Research Finding MN-101 1983

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RGN·HSRC

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1983

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CONTENTS

		PAGE
1	INTRODUCTION	1
2	MANPOWER AND DEMOGRAPHICS	1
3	THE CHANGING OCCUPATIONAL STRUCTURE OF THE LABOUR FORCE	6
4	THE EDUCATIONAL LEVEL OF THE LABOUR FORCE	8
5	THE PRICE OF LABOUR	13
6	LABOUR TURNOVER	17

THE MANPOWER SCENE

1 INTRODUCTION

All planning activities and decisions are directed towards the future but all knowledge has bearing only on situations of the past. Man's attempts at planning are basically to make an unsure future more sure. Organizations have been accustomed to financial and physical planning but more are also giving attention to what can be called manpower planning. One can understand why this is happening - labour differs radically from other resources and inputs, and organizations are finding it increasingly difficult to obtain the kind of labour they need.

Whatever the sophistication level of the manpower planning activity, it must take the external manpower situation into account for sensible decision making, but it is also difficult for many organizations to acquire such data. The aim of this short report is to supply some information in this regard.

The information is culled from various sources but much comes from IMAN's own research efforts. The individual organization will not be able to dovetail this information with its own in a neat systematic way but if this report can make the manpower planner more sensitive to certain changes to which the organization is going to have to adapt, it will serve its purpose.

2 MANPOWER AND DEMOGRAPHICS

The supply of labour is a function of population growth. Table 1 shows a projection of the South African population including the independent Black states up to the year 2000.

Based on the activity rates (the percentage of the population in an age group which is able and willing to work) calculated from the 1980 population census, the increase in the labour force up to the year 2000 is shown in Table 2.

TABLE 1

PROJECTIONS OF THE SOUTH AFRICAN POPULATION (INCLUDING THE INDEPENDENT BLACK STATES) FOR THE PERIOD 1980-2000

Year	Population group									
	Asians		Whites		Coloureds		Blacks		Total	
	N	%	N	%	N	%	N	%	N	%
1980	813 000	2,8	4 499 000	15,8	2 539 000	8,9	20 700 000	72,5	28 551 000	100
1985	889 000	2,8	4 823 000	15,0	2 794 000	8,7	23 700 000	73,6	32 206 000	100
1990	964 000	2,7	5 163 000	14,2	3 070 000	8,4	27 100 000	74,7	36 297 000	100
1995	1 041 000	2,6	5 517 000	13,6	3 348 000	8,3	30 500 000	75,5	40 406 000	100
2000	1 108 000	2,5	5 817 000	13,2	3 607 000	8,1	33 700 000	76,2	44 232 000	100

Source: HSRC, ISODEM

TABLE 2

NETT GROWTH IN THE LABOUR FORCE, 1980-2000

Year	Population group									
	Asians		Whites		Coloureds		Blacks		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1980-1985	25 058	7 366	133 772	66 067	98 788	59 914	704 627	365 606	962 245	498 953
1985-1990	27 363	8 533	138 298	66 268	93 980	51 041	749 688	386 481	1 009 329	512 323
1990-1995	30 233	8 302	131 459	57 844	85 415	41 229	806 910	414 769	1 054 017	522 144
1995-2000	26 036	5 149	93 238	35 866	82 079	39 883	918 291	485 152	1 119 644	566 050

Some very interesting facts emerge from Tables 1 and 2. The declining fertility rate and ageing of the population is reflected in Table 2 and it is estimated that the nett growth in the White labour force will decline from 1990 onwards.

