u>	<u>1969</u>	<u>1971</u>	<u>1973</u>	<u>1975</u>	<u>1977</u>
I	0,78	1,00	1,11	1,08	1,12
IIa	1,16	1,33	1,34	1,28	1,36
IIb	3,49	3,96	4,06	4,00	4,32
IIc	1,81	1,84	1,89	2,39	2,45
IIIa	16,91	18,31	18,32	18,25	18,02
IIIb	20,13	19,82	19,85	21,10	19,74
IIIc	55,70	53,74	53,43	51,90	52,99

F SIC 6 - Commerce

<u>Class</u>	<u>1969</u>	<u>1971</u>	<u>1973</u>	<u>1975</u>	<u>1977</u>
I	12,67	14,52	14,96	15,33	15,56
IIa	0,90	0,95	1,02	0,97	1,03
IIb	39,36	41,46	41,66	40,97	42,21
IIc	0,83	0,79	0,79	1,01	1,00
IIIa	6,33	6,37	6,31	6,35	6,18
IIIb	9,91	9,05	8,94	9,58	8,64
IIIc	30,01	26,86	26,32	25,79	25,38

G SIC 7 - Transport, Storage and Communication

<u>Class</u>	<u>1969</u>	<u>1971</u>	<u>1973</u>	<u>1975</u>	<u>1977</u>
I	1,72	2,10	2,40	2,35	2,39
IIa	0,85	0,93	1,01	0,93	1,01
IIb	22,59	24,96	25,19	24,62	25,71
IIc	1,80	1,79	1,82	2,31	2,31
IIIa	11,70	12,40	12,44	12,55	12,87
IIIb	16,67	15,94	15,84	16,92	15,47
IIIc	44,67	41,88	41,30	40,31	40,23

H SIC 8 - Finance

<u>Class</u>	<u>1969</u>	<u>1971</u>	<u>1973</u>	<u>1975</u>	<u>1977</u>
I	9,45	10,60	11,29	11,22	10,93
IIa	1,86	1,90	1,95	1,83	1,86
IIb	74,87	75,44	75,14	75,40	76,29
IIc	0,14	0,12	0,12	0,16	0,15
IIIa	1,09	1,07	1,05	1,06	1,05
IIIb	1,90	1,67	1,62	1,72	1,51
IIIc	10,68	9,20	8,83	8,62	8,21

I SIC 9 - Government, Personal and Community Services

Class	1969	1971	1973	1975	1977
I	1,75	2,06	2,24	2,28	2,24
Iia	17,36	18,66	20,25	18,84	19,80
Iib	24,07	25,87	25,45	25,29	25,39
Iic	0,89	0,85	0,84	1,10	1,07
IIia	12,53	13,03	13,00	13,63	14,60
IIib	6,23	5,77	5,61	6,16	5,43
IIic	37,18	33,77	32,61	32,71	31,46

Each sector will be discussed briefly:

A. Fishing: This is the smallest sector under consideration. The distinctive feature of its occupational structure is the preponderance of workers, 94,3% in 1977. Semi-skilled workers are the largest part of this class. The occupational structure changed little between 1969 and 1977.

B. Mining: As in fishing workers predominated, constituting 90,9% of all occupations in 1977. Here unskilled workers are the largest part of this class, indicating that the traditional skilled/unskilled division of labour has persisted on the mines. The occupational structure changed little between 1969 and 1977, but petty bourgeois occupations increased to some extent as a share of the total.

C. Manufacturing: Manufacturing is the largest sector under consideration. Workers comprised a large but falling share of the total - 85,1% in 1969 and 81,2% in 1977. Petty bourgeois occupations formed a substantial proportion of the total and grew from 13,8% in 1969 to 16,9% in 1977 - the greatest part of this increase occurred among clerical and nonmanual workers. Supervisory occupations formed a larger proportion of the total in manufacturing than in any other sector. Within the working class, skilled occupations increased slightly if at all, semi-skilled decreased slightly and unskilled decreased substantially as a proportion of all occupations.

D. Electricity, Gas and Water: The impact of this small sector on the overall division of labour can only have been slight. The features of this sector are:

- a substantial and increasing proportion of petty bourgeois occupations (12,9% in 1969 and 16,0% in 1977)
- increasing skill among the workers over time. Even then unskilled workers constituted 59,4% of the total in 1977.

E. Construction: Occupational structure changed little over the period. In 1977, workers made up 90,7% of total employment in this sector - 18,0% were skilled, 19,7% semi-skilled and 53,0% unskilled.

F. Commerce: This was the third largest sector under investigation. It differs from the preceding sectors in that bourgeois occupations constituted a large and growing proportion of the total - 12,7% in 1969 and 15,6% in 1977. The share of petty bourgeois occupations was almost much larger - 41,1% in 1969 and 44,2% in 1977. Of these, the most numerous were clerical. Working class occupations fell from 46,3% in 1969 to 40,2% in 1977. Unskilled occupations constituted a relatively small part of the total - 25,4% in 1977.

G. Transport, Storage and Communication: The shares of the three classes were closest to those in manufacturing - 2,4% bourgeois, 29,0% petty bourgeois (the greatest difference) and 68,6% workers in 1977.

H. Finance: This is another small sector; its distinctive feature is the high proportion of petty bourgeoisie in total employment (clerical and non-manual occupations accounted for 76,3% in 1977). Bourgeois occupations were also important (10,9% in 1977). The share of the working class fell from 13,7% in 1969 to 10,8% in 1977.

I. Government, Personal and Community Services: This sector was the second largest under consideration. Petty bourgeois activities were a substantial and growing part of this sector - 42,3% in 1969 and 46,3% in 1977. The proportion of skilled workers grew from 12,5% in 1969 to 14,6% in 1977, whereas unskilled workers decreased from 37,2% in 1969 to 31,5% in 1977. Semi-skilled workers

were a relatively small and falling proportion of the total - 5,4% in 1977. Finally, this sector is distinguished from all others in having a large proportion of employees in the professions: 17,4% in 1969 and 19,8% in 1977.

(c) Occupational concentration in sectors: Tables VIIA and VII B contrast the proportions of the seven classes employed in each sector with the share of each sector in total employment. From these tables, an impression may be gained of which classes are concentrated in the various sectors.

TABLE VII - Occupational concentrations in sectors
(Percentages of each class employed in the various sectors)

A. 1969										
Class	Sectors									Total
	1	2	3	4	5	6	7	8	9	
I	0,02	1,21	9,03	0,30	1,87	62,91**	5,15	6,37**	13,14	100,00
Ia	0,00	0,94	6,30	0,42	1,79	2,91	1,66	0,82	85,16**	100,00
Iib	0,02	3,19	13,09	0,41	1,37	32,33**	11,23*	8,34**	30,02*	100,00
Iic	0,02	19,29*	45,05*	1,68*	7,05	6,81	8,94	0,15	11,00	99,99
IIa	0,04	8,34	26,21*	1,52*	12,66*	9,95	11,13*	0,23	29,92*	100,00
IIb	0,53**	1,99	61,37**	0,45	8,70*	9,00	9,16	0,23	8,58	100,01
IIc	0,04	29,02*	20,71	1,42*	9,15*	10,35	9,32	0,50	19,48	99,99
All	0,11	15,17	26,13	1,00	7,34	15,42	9,33	2,09	23,41	100,00

B. 1977										
Class	Sectors									Total
	1	2	3	4	5	6	7	8	9	
I	0,02	1,07	9,82	0,47	2,30	60,41**	5,12	6,85**	13,94	100,00
Ia	0,00	0,78	6,78	0,56	1,94	2,75	1,49	0,80	84,90**	100,00
Iib	0,02	2,97	14,73	0,61	1,68	30,88**	10,37*	9,01**	29,73*	100,00
Iic	0,02	16,32*	48,21*	2,32*	8,11	6,25	7,97	0,15	10,65	100,00
IIa	0,03	7,27	26,05	1,95*	13,34*	8,61	9,90*	0,24	32,60*	99,99
IIb	0,41**	1,63	63,53**	0,60	9,69*	7,99	7,89	0,23	8,03	100,00
IIc	0,03	25,46**	23,00	2,04*	10,93*	9,86	8,62*	0,52	19,56	100,02
All	0,09	12,21	27,49	1,35	8,13	15,31	8,45	2,47	24,51	100,01

Note: An asterisk denotes that the occupation is over-proportionally represented in the relevant sector. A double asterisk denotes a particularly great concentration (twice or more the proportion of the sector in the total work force under consideration), e.g. in sector 3, class IIc and IIIa have a single asterisk because 45,05 and 26,21 are between one and two times as great as 26,13 and IIIb has a double asterisk because 61,37 is more than twice 26,12.

Bourgeois occupations were over-proportionally represented in commerce and finance, and were important in the services sector.

As regards petty bourgeois activities, the professions are heavily concentrated in the services sector. Clerical, white collar technical and non-manual workers were over-proportionally represented in commerce, transport, finance and services and important in manufacturing. Supervisors were most heavily concentrated in mining and manufacturing, and were also over-proportionally represented in electricity, gas and water.

Skilled workers were important or over-proportionally represented in manufacturing, construction, transport and services in 1977. Semi-skilled workers were over-proportionally represented in fishing, manufacturing and construction in the same year. Finally, unskilled workers were over-proportionally represented particularly in mining and to a lesser degree in construction and transport.

(d) Changes in sectoral employment as an explanation of changes in occupational distribution: It has been suggested that, as changes in sectoral shares of the total work force have been quite small over the period, change in the occupational structure will be more the result of intra-sectoral change than the result of shifts in the sectoral composition of employment. This question may be approached more precisely as follows:

Compute a hypothetical occupational distribution based on the 1969 sectoral occupational distribution but on the 1977 sectoral employment shares. Then the change between the 1969 and 1977 occupational distributions can be partitioned into that due solely to changes in sectoral employment shares (the difference between the 1969 distribution and the hypothetical distribution) and to that due to intra-sectoral occupational change (the difference between the hypothetical distribution and the 1977 distribution). The hypothetical distribution is displayed in Table VIIIA and the partition of the change in occupational distribution in Table VIIIB.

TABLE VIIIA - 1969 Sectoral occupational distribution with 1977 sectoral employment shares

Occupational category	Sector									TOTAL
	1	2	3	4	5	6	7	8	9	
01	-	55	134	20	42	75	53	81	23466	23926
02	16	884	8724	507	2381	18009	5925	6850	13937	57233
03	4	1072	7535	853	4197	2180	1528	1268	34209	52846
04	4	447	5817	17	797	13480	761	1754	2618	25695
05	-	812	9326	572	846	5154	2264	1134	170967	191075
06A	4	295	1312	155	272	72739	1091	3964	6400	86232
06B	17	2703	9898	165	2369	19097	7826	13522	42462	98059
07	71	17675	56718	2834	7388	113214	33906	59632	80521	371959
08A	6	9872	6992	498	1283	4239	10972	386	81651	115899
08B	15	15723	47959	2303	7897	6848	8193	181	1161	100780
09	159	25500	138243	10367	72599	47804	42128	1068	83430	421298
10	84	5496	72305	2638	5512	191563	60837	26368	194121	558924
11	3733	14605	589152	5570	87956	81562	75686	2525	82000	942789
12	660	561147	523233	46271	243311	246920	202794	14192	489749	2328277
Total	4773	656286	1477348	72770	436850	822884	453964	132925	1317192	5374992

TABLE VIII B - Partitioning of the change in occupational structure between 1969 and 1977

Occupational category	1969 * distribution	Hypothetical distribution	1977 distribution	Change from 1969 to hypothetical distribution	Change from hypothetical to 1977 distribution	Total change	Sectoral shares change (Percent)	Intra-sectoral change (%)
01	22867	23926	21758	1059	-2168	-1109	-95	+195
02	55722	57233	80120	1511	22887	24398	6	94
03	50552	52846	54953	2294	2107	4401	52	48
04	25225	25695	23975	470	-1720	-1250	-38	+138
05	183009	191075	230566	8066	39491	47557	17	83
06A	85912	86232	107853	320	21621	21941	1	99
06B	94921	98059	99861	3138	1802	4940	64	36
07	363548	371959	452300	8411	80341	88752	9	91
08A	115146	115899	165832	753	49933	50686	1	99
08B	101222	100780	131920	-442	31140	30698	-1	+101
09	411817	421298	424184	9481	2886	12367	77	23
10	550436	558924	572849	8488	13925	22413	38	62
11	912890	942789	890070	29899	-52719	-22820	-131	+231
12	2401727	2328279	2118753	-73448	-209526	-282974	26	74
Total	5374994	5374994	5374994	0	0	0		

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* Note: Because we are working in terms of numbers rather than percentages, it is necessary to inflate all the 1969 occupational group totals by a constant factor to remove the effects of expansion of employment between 1969 and 1977.

The thing to note from Table VIII B is that in only three of the fourteen occupational categories (03-professionals, 06B-senior clerical/white-collar technical, 09-skilled workers) did the change in sectoral employment shares explain more than 50% of the change in occupational numbers. In seven other categories it explains a small part of the change, in four (01-professional, 04-medium owners and managers, 08B-supervisors, 11-semi-skilled workers) the occupational numbers changed in the opposite direction to what would have been predicted by considering sectoral employment shares alone.

B. THE RACIAL DIVISION OF LABOUR: Tables IXA to IXD show the percentage of each occupational category occupied by the four racial groups in 1969, 1971, 1973, 1975 and 1977.

TABLE IXA - *Percentage Whites*

Occupational category	1969	1971	1973	1975	1977
01	(?) 90,3**	75,9**	81,0**	80,5**	83,3**
02	97,1**	96,8**	95,6**	96,4**	96,6**
03	96,6**	96,9**	95,5**	95,1**	94,3**
04	97,7**	95,9**	96,5**	96,3**	94,6**
05	53,3*	(?)55,6*	49,6*	46,9*	46,8*
06A	66,5**	68,0**	68,6**	66,4**	68,7**
06B	93,7**	93,9**	90,2**	90,6**	91,2**
07	85,2**	84,2**	79,9**	77,7**	72,2**
08A	63,0**	58,2*	59,2*	59,6*	57,4**
08B	77,0**	75,8**	72,6**	67,4**	61,3**
09	74,6**	68,8**	68,3**	62,5**	60,3**
10	55,9*	53,7*	51,2*	48,9*	43,8*
11	15,7 ⁻	12,6 ⁻	12,0 ⁻	10,5 ⁻	8,5 ⁻
12	1,8 ⁻	1,4 ⁻	1,2 ⁻	1,1 ⁻	0,8 ⁻
TOTAL	30,8	31,0	30,2	30,1	28,7

TABLE IXB - Percentage Coloureds

Occupational category	1969	1971	1973	1975	1977
(?) 01	2,13 ⁻⁻	3,81 ⁻⁻	3,68 ⁻⁻	0,94 ⁻⁻	1,68 ⁻⁻
02	0,30 ⁻⁻	0,54 ⁻⁻	0,53 ⁻⁻	(?) 0,31 ⁻⁻	0,69 ⁻⁻
03	0,50 ⁻⁻	0,52 ⁻⁻	0,80 ⁻⁻	0,78 ⁻⁻	0,90 ⁻⁻
04	0,33 ⁻⁻	0,43 ⁻⁻	0,86 ⁻⁻	0,93 ⁻⁻	0,77 ⁻⁻
05	12,91*	11,03*	11,97*	11,53*	12,55*
06A	2,53 ⁻⁻	2,26 ⁻⁻	2,53 ⁻⁻	2,67 ⁻⁻	2,51 ⁻⁻
06B	1,56 ⁻⁻	1,64 ⁻⁻	(?) 4,04 ⁻⁻	1,98 ⁻⁻	1,92 ⁻⁻
07	3,51 ⁻⁻	3,53 ⁻⁻	5,35 ⁻⁻	5,31 ⁻⁻	6,42 ⁻⁻
08A	6,58 ⁻⁻	6,19 ⁻⁻	7,14 ⁻⁻	7,27 ⁻⁻	7,65 ⁻⁻
08B	6,49 ⁻⁻	7,00 ⁻⁻	8,13 ⁻⁻	7,67 ⁻⁻	8,78 ⁻⁻
09	11,05*	11,20*	12,72*	13,58*	13,12*
10	8,42 ⁻⁻	8,15 ⁻⁻	8,57 ⁻⁻	10,68*	10,85*
11	21,66**	21,77**	22,06**	21,20**	17,76*
12	8,33 ⁻⁻	8,13 ⁻⁻	7,82 ⁻⁻	8,45 ⁻⁻	8,41 ⁻⁻
TOTAL	10,14	9,93	10,26	10,59	10,09

TABLE IXC - Percentage Astans

Occupational category	1969	1971	1973	1975	1977
01	1,22--	2,07-	2,23-	2,81-	3,53-
02	2,32-	2,13-	3,36-	2,58-	2,08--
03	0,53--	0,84--	0,79--	0,75--	1,94--
04	1,77-	(?) 3,35-	2,16-	2,57-	3,55-
05	4,42*	4,16*	4,12*	3,82-	3,91-
06A	17,53**	16,62**	16,54**	17,45**	16,35**
06B	2,38-	2,71-	2,92-	3,80-	3,91-
07	3,56*	4,72*	5,40*	6,16*	6,58*
08A	0,76--	1,61--	1,08--	1,40--	2,36-
08B	2,40-	3,66-	3,24-	4,51*	3,53-
09	1,87-	2,52-	2,52-	2,83-	3,31-
10	7,04*	8,73**	8,33**	7,99**	8,93*
11	7,88**	8,17**	7,88**	7,18*	6,83*
12	1,15--	0,94--	0,97--	0,97--	(?) 2,18--
TOTAL	3,54	3,92	3,91	3,97	4,56

TABLE IXD - Percentage Africans

Occupational category	1969	1971	1973	1975	1977
(?) 01	6,3 ⁻	18,2 ⁻	17,7 ⁻	15,8 ⁻	11,4 ⁻
02	0,2 ⁻	0,5 ⁻	0,5 ⁻	0,7 ⁻	0,5 ⁻
03	2,4 ⁻	1,8 ⁻	2,9 ⁻	3,4 ⁻	2,4 ⁻
04	0,2 ⁻	0,3 ⁻	0,5 ⁻	(?) 0,2 ⁻	1,1 ⁻
05	29,3 ⁻	29,2 ⁻	34,3 ⁻	37,8 ⁻	(?) 31,5 ⁻
06A	13,4 ⁻	12,9 ⁻	12,3 ⁻	13,5 ⁻	12,3 ⁻
06B	2,4 ⁻	1,7 ⁻	2,9 ⁻	3,6 ⁻	2,8 ⁻
07	7,7 ⁻	7,6 ⁻	8,6 ⁻	10,8 ⁻	14,5 ⁻
08A	29,7 ⁻	34,0 ⁻	32,5 ⁻	31,8 ⁻	31,3 ⁻
08B	14,1 ⁻	13,5 ⁻	12,6 ⁻	20,5 ⁻	26,3 ⁻
09	9,3 ⁻	17,4 ⁻	16,5 ⁻	21,1 ⁻	23,2 ⁻
10	28,6 ⁻	29,4 ⁻	31,9 ⁻	32,4 ⁻	36,4 ⁻
11	54,7 ⁻	57,5*	58,1*	61,1*	66,7*
12	88,8*	89,9*	90,0*	89,5*	88,4*
TOTAL	55,6	55,1	55,6	55,4	56,2

Notes: (1) An asterisk denotes that the racial group is over-proportionally represented in the relevant occupational category. A double asterisk denotes heavy over-representation (twice or more the proportion of the racial group in total employment). A minus denotes under-representation and a double minus substantial under-representation (half or less the proportion of the racial group in total employment).