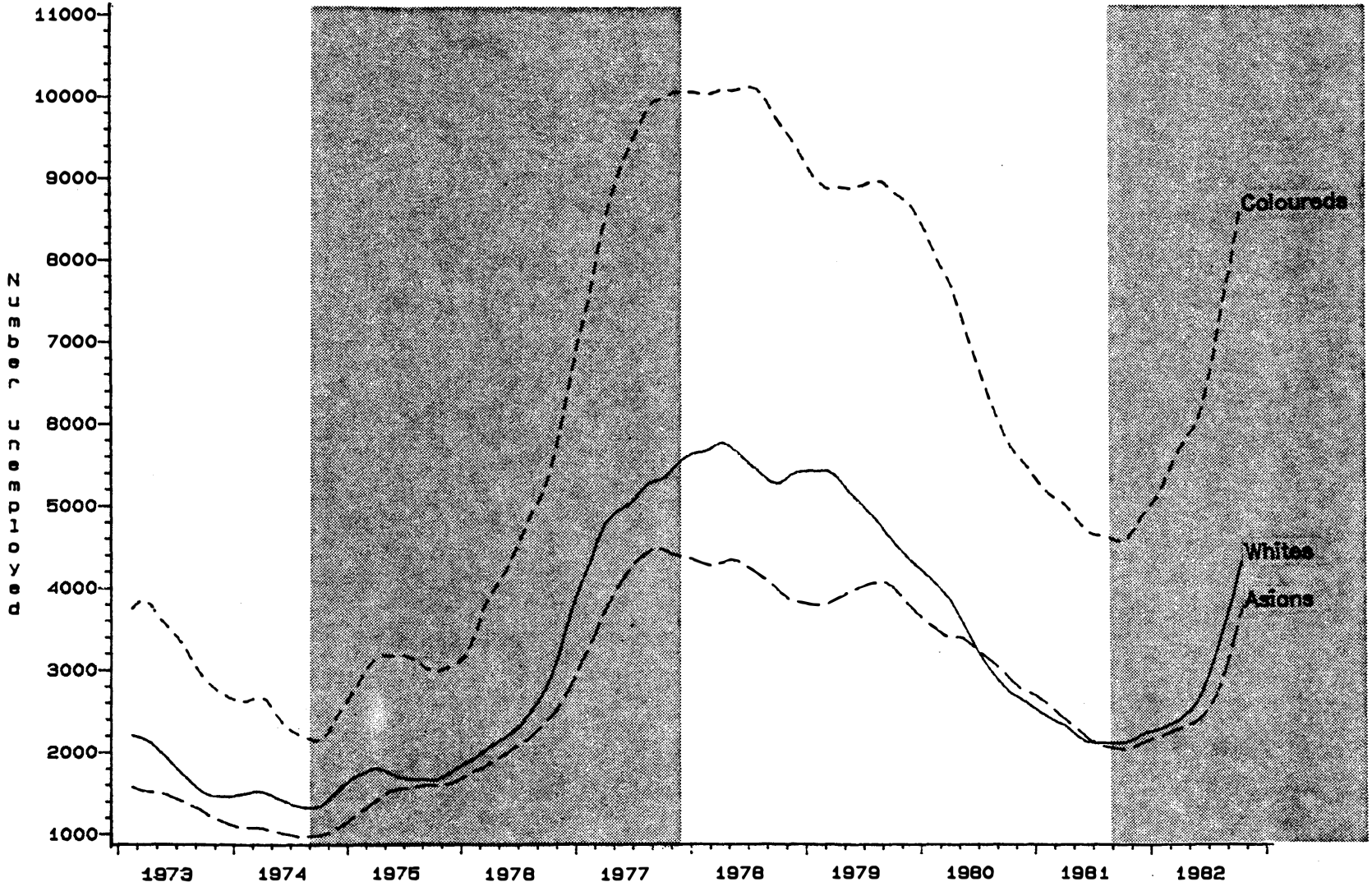
According to the Economic Development Programme (1978-1987) job opportunities will increase by 1 756 000 p.a. for the programming period, which gives some idea of the magnitude of the unemployment problem. According to data obtained from the Economic Planning Branch of the Prime Minister's Office, the long-term incremental capital output ratio for the period 1946-1981 is in the order of 3,6. This means that it takes a capital investment of R3,6 to increase the GDP by R1. In 1977 the GDP amounted to R58 918 m (1981 prices) and at a growth rate of 4,5 % will amount to R91 498 m in 1987 - an increase of R32 580 m - which means that for each job opportunity created (1 756 000) the GDP increased by R18 900. Given the ratio of capital investment to growth in the GDP of 3,6 : 1 this means that each job opportunity demanded a capital investment of about R68 000. According to the Reserve Bank, gross domestic fixed investment amounted to R18 298 m and the provision for depreciation to R9 273 m in 1981. An amount of about R9 000 m was thus available for new investments, which means that 134 000 new job opportunities could be created. When this figure is compared with the annual increase in the labour force (292 000 p.a. for 1980-1985) it gives some indication of the magnitude of the unemployment problem that has to be faced. Manpower Survey No. 14 of 1981 put the number of vacancies for skilled and semi-skilled workers at 167 000. This means that if we take numbers only into account we can wipe out the skills shortages with only one year's increase in the labour force. Employment of unskilled work seekers to fill the present skills gap is therefore no solution to the unemployment problem.