(2) Unfortunately, there are some fluctuations for which there is no apparent explanation other than unreliability of estimates. These are denoted by the entry of (?) before the figures.

Each occupational class is discussed below:

I. Bourgeoisie: Whites clearly dominate here on the whole. Asians constitute a substantial part of the lowest category (06A) where they are proportionally over-represented. Africans also appear in this stratum, but are proportionally substantially under-represented.

II. Petty Bourgeoisie:

(a) Professions: Here again Whites dominate the upper echelons (Africans' share of category 01 is accounted for by the fact that clergy have been put here), but their share of the semi-professional category is falling. All the other racial groups are represented. This tendency may be explained in part by the expansion of educational services.

(b) Clerical, White-Collar Technical and Non-Manual Workers: While Whites still constitute the largest proportion of these occupations, particularly in the top (06B) stratum, there has been substantial and increasing penetration by Coloureds, Asians and Africans. This tendency is important in that these occupations are growing in relation to the total work force under consideration, constituting 20,9% of the total in 1977.

(c) Supervisors: This is a small but growing category which has been penetrated by Africans and, to a lesser extent, Coloureds. The proportion of Asians in this category has remained constant and that of Whites has fallen.

III. Workers:

(a) Skilled Workers: Whites still dominate blue-collar technical and skilled worker occupations but Coloureds, Asians and Africans have all increased their shares of these categories between 1969 and 1977. The proportion of Africans in the skilled worker category (09) increased from 9,3% in 1969 to 23,2% in 1977.

(b) Semi-skilled Workers: The proportion of Whites in semi-skilled occupations fell sharply between 1969 (15,7%) and 1977 (8,5%). Coloureds and Asians increased their share of this category up to 1973 and 1971 respectively, but reduced their shares after these dates. The proportion of Africans increased steadily from 54,7% in 1969 to 66,7% in 1977.

(c) Unskilled Workers: As one expects, Whites constitute a negligible part of this category. Asians are also relatively unimportant. The proportion of Coloureds fluctuated around a level of about 8%. Africans, of course, dominate this category forming 88,8% in 1969 and 88,4% in 1977. The decrease in their share between 1973 and 1977 (and associated increase in the proportion of Coloureds and Asians) may be explained by labour market institutions (such as influx control and job placement by labour bureaux) which place the burden of unemployment on Africans.

Penetration of occupational categories by Blacks vary considerably across sectors, as can be seen from Tables XA to D which set out the percentage of each racial group in each occupational category for each sector in 1977.

TABLE XA - % Whites by sector by occupation 1877

Occupational category	Sector									TOTAL
	1	2	3	4	5	6	7	8	9	
01	-	100,0	100,0	100,0	100,0	100,0	100,0	100,0	83,0*	83,3
02	96,0*	99,9	97,7	100,0	98,7	94,8*	97,3	99,1	96,4*	96,6
03	100,0	97,2	97,0	99,8	97,4	96,5	100,0	99,9	92,5*	94,3
04	100,0	99,8	97,4	100,0	99,5	93,1*	95,7	96,3	91,3*	94,6
05	-	86,3	87,9	88,0	76,9	83,5	99,7	94,9	41,7*	46,8
06A	100,0	98,3	98,5	100,0	100,0	63,7*	99,7	97,4	94,2	68,7
06B	100,0	81,4	88,3*	96,7	87,9*	87,4*	94,4	96,9	92,4	91,2
07	76,3	21,1*	68,8*	93,7	57,9*	71,8*	86,3	83,7	74,9	72,2
08A	60,0	70,8	85,9	96,5	95,5	90,4	93,5	99,0	44,9*	57,4
08B	35,0*	79,1	48,8*	54,5*	85,8	78,7	53,8*	82,3	68,9	61,3
09	65,1	82,8	63,6	80,5	38,0*	63,7	84,6	42,6*	50,9*	60,3
10	36,8*	35,4*	33,6*	26,7*	32,0*	46,7	49,7	74,6	40,1*	43,8
11	2,7*	7,8*	4,7*	62,8	3,7*	4,6*	36,6	5,7*	17,3	8,5
12	0,9	0,2*	0,5*	1,1	0,0*	0,3*	3,2	0,1*	1,0	0,8

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TABLE XC - % Asians by sector by occupation 1977

Occupational category	Sector									TOTAL
	1	2	3	4	5	6	7	8	9	
01	-	.*	.*	.*	.*	.*	.*	.*	3,61	3,53
02	.*	0,07*	1,11*	.*	0,11*	4,27	1,27*	0,23*	1,70*	2,08
03	.*	0,32*	1,07*	0,21*	0,84*	1,52*	.*	0,09*	2,61	1,94
04	.*	.*	1,37*	.*	0,49*	4,99	2,71*	1,03*	5,08	3,55
05	-	.*	1,59*	0,40*	1,32*	3,92	0,14*	2,18*	4,16	3,91
06A	.*	.*	0,66*	.*	.*	19,05	0,14*	0,64*	3,12*	16,35
06B	.*	0,16*	5,66	0,54*	4,17	7,02	2,20*	1,14*	3,47*	3,91
07	4,12*	0,36*	7,56	0,40*	10,58	9,20	6,05*	3,77*	5,63*	6,58
08A	.*	0,01*	3,82	.*	0,20*	5,22	2,31*	0,82*	2,52	2,36
08B	.*	0,05*	5,00	0,26*	0,49*	3,75	1,68*	1,52*	6,52	3,53
09	4,14	0,24*	2,98*	0,62*	30,18	4,85	1,12*	0,55*	4,78	3,31
10	3,16*	2,61*	8,79*	0,89*	7,91*	12,04	2,93*	3,77*	8,90*	8,93
11	0,22*	1,04*	7,89	0,50*	0,77*	6,59*	4,70*	1,05*	10,19	6,83
12	.*	0,04*	1,64*	0,13*	0,06*	0,90*	0,59*	0,16*	8,38	2,18

TABLE XB - % Coloureds by sector by occupation 1977

Occupational category	Sector									TOTAL
	1	2	3	4	5	6	7	8	9	
01	-	-*	-*	-*	-*	-*	-*	-*	1,7	1,7
02	-*	-*	0,7	-*	0,7	0,7	0,4*	0,5*	0,9	0,7
03	-*	1,5	0,9	-*	0,7*	2,0	-*	-*	0,9	0,9
04	-*	-*	0,7*	-*	-*	0,8	1,1	1,8	0,5*	0,8
05	-	1,4*	2,7*	1,1*	18,2	4,3*	0,2*	2,1*	13,7	12,5
06A	-*	-*	0,5*	-*	-*	2,7	0,1*	0,8*	2,3*	2,5
06B	-*	0,9*	3,7	-*	3,4	3,6	0,5*	1,2*	1,2*	1,9
07	19,6	0,7*	8,0	0,3*	14,1	8,7	2,0*	6,7	4,7*	6,4
08A	40,0	0,6*	4,1*	-*	1,0*	2,7*	3,0*	0,2*	10,1	7,7
08B	65,0	0,2*	14,3	3,9*	5,1*	6,6*	7,2*	9,6	3,3*	8,8
09	21,9	2,3*	11,6*	4,6*	32,3	10,9*	2,1*	43,2	8,8*	13,1
10	50,5	5,2*	13,4	5,9*	13,2	14,4	6,6*	6,2*	5,7*	10,9
11	75,7	7,2*	21,0	10,9*	7,3*	16,1*	11,7*	26,7	11,5*	17,8
12	45,7	0,9*	10,1	9,5	7,5*	12,1	13,5	17,5	12,1	8,4

TABLE XD - % Africans by sector by occupation 1977

Occupational category	Sector									TOTAL
	1	2	3	4	5	6	7	8	9	
01	-	-*	-*	-*	-*	-*	-*	-*	11,7	11,4
02	4,0	0,1*	0,4*	-*	0,5	0,3*	1,0	0,2*	1,0	0,5
03	-*	1,0*	1,0*	-*	1,1*	0,4*	-*	-*	3,9	2,4
04	-*	0,2*	0,5*	-*	-*	1,1	0,5*	0,9*	3,1	1,1
05	-	12,3*	7,7*	10,6*	3,6*	8,3*	2,0*	0,8*	40,4	31,5
06A	-*	1,7*	0,4*	-*	-*	14,5	-*	1,2*	0,4*	12,3
06B	-*	17,5	2,4*	2,7*	4,5	2,0*	2,8	0,8*	2,9	2,8
07	-*	77,9	15,6	5,7*	17,4	10,3*	5,6*	5,9*	14,9	14,5
08A	-*	28,6*	6,2*	3,5*	3,3*	2,9*	1,2*	-*	42,5	31,3
08B	-*	20,7*	31,9	41,3	8,6*	11,0*	37,3	6,6*	21,3*	26,3
09	8,9*	14,7*	21,9*	14,3*	25,5	20,5*	12,2*	13,7*	35,5	23,2
10	9,5*	56,8	44,2	66,4	46,9	26,9*	40,7	12,1*	42,9	36,4
11	21,4*	83,9	66,4*	25,7*	88,2	72,7	47,0*	66,5*	61,0*	66,7
12	53,4*	98,9	87,4*	89,3	92,5	86,6*	82,7*	82,3*	78,5*	88,4

Note: Asterisks are placed next to entries where the proportion in the relevant sector is *less* than that for the relevant race group in the relevant occupation. The occupational categories are divided into class categories and the number of asterisked entries in each class are tabulated in Table XE.