This does not mean that training should not be increased or that we can allow the rate of growth to be stilted by lack of skilled manpower. Such an approach would only aggravate a grave problem.

To conclude this paragraph, Figure 1 indicates how registered unemployment reacts to the economic cycle.

FIGURE 1

NUMBER OF REGISTERED UNEMPLOYED WHITE COLOURED AND ASIAN MALES EXPRESSED AS A SIX-MONTHLY MOVING AVERAGE, 1973 - 1982



SOURCE: DEPARTMENT OF MANPOWER

The number of unemployed is expressed as a moving average because a strong cyclical effect can be observed in the data.

The number of registered unemployed gives some indication of unemployment but not all the unemployed take the trouble to register with the Department of Manpower. The figures do show that the unemployment rate reacts very quickly to changes in the economic cycle. The downward phase is immediately followed by a rise in registered unemployment while on the upturn there seems to be a time lag of about 12 to 24 months before the situation improves.

3 THE CHANGING OCCUPATIONAL STRUCTURE OF THE LABOUR FORCE

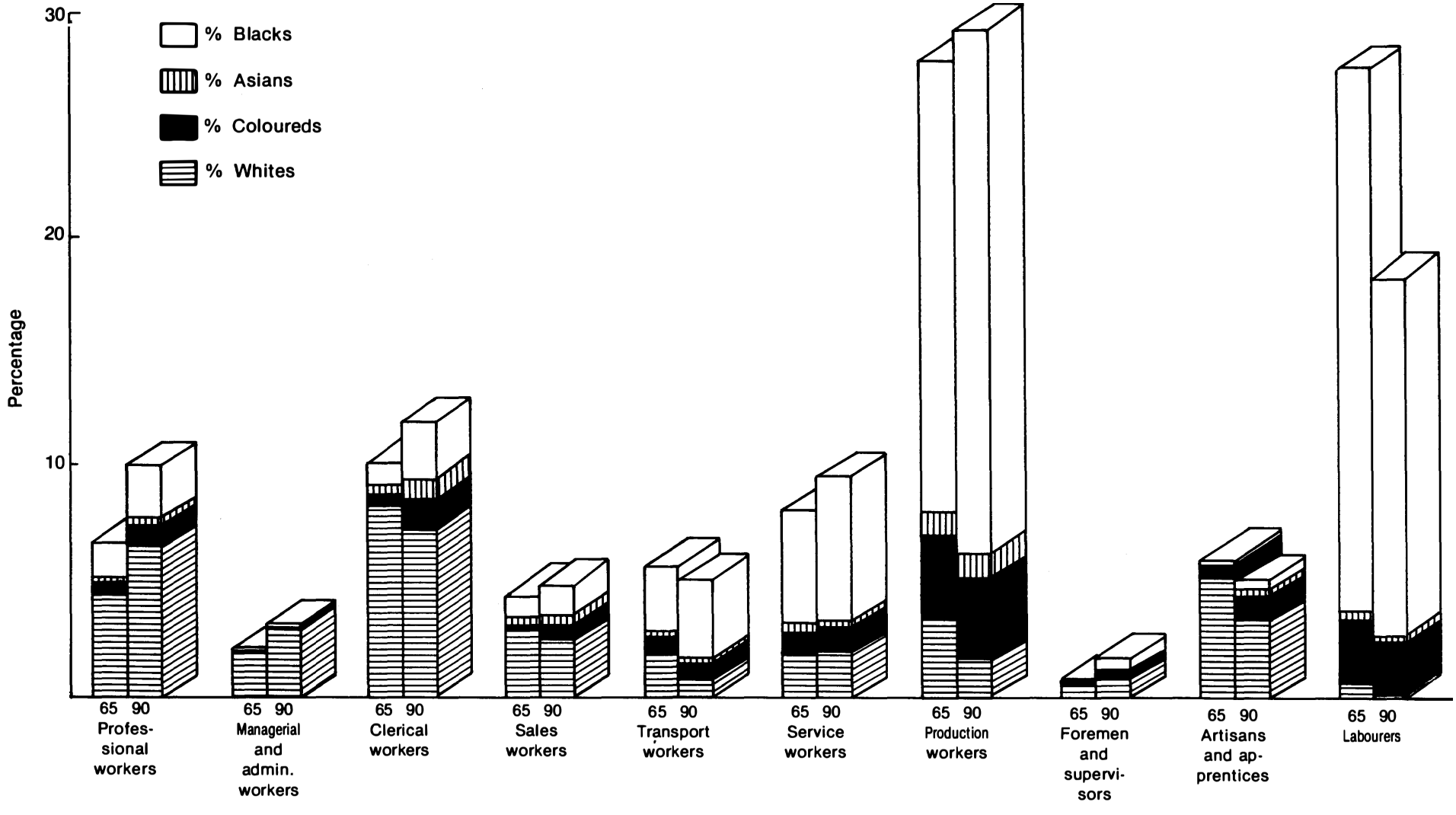
The occupational structure of the labour force needed in the production of goods and services changes over time and reflects the changes that took place not only in the demand for goods and services, but also in the technology needed to produce them.

Figure 2 indicates the occupational structure of the labour force in 1965 as well as a conservative projection of the trends for 1990. These projections are based on the biennial Manpower Surveys of the Department of Manpower from 1965 to 1981. The skills needed for the production of our goods and services follow the general trend in industrialized countries, namely an increase in the need for skilled manpower and a decrease in the need for the unskilled.

There are three occupational groups which show an increase in overall percentage but a decrease in the percentage of Whites employed, namely clerical, sales and production workers. The percentage of Whites in clerical occupations, for example, decreased from 83 % in 1965 to 65 % in 1981 while the percentage of Blacks doubled from 9 % to 18 % during the same period. At the same time the percentage of White males in this group decreased from 41 % to 27 %. This has important manpower planning implications for those organizations such as banks and building societies which employ large numbers of clerical workers and recruit their managers through a system of inhouse training and promotion of clerical workers.

FIGURE 2

THE OCCUPATIONAL STRUCTURE OF THE SOUTH AFRICAN LABOUR FORCE, 1965 and 1990



Given the declining growth rate of the White labour force, the training rate of other groups will have to be stepped up, especially in those fields which in the past have been predominantly White. This is especially true in the technical fields but one must remember that this is much easier said than done.

4 THE EDUCATIONAL LEVEL OF THE LABOUR FORCE

The educational level of a labour force gives an indication not only of its available skills but also of its trainability.

The differences between the educational levels of the population groups (Figure 3) are reflected in the occupational structure. However, this situation is changing rapidly, as can be seen from Figure 4 which shows that the percentage of Blacks, Coloureds and Asians in the labour force with an educational level of at least Std 10 is increasing at an accelerating rate.