TABLE XE - *Asterisked entries in Tables XA to XD*

I	1	2	3	4	5	6	7	8	9
Whites	1	-	-	-	-	3	-	-	2
Coloureds	3	3	2	3	2	-	2	2	2
Asians	3	3	3	3	3	-	3	3	1
Africans	2	3	3	3	2	1	2	3	1
<hr/>									
IIa									
Whites	-	-	-	-	-	-	-	-	3
Coloureds	1	2	2	3	2	2	3	3	-
Asians	1	3	3	3	3	2	3	3	-
Africans	1	3	3	3	3	3	3	3	-
<hr/>									
IIb									
Whites	1	2	3	1	3	2	-	-	1
Coloureds	1	3	-	3	-	-	3	2	3
Asians	3	3	1	3	1	-	3	3	3
Africans	3	-	1	2	-	3	1	3	-
<hr/>									
IIc									
Whites	1	-	1	1	-	-	1	-	-
Coloureds	-	1	-	1	1	1	1	-	1
Asians	1	1	-	1	1	-	1	1	-
Africans	1	1	-	-	1	1	-	1	1
<hr/>									
IIIa									
Whites	-	1	-	-	1	-	-	1	2
Coloureds	-	2	2	2	1	2	2	1	1
Asians	1	2	1	2	1	-	2	2	-
Africans	2	2	2	2	1	2	2	2	-

A discussion of Table X follows:

I. Bourgeoisie: The sector most penetrated by Blacks is commerce (especially by Asians).

II. Petty Bourgeoisie:

(a) Professions: Here penetration has been confined to the service sector. This sector is predominantly public and is the one affected by the creation of separate racial administrative bureaucracies.

(b) Clerical, White-Collar Technical and Non-Manual Workers: Penetration has taken place in the (private) sectors of manufacturing, construction and commerce (by Coloureds and Asians)

(c) Supervisors: Here penetration has taken place in fishing (by Coloureds), manufacturing, electricity (by Africans) and transport (by Africans).

III. Workers:

(a) Skilled: Whites are proportionally under-represented in mining, construction, finance and services.

(b) Semi-skilled and unskilled: Whites are proportionally over-represented in electricity, gas and water, transport and services; all of these are predominantly public sectors in which semi-skilled workers have been traditionally protected from competition from other races.

It remains to report on the effects of the changing racial division of labour on the apportionment of earners in each racial group between the three main occupationally-defined classes. This is done in Table XI.

TABLE XIA Allocation of Whites to each occupational class
%

	1969	1971	1973	1975	1977
I	8,22	9,45	10,34	10,67	11,28
IIa	10,11	10,79	10,64	11,17	11,52
IIb	42,74	43,77	43,10	43,37	43,29
IIc	4,71	4,66	4,70	5,24	5,24
II	57,56	59,22	58,44	59,78	60,05
IIIa	22,98	22,57	22,92	22,25	22,72
IIIb	8,68	6,80	6,66	5,89	4,91
IIIc	2,56	1,95	1,65	1,41	1,06
III	34,22	31,32	31,23	29,55	28,69

TABLE XIB Allocation of Coloureds to each occupational class
%

	1969	1971	1973	1975	1977
I	0,45	0,53	0,57	0,59	0,63
IIa	4,47	4,22	4,75	4,76	5,49
IIb	11,12	11,79	13,51	15,16	17,16
IIc	1,21	1,35	1,55	1,70	2,13
II	16,80	17,36	19,81	21,62	24,78
IIIa	9,75	10,73	11,71	12,29	12,60
IIIb	36,28	36,75	36,08	33,82	29,14
IIIc	36,72	34,64	31,83	31,69	32,84
III	82,75	82,12	79,62	77,80	74,58

TABLE XIC Allocation of Asians to each occupational class
%

	1969	1971	1973	1975	1977
I	8,84	8,63	9,36	10,02	8,22
IIa	4,54	4,27	4,54	4,62	4,42
IIb	28,39	34,10	34,35	35,70	34,57
IIc	1,28	1,78	1,62	2,66	1,90
II	34,21	40,15	40,51	42,98	40,89
IIIa	4,52	6,24	5,89	6,75	7,33
IIIb	37,85	34,90	33,84	30,58	24,77
IIIc	14,59	10,09	10,40	9,67	18,79
III	56,96	51,23	50,13	47,00	50,89

TABLE XID Allocation of Africans to each occupational class
%

	1969	1971	1973	1975	1977
I	0,39	0,43	0,43	0,51	0,46
IIa	1,89	2,09	2,59	3,10	2,53
IIb	6,29	6,85	7,49	7,98	9,17
IIc	0,48	0,47	0,56	0,87	1,15
II	8,66	9,41	10,64	11,95	12,85
IIIa	2,86	4,01	3,76	4,64	4,97
IIIb	16,73	17,47	17,54	18,66	19,67
IIIc	71,37	68,68	67,63	64,26	62,04
III	90,96	90,16	88,93	87,56	86,68

Notes: (1) Totals may not add to exactly 100% because of rounding.
 (2) The principal unexplained fluctuation in this table appears in subclass IIIc (group 12) - Asians. For some reason, the number of Asians in this group reported by the Manpower Survey doubled between 1975 and 1977. It is unlikely that this is an accurate reflection of what really happened.

From Table XI it can be noted that only in the case of Whites was there a clear and sustained increase in the proportion of the labour force belonging to the 'owner and manager' category. On the other hand, the proportion of petit bourgeois increased in all racial groups, while the proportion of workers decreased in all racial groups (though the decline in the proportion of Africans here was less marked than for Whites, Coloureds and Asians).

V. SUMMARY OF RESULTS AND CONCLUSIONS:

The principal results of this study may be summarised as follows:

- (a) The proportion of the South African work force covered by the Manpower Surveys and hence by this study fluctuates between 48% and 53%. The rest consist of people employed in agriculture and domestic service and the 'informal sector' as well as the unemployed.
- (b) Despite the defects of the data sources, it is possible to detect a number of clear trends in the racial division of labour between 1969 and 1977.
- (c) The outstanding features of occupational change over the period are
 - the increase in the share of bourgeois and more particularly, petty bourgeois occupations
 - the decrease in the proportion of unskilled workers
- (d) The size of the occupational classes varies considerably between sectors. Certain classes are proportionally over-represented or concentrated in one or two sectors (bourgeois occupations in commerce and finance and the professions in services). Nonetheless, intra-sectoral change in occupational structure is more important in explaining change in the overall occupational structure from 1969 - 1977 than change in the sectoral employment shares.
- (e) As regards the racial division of labour, the outstanding feature is the predominance of Whites in both bourgeois and petty bourgeois occupations and their under-representation in the semi-skilled and unskilled strata of the working class.
- (f) However, over the period studied, there has been rapid penetration of Coloureds, Asians and Africans into petty bourgeois activities (particularly clerical, white-collar-technical and non-manual work) in the private sectors of manufacturing, construction and commerce. In addition, some penetration of races other than Whites has taken place within the services sector, reflecting the creation of racial bureaucracies in the public sector. To this extent our work shows a more complex pattern of change in the racial division of labour than Terrington's study (mainly of manufacturing) of the period 1949-1973.

(g) Within the working class, there appears to have been a fairly rapid replacement of Whites by other races, with the share of Africans increasing particularly rapidly in the semi-skilled and artisan classes. Whites constitute a small and rapidly decreasing proportion of the working class, particularly in the semi-skilled and unskilled strata. The trend observed by Davies over the period from 1946 to 1960 continues to apply. It is only within the public sectors that they continue to represent a significant share of semi-skilled occupations.

(h) When it comes to tracing the effects of these changes on the occupational class composition of the various racial segments of the labour force, it appears that only in the case of Whites was there a clear increase in the proportion belonging to the bourgeoisie. The proportion of the petty bourgeois increased in all racial groups. The proportion of workers decreased in all racial groups, although the decline for Africans was less marked than for Whites, Coloureds and Asians.