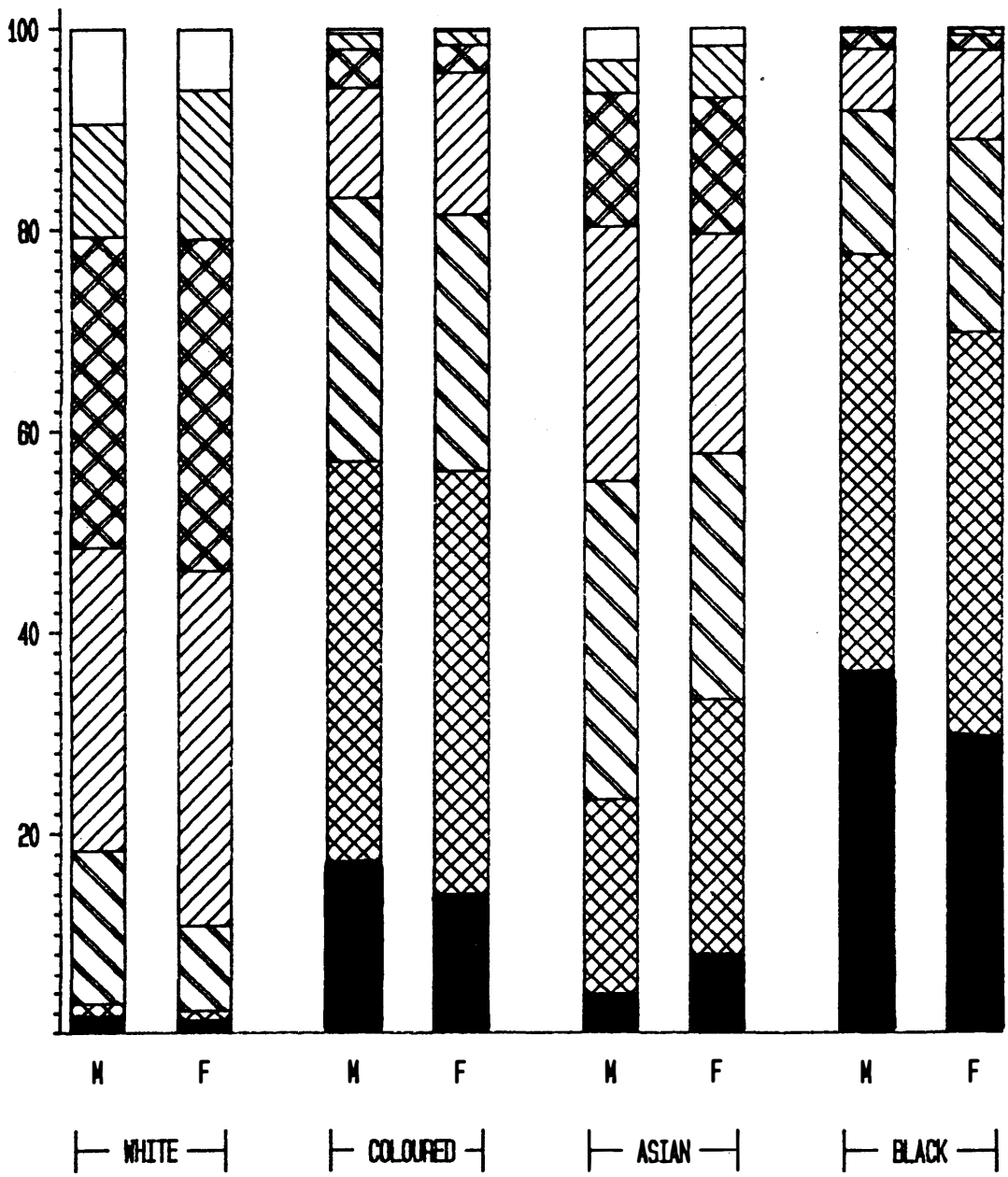
Why this is happening can be seen in Figure 5 which shows that the number of Black Std 10 pupils has increased sharply since 1978. This rise would have been even sharper if the Std 10 pupils of Bophuthatswana, Ciskei and Venda, who were progressively excluded as these countries became independent, were included. These countries are all labour-exporting countries which have an impact on the South African labour market. The indication for 1983 is that the number of Black pupils in Std 10 has passed that of the Whites for the first time in history.

This increasing number of young people with high school education should make it possible to alleviate the skills shortage through training.

Two very important occupational groups in the production process are those of artisans and technicians. Becoming an artisan is not an occupation for the pre-Std 10 school leaver only. This applies especially to the metal and engineering and electrical trades (Figure 6). In the

FIGURE 3

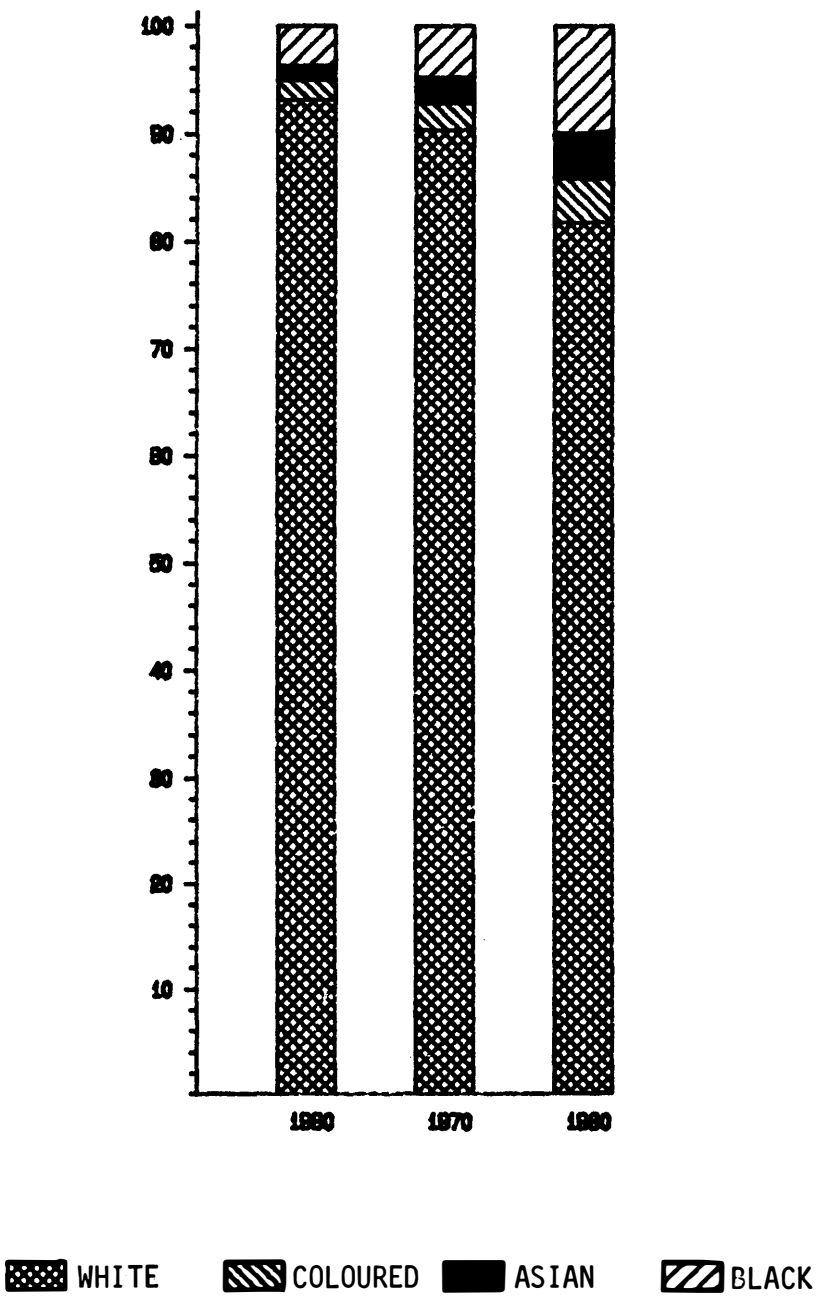
EDUCATIONAL LEVEL OF THE LABOUR FORCE, 1980



SOURCE: CENTRAL STATISTICAL SERVICES

FIGURE 4

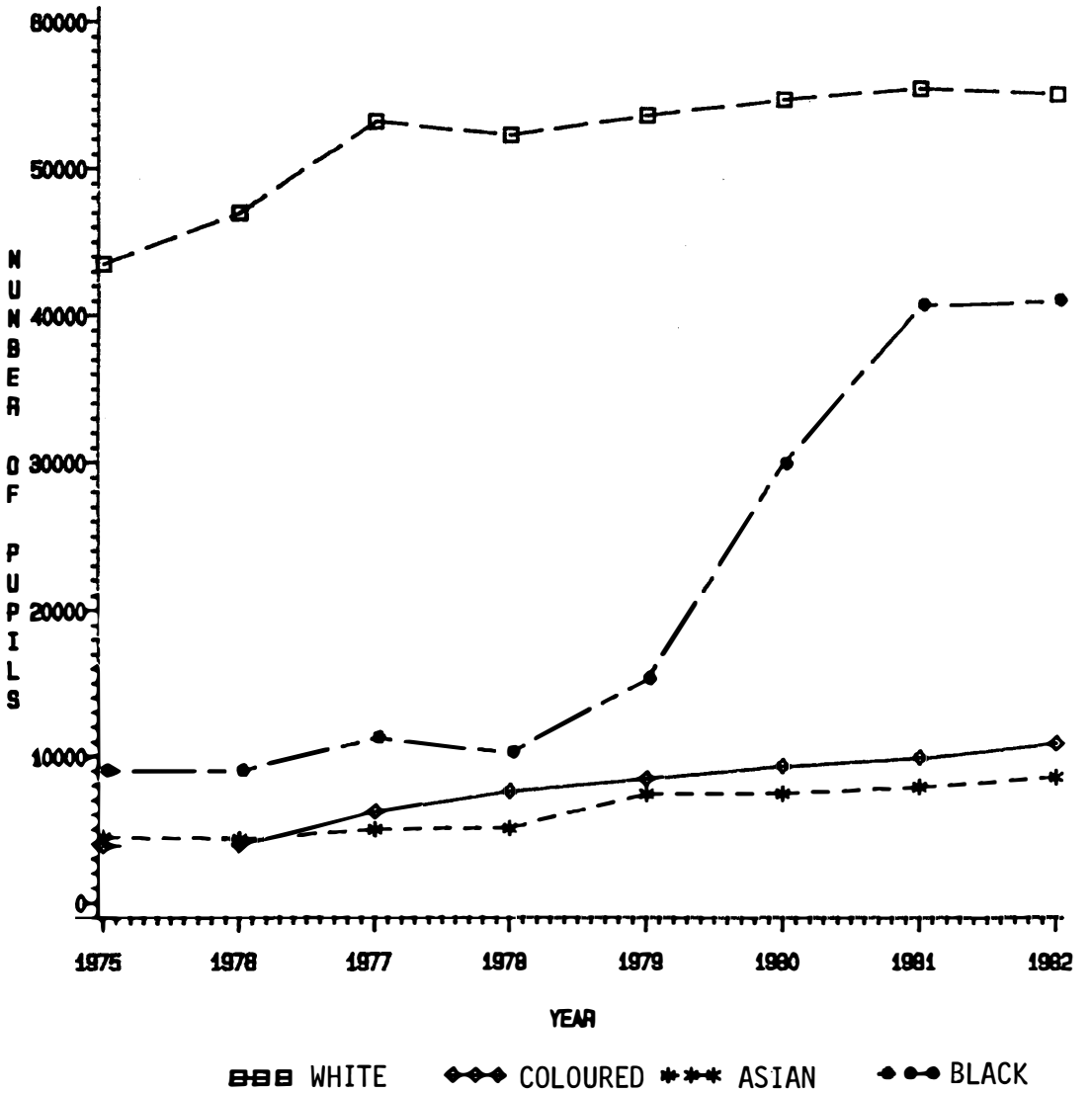
DISTRIBUTION OF THE LABOUR FORCE WITH STD 10 OR HIGHER QUALIFICATION IN 1960, 1970 & 1980