NOTES

- 1 See, for instance:
H. Adam, *Modernising Racial Domination*, University of California Press, 1972, pp. 145-159.
N. Bromberger, Economic Growth and Political Change, in (ed) A. Leftwich, *South Africa: Economic Growth and Political Change*, Allison and Busby, 1974, especially paragraphs 3.4.2. (iv) and (v) on pp. 81-83.
M. Legassick and D. Innes, Capital Restructuring and Apartheid: A Critique of Constructive Engagement, *African Affairs*, vol. 76, 1977, pp. 446-449.
- 2 H. Adam, *Modernising Racial Discrimination*, University of California Press, Berkeley, 1971. pp. 150-154 and 180-182.
- 3 L. Schlemmer, 'The Social Implications of Occupational Mobility in South Africa's Plural Society', in H.W. van der Merwe and C.T. Groenewald (eds) *Occupational and Social Change among Coloured People in South Africa*, Juta, Cape Town, 1976 p.45.
- 4 M. Legassick, 'Legislation, Ideology and Economy in Post-1948 South Africa', *Journal of Southern African Studies* Vol. 1, No. 1, October 1974, p.13.
- 5 J. Knight and M. McGrath, 'An Analysis of Racial Wage Discrimination in South Africa', *Oxford Bulletin of Economics and Statistics*, Vol. 39, 1977.
- 6 At present analysis of these connections is inhibited by the fragmentary nature of existing information. This study provides the empirical basis for a more precise analysis of occupations and the racial division of labour. The Current Population Survey which collects information on employment, incomes, occupations and place of residence of a large sample of African workers makes it possible to provide detailed information on other aspects of these connections.
- 7 In addition, a tabulation of the 'occupation and race distribution of industrial labour' based on a sample of 1 106 000 industrial workers analysed by the Federated Chamber of Industries in 1969 is provided by Cortis (L. Cortis, White Involvement in Black Advancement, *People and Profits*, Vol. 1, 1974, p. 11). Only five occupational categories are used - artisans and apprentices, supervisors, operators, semi-skilled and other. Unfortunately no definitions of these categories are provided, but it seems that 'operators' correspond roughly with our 'semi-skilled' category and 'semi-skilled' with our 'unskilled' category. This can be seen from a comparison of our findings concerning the racial division of labour in manufacturing in 1977 with Biesheuvel's calculations (S. Biesheuvel, Black Industrial Labour in South Africa, *South African Journal of Economics*, vol. 42 no. 3, September 1974 pp. 292-311):

Racial division of labour in manufacturing

(Percentage of occupational groups occupied by different races)

Occupation	Cortis/Biesheuvel, 1969 (1)			Simkins/Hindson, 1977 (2)			
	Whites	Col/As	Africans	Whites	Col/As	Africans	
Supervisors	68,2	13,6	18,2	088	48,8	19,3	31,9
Artisans/ apprentices	89,7	10,3	-	09	63,6	14,6	21,9
Operators	13,4	34,6	52,0	11	4,7	28,9	66,4
Semi-skilled	-	11,1	88,9	12	0,8	11,7	87,4

Sources: (1) Biesheuvel, *op. cit.*, Table III.
(2) Simkins/Hindson, Tables XA to XD.

Note that the two estimates of the proportion of Africans in the lowest category are very similar. The proportion of Africans in the higher categories are higher in our estimates - a reasonable result in terms of our general findings. Further confirmation that it is reasonable to identify categories *broadly* in this way is provided by comparison of the all-race occupational composition of manufacturing employment in 1969.

Occupational composition of manufacturing employment, 1969.
(all races)

Occupation	Cortis (1)		Simkins/Hindson (2)	
	Number (thousands)	%	Number (thousands)	%
Supervisors	22	2,0	088	3,2
Artisans/ apprentices	78	7,0	09	9,4
Operators	485	43,8	11	39,9
Semi-skilled	323	29,2	12	35,4
Others	199	18,0	Rest	12,1
	1107	100,0	1027	100,0

Sources: (1) Cortis, *op. cit.*, Fig. 3.
(2) Simkins/Hindson, Table IVA.

The discrepancies reflect different coverage, different definition of occupational categories and errors arising from estimation procedures. Apportionment of the discrepancies is not possible.

- 8 C. Pienaar, The Manpower Implications of Economic Growth in South Africa to 1985, Unpublished M. Com. Dissertation, University of Natal, 1975.
- 9 Pienaar, *op. cit.*, p. 100.
- 10 Pienaar, *op. cit.*, p. 101.
- 11 Pienaar, *op. cit.*, p. 102.
- 12 D. Terrington, An Examination of the Occupational Wage Structure in Selected Industries Covered by the Wage Board: The Impact of Wage Board Determinations on the Occupational Wage Structure and the Politico-Economic Implications of Changes in the Occupational Wage Structure, Unpublished M.A. Dissertation, University of Cape Town, 1974.
- 13 Terrington, *op. cit.*, p. 158.
- 14 See R. Davies, Capital, the State and White Wage Earners: An Historical Materialist Analysis of Class Formation and Class Relations in South Africa, 1900-1960, Unpublished D. Phil. Thesis, University of Sussex, 1977.
- 15 Davies, *op. cit.*, p. 26.
- 16 Davies, *op. cit.*, p. 27.
- 17 See Knight and McGrath *op. cit.*, Table I, p. 247.
- 18 See the tables produced by Sadie in Chapter 5 of the Theron Commission Report.
- 19 This information was obtained from discussions with officials of the Department of Labour.
- 20 We are grateful to Professor Schlemmer for letting us have a copy of the list of categories and rules for assignation of particular occupations to these categories. The categories were originally based on D.V. Glass, *Social Mobility in Britain*, Routledge and Kegan Paul, 1954.
- 21 A comprehensive class analysis based on this criterion should also include capitalist and non-capitalist agriculture, non-capitalist activities in the urban areas and, of course, the unemployed. Discussion in this paper is limited, however, to the half of the labour force identified in the Manpower Surveys.
- 22 Terrington, *op. cit.*, pp. 137-138.
- 23 on p. 7.14.
- 24 The term is used by M. Bacharach in his *Biproportional Matrices and Input-Output Change*, Department of Applied Economics Monograph 16, Cambridge University Press, 1970.

APPENDIX - OCCUPATIONAL AND SECTORAL AGGREGATION TABLES.

A. Occupational Aggregation

Each Manpower Survey associates the same 3-digit code number with each occupational category. The following tables convert these numbers into fourteen occupational categories.

Codes 000-099

<u>Manpower Survey Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
001	03	Chemical Engineer (Professionally qualified)
002	03	Civil Engineer (Professionally qualified)
003	03	Electrical Engineer (Professionally qualified)
004	03	Mechanical Engineer (Professionally qualified)
005	03	Mining Engineer (Professionally qualified)
006	03	Other Engineers (specify) (Professionally qualified)
007	03	Chemist (Not Pharmacists)
008	03	Geologist, Geophysicist
009	03	Physicist

Codes 100-199

101	01	Architect
102	03	Quantity Surveyor
103	05	Designer:(Industrial and Commercial)(Not fashion designer or Engineering)
104	05	Technician: Draughtsman (civil, mechanical, architectural, etc.)
105	09	Technical Assistant: Tracer
106	03	Land Surveyor
107	03	Cartographer, Geographer
108	03	Metallurgist
109	03	Biologist, Hydrobiologist, Microbiologist, Algologist, Botanist, Zoologist, Physiologist.

Codes 100-199

<u>Manpower Survey Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
110	08A	Agriculturist, Horticulturist, Forester
111	03	Mathematician, Statistician, Actuary
112	08A	All technologists, e.g. textile, rubber, concrete, fuel, wood, plastic, paint, food etc.
113	08A	Technician: Engineer (Other)
114	08A	Technician:Chemical
115	09	Technical Assistant:Other
116	08A	Technician:Medical and Dental
117	08A	Technician: Other
118	03	Veterinary Surgeon
119	01	Medical Doctor:(General Practitioner or Specialist)
120	01	Dentist
121	06B	Health Inspector
122	08A	Nurse, Male Nurse, Health Visitor (Registered)
123	05	Midwife
124	08A	Student Nurse, Student Male Nurse
125	04	Dispensing Chemist, Druggist
126	04	Optometrist, (Not Ophthalmologist, Eye Specialist)
127	05	Dietician, Domestic Scientist
128	05	Medical Auxiliaries: Masseur, Physiotherapist, Occupational Therapist, Speech Therapist
129	03	Professor, Lecturer, Teacher (Universities)
130	05	Vocational Teacher, Instructor
131	03	Inspector of Education
132	01	Clergyman, Priest, Missionary
133	03	Judge, Magistrate, Bantu Affairs Commissioner
134	01	Advocate, Legal Adviser
135	03	Attorney, Conveyancer, Notary, Sworn Appraiser
136	06B	Other Legal Occupations, e.g. Legal Assistants, Sheriff,etc.
137	05	Artist, Painter, Sculptor, Commercial Artist, Display Artist, Colour Consultant, Interior Decorator, Fashion Designer
138	05	Author, Editor, Journalist, Reporter, Copy Writer, Translator
139	05	Actor, Musician, Dancing Teacher, Singer, Radio Announcer, Organist.

Codes 100-199

<u>Manpower Survey Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
140	05	All Other Teachers
141	03	Accountant, Auditor (Registered)
142	06B	Accountant, Auditor (articled clerk)
143	03	Cost Accountant, Estimator, Valuer, Management Consultant
144	03	Economist, Economic Adviser, Financial Analyst
145	05	Librarian, Archivist
146	03	Psychologist: Personnel, Industrial, Clinical, etc.
147	03	Sociologist, Social Welfare Worker
148	05	Public Relations Officer
149	05	Programmer, Systems Analyst
150	06B	Work Study Officer, O & M Officer
151	03	Market Researcher
152	08A	Technician: Agricultural
153	08A	Technician: Telecommunications e.g. Workshop, Drawing Office and Technical officers
154	03	Industrial Engineer (Professionally qualified)
155	03	Agricultural Engineer (Professionally qualified)
156	03	Town Planner, Regional Planner
157	03	Natural Scientist (n.e.c.) e.g. Meteorologist, Hydrologist, Astronomer
158	03	Life Scientist (n.e.c.) Oceanographer, Biophysicist, Biochemist.
159	08A	Technician: Engineering Electrical (heavy current)
160	05	Other (Professional, Semi-Professional and Technical)
162	03	Topographical Surveyor
163	08A	Technician: Engineering (Civil)
164	08A	Technician: Engineering (Mechanical)
165	03	Lecturer, Teacher e.g. Training Colleges, Colleges for Advanced Technical Education, etc.
166	09	Technical Assistant : Engineering
167	06B	Articled Clerk
168	08A	Technician: Engineering Electrical (light current) (Telecommunication excluded)
169	05	Radiographer

Codes 100-199

<u>Manpower Survey Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
170	02	Managing Director
171	02	Mine Manager, Assistant and Underground Manager
172	06A	Compound Manager (Licensed)
173	08B	Manager/Superintendent of Factory, Production, Works, Plant
174	04	Director of Sales, Purchasing
175	04	Manager of Credit Finance, etc.
176	04	Personnel Manager, (Not Psychologist) (Government Depart- ments excluded)
177	06A	Manager of Branch, District, Club, Airport, Region, Hotel, Shop, etc.
178	04	Company Secretary
179	06B	Secretary of Branch Mine, Works, etc.
180	06B	Other Secretaries, e.g. Club, Institute, School, Mayor's Secretary, etc.
181	02	Administrative Officials and higher, e.g. Heads of Departments, Town Clerk, Departmental Head, Curator, as well as other Executives, Principal and Chief Clerk and Superintendent/Manager/Director of Section of Department of the Establishment e.g. Advertising, Beach, Contracts, Employment, Housing, Property, Transport, etc.
182	06A	Inspector of Construction, Premises, Housing, Drainage, etc.
183	02	General Manager

Codes 200-299

201	06B	Accountant, Internal Auditor (not registered)
202	07	Bank Clerk (Banking institutions only)
203	06B	Bookkeeper
204	10	Cashier, Teller, Paymaster
205	07	Clerk : Wages, Salary Payments, Pension Fund
206	07	Clerk: Costing, Pricing, Invoice, Order, Purchasing, Sales (not counter assistants)
207	07	Clerk: Accounting, Audit
208	08B	Clerk: Administrative, Correspondence, Committee
209	10	Clerk: Despatch, Mailing, Shipping, Mass-measuring Bridge, Station Agent.

Codes 200-299

<u>Manpower Survey Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
210	10	Clerk: Factory, Production, Operation
211	07	Clerk: Records, Registry, Filing, Statistics, Micro-filing, Index, Recorder, Tallyman, Clip Counter.
212	10	Storeman, Stores Assistant, Stationery Clerk, Stock Clerk, Outfit Clerk, Paper/Document Keeper.
213	07	Clerk: Staff, Employment Officer
214	07	Clerk, Receptionist
215	07	Typist, Stenographer, Shorthand Typist
216	10	Typist/Clerk/Telephonist
217	10	Office Machine Operator: Duplicating Machine, Punch Card Machine, Printing Machine, Comptometer, Photostats, Computing, etc.
218	07	Library Assistant
221	10	Meter Reader
222	10	Timekeeper, Time Office Clerk, Clipper
223	07	General Clerk: Senior Clerk, Clerk Grades I,II,III, Junior Clerk, Personal Clerk, Clerical assistant.
224	07	Other clerical employees not classifiable above e.g. Travel, Advertising, Estate, Security, Totalisator, Booking, Examiner of Driver's Licences, etc.
240	06B	Auctioneer, Stockbroker
241	06A	Estate Agent
242	07	Insurance Agent, Insurance Broker
243	07	Market Agent, Slaughter-stock Agent
244	04	Other Agents, e.g. Indent, Shipping, Manufacturing, etc.
245	07	Representatives: Manufacturing, Sales, Services, Medical, Commercial Traveller
246	07	Buyer
247	06B	Buyer
248	10	Canvasser and Other Outside Salesmen
249	07	Salesmen, Demonstrator
250	06B	Mannequin
251	10	Shop and Counter Assistant, Counterhand, Soda-fountain hand, Florist, Receiver of Dry-cleaning etc.
252	10	Hawker, Newspaper Boy, Other Street Vendors

Codes 200-299

<u>Manpower Survey Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
253	10	Floorwalker
254	12	Petrol Pump Assistant
255	10	Other Sales Occupations, e.g. Negotiators, Sales Promotor, etc.
256	07	Sales Engineer
270	08A	Mining Engineer (not qualified engineer) including Metallurgical Official, Compound Staff, etc.
271	08B(W) 12 (CAB)	Rockbreaker, Quarryman
272	09	Blaster
273	08B(W) 12 (CAB)	Coalminer
274	12	Reduction Worker
275	11	Stationary-engine driver (surface and underground)
276	09	Winding-engine Driver (surface and underground)
277	08B(W) 12 (CAB)	Mineworker (all other surface)
278	08B(W) 12 (CAB)	Mineworker (all other underground)
279	12	Prospector
280	06B	Mine Surveyor
281	08B	Other Mining Officials

Codes 300-399

300	06B(W) 11(CAB)	Water Transport Worker: Captain, Navigating Officer, Engineer Officer, Marine Engineer, Pilot (Ship), Mate, Stoker, Boatsman (not Armed Forces)
301	12	Other Water Transport Workers, e.g. Stevedoring Hand, Leader, Winchman, Gangwayman, Induna, etc.
302	05	Air Transport Worker: Pilot, Navigator, Air Traffic Controller, etc.
303	09	Train Driver: Steam Loco, Electric Unit or Diesel Engine (any industry)
304	11	Fireman and Driver's Assistant: Steam Loco, Electric Unit or Diesel Engine (any industry)

Codes 300-399

<u>Manpower Survey Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
305	10	Conductor, Ticket Examiner, Inspector (Trains)
306	06B	Station Master, Station Foreman
307	11	Shunter
308	11	Signalman, Banksman
309	10	Checker
310	12	Porter
311	11	Bus, Tram or Trolleybus Driver
312	10	Inspector, Conductor, Ticket Examiner (Bus, Tram, Trolleybus)
313	11	Chauffeur, Taxi Driver, Ambulance Driver, Driver for Commercial Traveller
314	11	Delivery Van Driver
315	11	Driver: Heavy Lorry, Tanker, etc.
316	11	Driver: Extra Heavy Lorry, Tanker, etc.
317	11	Driver: Lorry, Tanker etc. (over 10 000 lb.)
318	11	Other Deliverymen (motorcycle, bicycle, etc.)
320	10	Other Transport Officials, e.g. Despatchers, Instructors, Regulators, etc.
321	12	Other Transportation Workers, e.g. Driver/Van Assistant, Truck Attendant
322	10	Postman, Post Officer Sorter
323	10	Telegraphist, Teleprinter Operator
324	10	Telephonist, Switchboard Operator
325	09	Radio Operator: Ship, Aircraft, Broadcasting Station (not armed forces)
326	10	Messenger
340	11	Blast Furnace Operator
341	12	Cupola Attendant
342	11	Coke Oven, By-products, Coal, Coke Crushing Machine and Gas Producer Operators
343	12	Mill Hand
344	11	Smelter, Melter, Heater
345	11	Forging and Drop Forging Operator
346	11	Production Moulder and Core Maker
347	11	Casting, Die-casting and Spin-casting Machine Operator
348	11	Machinist
349	11	Turret and Capstan Lathe Operator

Codes 300-399

<u>Manpower Survey Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
350	11	All Other Machine Setters and Adjusters (n.e.c) (not artisan)
351	11	Drilling Machine Operator (Not for water drilling purposes)
352	11	Broaching Machine Operator
353	11	Gas Welding, Gas Cutting and Profile Cutting Operator
354	11	Butt Welding operator
355	11	Other Welding operator
356	11	All Cutting and Sawing Operators (n.e.c.)
357	11	Rough Grinding Operator
358	11	Flattening and/or Straightening Machine Operator
359	11	Hot and/or Cold Bending, Forming, Folding Machine Operator
360	11	Universal Window and Door Jamb Maker
361	11	Tube Fitter and/or Expander
362	11	Platelayer
363	11	Sheeter
364	11	Riveter, Caulker
365	11	Bolt, Nut, Chain, Nail, Rivet and Spring Making Machine Operator
366	11	Wire-Drawing, Plating, Rope-making and Weaving Machine Operator
367	11	Press, Power Press, Trap Extrusion Press Operator
368	11	Fly Treadle Manual Pressing, Notching Machine Operator
369	11	Guillotine Operator
370	11	Metal Spinner
371	11	Stripping and/or Pickling Tank and Acid Reclaiming Operator
372	11	Electro-, Spray and Hotdip Galvanizing and Tinning Plate Operator
373	12	Electroplating Bath Attendant
374	11	Coil Winder
375	11	Stencil Cutter
376	11	Cotton and/or Glass Braiding Operator
377	11	Motors and/or Coils Sprayer
378	11	Assembler
379	11	Mechanic's Stripper and Body Stripper

Codes 300-399

<u>Manpower Survey Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
380	11	Radiator Repairer
381	11	Pattern Cutter, Maker, Cutter, Chopper Out, Seaming Machinist
382	11	Re-Metaller
383	11	Scooter Worker
384	11	Battery Mechanic
385	11	Vulcanizer's Operative
386	11	Pelleting Machine, Calendring Machine Minder
387	11	Moulding Press, Injection Moulding Machine , Extrusion Machine Operator
388	11	Mixing and Rolling Machine Minder
389	11	Duster
390	11	Pickling and/or De-Greasing and/or De-enamelling Plant Operator
391	11	Milling and/or Millroom Plant Operator
392	11	Brushing, Dipping and/or Slushing, Spraying, Sign Brushing and Silk Screen Operator
393	11	Carbon Grinder
394	11	Operators and Semi-skilled Workers in the Manufacturing of Hot or Cold Cathode Fluorescent Lighting Units and Neon Signs
395	11	Operators and Semi-skilled Workers in the Manufacturing of Metal Containers
396	09(W) 11(CAB)	All other Skilled and Semi-skilled Occupations in the Processing of Metal, Plastics or Machine Parts in General Engineering, Motor Engineering and Electrical Industry
397	11	Crane Operator, Crane Driver
398	11	Driver: Stacker, Handling Equipment, Mechanized Internal Transporter, etc.

Codes 400-499

400	11	Asphalter
401	11	Plate Layer, Ganger
402	08B(W) 12(CAB)	Road Surfacing Man
403	11	Pipe Fitter, Lead Burner

Codes 400-499

<u>Manpower Survey Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
404	11	Scaffolder
405	11	Steel and Aluminium Fixer
406	11	Roofing Fixer, Sheeter, Slater, Insulation Fixer
407	11	Erector of Fences, Poles, Windmills, etc.
408	11	Concrete, Cementation Operator, Dam Builder.
409	12	Glazier, Pole Painter, White Line Marker
410	11	Other Semi-Skilled Workers (n.e.c.) (Specify)
411	11	Plant Operator (Tractor, Roller, Power Shovel, etc.)
412	11	Brush-hand (non-artisan)
413	11	Other Operators
420	11	Woodworker (Plantation)
421	12	Kiln Attendant
422	09	Boat Builder
423	11	Boat Building Operator
424	11	Machine Operator (Wood)
425	11	Machine Minder (Wood)
426	11	Grader of Hardwood Logs
427	11	Furniture Manufacturing, Machining and Carving Operator
428	11	Furniture Polishing and Veneering Operator
429	11	Sandpaper Worker (hand and/or machine)
430	11	Upholstering Worker
431	11	Other Semi-Skilled Workers in Furniture, Bedding and Studio Couch Manufacturing
432	09	Cooper, Vat Maker
433	11	Brush and Broom Maker
434	11	Mattress Maker
435	11	Weaver: Wicker, Cane, etc.
436	11	Other Semi-Skilled Workers in Wood Processing (specify)
440	11	Spinning Machine Operator (including Mule Spinner, Thread and Yarn Spinner, etc.)
441	11	Weaver: (including Hand Loom, Cloth, Jacquard Lace, Net and Carpet Machine Looms)
442	11	Dyer, Textile Printer

Codes 400-499

<u>Manpower Survey Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
443	11	Rope and Twine Makers
444	11	Other Textile-Machine Operators (n.e.c.)
445	11	Other Skilled and Semi-Skilled Workers in Textile Manufacturing (n.e.c.)
446	11	Knitting Machine Operator
447	11	Sewing Machine Operator
448	11	Pattern Maker and/or Grader
449	11	Pattern Laying Out and/or Marking In
450	11	Cutter, Chopper Out (hand or machine)
451	11	Presser, Ironer (hand or machine)
452	11	Trimmer
453	11	Layer-up
454	11	Finisher
455	11	Table Hand
456	11	Other Machine Operators in Clothing Manufacturing (n.e.c.)
457	11	Other Skilled and Semi-Skilled Workers in Clothing Manufacturing (n.e.c.)
458	11	Tailor, Dressmaker, Alteration Hand
459	11	Milliner, Trimmer, Blocker
460	11	Dry-cleaning Machine Operator, Washing Machine Operator
461	11	Cleaners, Spotter Dry-cleaner (not machine operator)
462	11	Brusher
463	11	Other Skilled and Semi-Skilled Dry-cleaning and Laundry Workers and Operators (n.e.c.)
470	11(WCA) 12(B)	Abattoir Worker, e.g. Cutter, Slaughterman, Offal Attendant, Meat Stamper, Kraal Attendant, By-products Plant Operator, etc.
471	11	Blockman's Assistant
472	11	Other Skilled and Semi-Skilled Workers in Canning and Processing of Fish and Meat e.g. Curer, etc.
473	11	Cheesemaker, Buttermaker
474	11	Cream Grader, Cream Tester, Milk Tester
475	09(W) 12(CAB)	Dairyman
476	11	Brakesman

Codes 400-499

<u>Manpower Survey Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
478	11	Confectioner's Assistant, Baker's Assistant
479	11	Other Skilled and Semi-Skilled Workers and Operators in Bread, Biscuit and Cake Manufacturing
480	09	Beveragemaker, Brewer
481	11	Juice Extractor, Syrup-maker
482	11	Sugar Pan Boiler
483	11	Sweetmaker
484	12	Retort Pressure Cooker, Vacuum Boiler Plant and Evaporator Attendant
485	11	Food Boiler, Peanut Roaster
486	12	Refrigerator Attendant
488	12	General Worker in Sweet Manufacturing Industry
489	11	Other Skilled and Semi-Skilled Workers in Beverage, Food Canning, Processing and Preparing Work
490	11	Operators of all Tobacco Preparing Machines
491	11	Skilled and Semi-Skilled Workers in the Preparation and Mixing of Tobacco by hand
492	11	Operators of Cigarette and Filter Plug Making, Filter Tip Assembling and Inserting Machines
493	11	Operators of other Machines in Manufacturing of Tobacco and Cigarettes
494	11	Other Skilled and Semi-Skilled Workers in Manufacturing of Tobacco and Cigarettes

Codes 500-599

500	11	Tannery Machine and Staking Machine Operator
501	11	Splitting Machine, Shaving and Whitening Machine Operator
502	11	Glazing and Buffing Machine Operator
503	11	Sammying, Setting and Barkmill Machine Operator, Tablehand
504	11	Other Machine Operators in Tanning Industry (n.e.c.)
505	11	Other Skilled and Semi-Skilled Workers in the pre- paration of Skins and Manufacture of Leather (n.e.c.)
506	11	Pattern Cutter, Pattern Grader

Codes 500-599

<u>Manpower Survey Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
507	11	Clicking Machine Operator
508	11	Splitting Machine Operator
509	11	Stitching Machine Operator (including Puritan and Pilot Machines)
510	11	Eyeletting, Perforating, Skiving, Folding, Burnishing (hand or machine)
511	11	Cutter, Sorter, Fitter
512	11	Pulling Over, Lasting (hand or machine)
513	11	Welt Sewing, Rough Rounding, Sole Sewing, Sole Stitching
514	11	Pounding
515	11	Stuck-on Process Worker
516	11	Edge Trimming and Setting, Heel Trimmer
517	11	Faking
518	11	Other Machine Operators in Shoe Manufacturing (n.e.c.)
519	11	Other Skilled and Semi-Skilled Workers in Shoe Manufacturing (n.e.c.)
520	11	Shoemaker, Harness Repairer
521	12	Other Workers in Leather Products Manufacturing (n.e.c.)
530	11	Glass Cutter
531	11	Glass Beveller, Silverer
532	11	Glass Polisher and Rouger
533	11	Furnaceman, Furnace Operator
534	11	Batchman
535	11	Operator of Machine Producing Glass and Fibre Glass containers
536	12	Process Hand and General Worker in Glass and Glass Products Manufacturing
537	11	Other Skilled and Semi-Skilled Workers in Glass and Glass Products Manufacturing (n.e.c.)
538	11	Burner
539	12	Flotation Plant Attendant
540	12	Miller and/or Rumbler Plant Attendant
541	12	Scale, Crusher and/or Screening Plant Attendant
542	12	Calcinator and/or Hydroballer Attendant
543	11	Other Machine or Plant Operators and/or Attendants in Cement, Paster of Paris and Lime Manufacturing (n.e.c.)

Codes 500-599

<u>Manpower Survey Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
544	11	Other Skilled and Semi-Skilled Workers in Cement, Plaster of Paris and Lime Manufacturing
545	11	Table Operator of an Asbestos-Cement Pipe-making Machine
546	11	Asbestos-Cement Pipe Lathe Operator
547	11	Kollergang Operator
548	11	Pipe Spinner
549	11	Pole Spinner
550	11	Beater or Hollander Operator
551	11	Testing Machine Operator
552	11	Wet Machine Minder
553	11	Other Machine Operators and Skilled and Semi-Skilled Workers in Cement Products Manufacturing
554	12	Clay Worker
555	11	Model or Mould Maker
556	11	Potter
557	11	Thrower
558	11	Operators of Power-Driven Crushing Machines, Tile and Brick-making Press and Pipemaking machine
559	11	Kiln-packer and/or Setter
560	12	Kiln Attendant
561	11	Other Machine Operators and Skilled and Semi-Skilled Workers in Manufacturing of Clay and Allied Products
570	11	Colour Matcher, Paint Maker, Varnish Maker
571	11	Operator of Machines for Paint Mixing, Blending and/or Straining
572	11	Other Semi-Skilled Workers in the Manufacturing of Paints, Polish and Chemical Products
573	11	Pill and Tablet Maker
574	11	Tester
575	09	Skilled Workers in the Manufacturing of Rubber and Rubber Products (except artisans)
576	11	Machine Operators in the Manufacturing of Rubber and Rubber Products
577	12	General Workers and other Semi-Skilled Workers in the Manufacturing of Rubber and Rubber Products
578	11	Operators of Machines for Refining, Bleaching, Hardening, Deodorising, Chilling, Texturating of Edible Fats and/or oils

Codes 500-599

<u>Manpower Survey/Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
579	11	Soap Boiler
580	11	Operators of Machines for Blending, Splitting, Vacuum Bleaching, Melting and Filtering of Fats and Oils
581	11	Drying and Blowing of Soap
582	11	Operator of Crushing or Expelling Machine
583	11	Operator of Glycerine Recovery Plant
584	11	Other Machine operators in the Manufacturing of Soap, Candles, Edible Oils and Fats
585	11	Other Semi-Skilled Workers in the Manufacturing of Soap, Candles, Edible Oils and Fats
586	11	Operators and Process Workers in the Manufacturing of Acids, Chemicals, Explosives Detonators, Ammonia, Chlorine, Plastic-coated Fabrics, Products and Solvents
587	11	Operators and Process Workers in the Manufacturing of Fertilizers
588	11	Other Semi-Skilled Workers (n.e.c.)
589	11	Laboratory assistant (not qualified)

Codes 600-699

600	11	Binder's Assistant
601	11	Copy Holder
602	11	Monotype Caster Attendant (not Artisans)
603	11	Solid Typesetter
604	11	Litho Operator
605	11	Platen Pressman
606	11	Screen preparer, Silk Screen Printer
607	11	Operators of Manually-operated Cutting Machines
608	12	Corrugated Board and Container Assistant (manual)
609	11	Other Operatives in the Printing and Newspaper industry
610	11	Clipper Operator
611	11	Digester Operator
612	11	Pulp Bleaching Operator
613	11	Beaterman
614	11	Pulp Handling Operator
615	11	Super Calendar Operator

Codes 600-699

Manpower Survey/Code	Occupational category	Manpower Survey Description
616	11	Millboard Plant Operator
617	11	Machineman
618	11	Dryerman
619	11	Other Operators and Semi-Skilled Employees in the Manufacturing of Paper and Cardboard
631	10	Fireman (all ranks)
632	10	Police and Detective Services (including Private, S.A.P., S.A.R. Security Officer, Licensing, Depot and Market Constables, etc.)
633	10	Prison Warder
634	10	Traffic Inspector (all ranks)
635	10(W) 12(CAB)	Field and Bush Ranger
636	10	Doorman, Gateman, Porter, Churchwarden
637	10	Watchman, Caretaker, (building and premises) including Night Hall Attendant, Core Shed Supervisor, etc.
638	12	Cleaner (building)
639	10	Cargo/Ship Guard
640	10	Lift Operator
641	10	Ambulanceman, First-Aid Attendant
642	10	Projectionist, Bioscope Operator
643	10	Usher
644	10	Outdoor Officer: e.g. Customs and Excise
645	08B(W) 12(CAB)	Groundsman
646	10	Nursery School Supervisor, Children's Play Centre Assistant
647	10	Other Service Occupations (Public), e.g. Lifeguard, Crematorium Superintendent, Medical/Clinic Orderlies, Process Server, Rodent/Malaria Officer, Installation/Sanitation Inspector, Attendant of: Billiard Room, Parking Lots, Cloakroom, Clinic, Swimming Bath, Camping Site, Lamps, Animals (Zoo), Disposal Works, etc.
648	05	Funeral Director, Undertaker
649	08A	Children's Nurse

Codes 600-699

<u>Manpower Survey/Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
650	08A	Nursing Assistant (not registered) (see occupation 124)
651	09	Beautician, Powder Technician
652	10	Barman, Wine Steward, Waiter, Waitress, Air Hostess
653	10	Page
654	09	Caterer
655	05	Matron: Hostel Matron, Housekeeper, Boardinghousekeeper, Housemaster
656	12	Kitchenhand, Pantry-hand, Tea Servant
657	11	Laundryman
658	11	Linen-keeper
659	12	Servants in business
660	10	Other Service Occupations (Personal) (Specify)
661	09	Chef, Cook, Staff Cook
662	05	Photographer
663	05	Other Occupations in Entertainment, e.g. Race Horse Trainer, Jockey, Golf Professional, Sports Director, Physical Culture Instructor, etc.
664	10	Shampoo Lady
670	08B	Supervisor, Chargehand, Foreman, Overseer, Clerk of Works
671	12	Boiler Attendant, Boiler Cleaner
672	12	Pumpman, Attendant of Water Installation and Filtration Plant, Sewerage Plant, etc.
673	11	Packing Machine Operator
674	12	Other Packing Workers, e.g. Despatch Packer, Labeller, Wrapper, Sample Boy, etc.
676	08B	Visual Inspection Worker, including Sorter, Grader, Examiner of: Materials, Products, Vehicle Licences, Inspector of: Meat, Pipes and Pipelines, Waste Water, Maintenance, Inspection Table Workers, etc.
677	11	Fisherman, Farmer, Hunter
678	09	Watchmaker, Locksmith, Camera and Film Repairer, Film Technician, Operative Worker in the Jewellery and Precious Metal Industry
679	09	Bicycle, Sewing Machine, Knitting Machine, Scale Mechanic or Technician

Codes 600-699

<u>Manpower Survey/Code</u>	<u>Occupational category</u>	<u>Manpower Survey Description</u>
680	10	Rodent Exterminator, Fumigator
681	11	Plant Propagator, Tree Pruner, Motor Lawn Mower Operator
682	11	Driller: Water, Minerals
683	11	Skilled and Semi-Skilled Operatives and Workers in Power Stations and Gasworkers, e.g. Turbine Driver, Switchboard Operator, Power Stations Operator and Maintenance Attendant, Gasworks Fitter, Electricity Plant Operator, etc.
684	11	Handyman, including Artisan Hand or Mate, Unindentured Carpenter/Mason/Blacksmith/Mechanic, etc.
685	12	Labourer
686	11	Transport Maintenance Workers, e.g. Repairer (non-Artisan), Greaser, Truckbuster
687	11	Communication Maintenance and Development Workers, e.g. Telephone Workmen, etc.

Codes 700-899 (Artisans and Bantu Building Workers) are classified as category 09.

Where categories have been split along racial lines the categories are followed by letters denoting which racial groups have been assigned to them (W-Whites, C-Coloureds, A-Asians, B-Africans).

B. Sectoral aggregation

The 38 sectoral categories in the 1977 Manpower Survey have been aggregated as follows:

- SIC 1 Fishing
 - 1 Fishing Industry
- SIC 2 Mining
 - 2 Gold Mining Industry
 - 3 Coal Mines
 - 4 Other Mines

- SIC 3 Manufacturing
- 6 Food Industry
- 7 Beverage and Tobacco Industry
- 8 Textile Industry
- 9 Clothing Industry
- 10 Wood Processing
- 11 Furniture Industry
- 12 Paper Manufacturing
- 13 Printing Industry
- 14 Chemical Industry
- 15 Petro-chemical
- 16 Rubber Products Manufacturing
- 17 Leather Industry
- 18 Shoe Industry
- 19 Non-Metalliferous Mineral Products
- 20 Basic Metal Industry
- 21 Manufacturing of Metal Products
- 22 Manufacturing of Machinery
- 23 Manufacturing of Electric Machinery
- 24 Miscellaneous Manufacturing
- 25 Manufacturing of Transport Equipment
- SIC 4 Electricity, Gas and Water
- 31 Electricity, Gas and Water
- SIC 5 Construction
- 5 Building and Construction Industry
- SIC 6 Commerce
- 27 Commerce
- 28 Motor trade
- SIC 7 Transport, Storage and Communication
- 29 Transport and Communication
- 37 S.A. Railways and Harbours
- 38 Postal Services
- SIC 8 Finance
- 28 Financial Organisations
- SIC 9 Government, Personal and Community Services
- 30 Local Authorities
- 32 Personal Services
- 33 Sports and Entertainment
- 34 Professional, Medical and Other Services
- 35 Government and Provincial Administrations
- 36 Bantu Home Lands

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1. CHARLES SIMKINS AND DUNCAN CLARKE, *Structural Unemployment in Southern Africa*, Natal University Press, 1978. R3,75 (Order from the Press at P.O. Box 375, Pietermaritzburg, 3200).
2. CHARLES SIMKINS AND COSMAS DESMOND, (eds.), *South African Unemployment: A Black Picture*, Development Studies Research Group and Agency for Industrial Mission, 1978. Price: R3.

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