SOURCE: CENTRAL STATISTICAL SERVICES

FIGURE 5

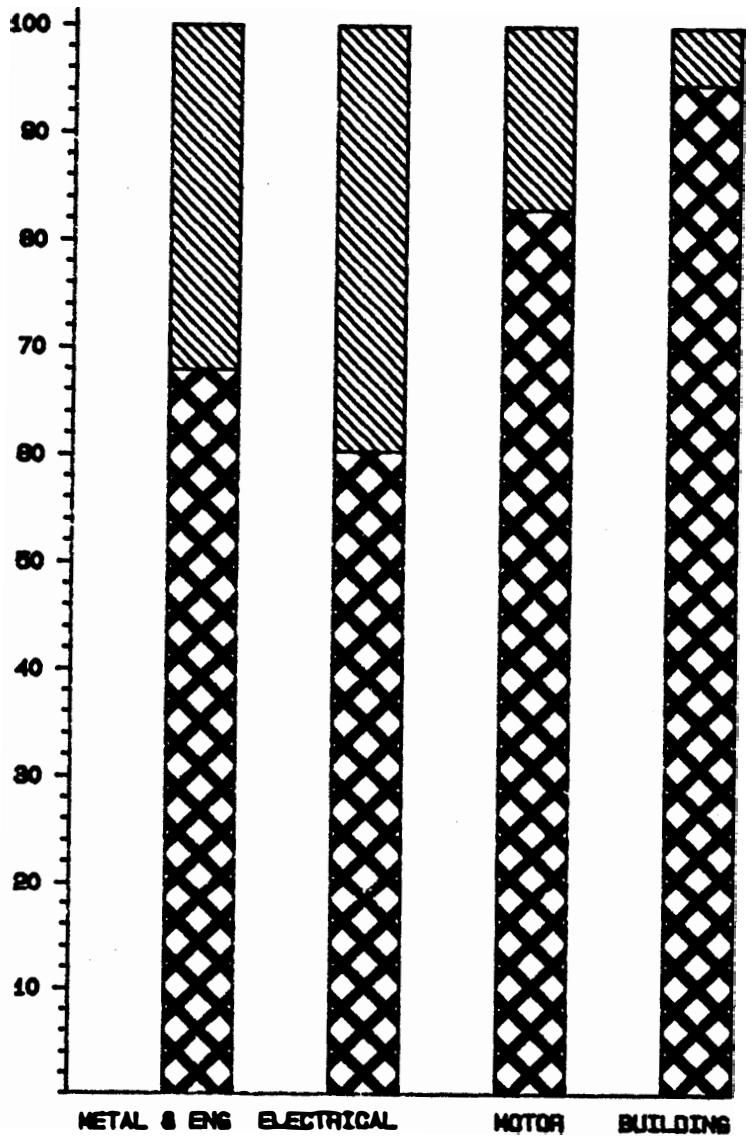
NUMBER OF PUPILS IN STD 10 (1975-1982)



SOURCE: CENTRAL STATISTICAL SERVICES

FIGURE 6

QUALIFICATION LEVEL OF ARTISANS
IN THE 1982 SURVEY GROUP



MMS survey group[1)], 32 % of the artisans in the metal and engineering trades and 40 % in the electrical trades had obtained a Std 10 or NTC III qualification. The qualified artisan is still the main source from which the technicians (Figure 7) are drawn, especially so for the engineering technicians.

It can be concluded that the main problem in the utilization of labour and the vertical mobility of the Asians, Coloureds and Blacks lies not so much in their trainability but in the hearts and minds of people. The White artisan especially, perceives himself to be an endangered species which should be protected; one can therefore expect that this group will give more attention to labour union membership. The MMS survey shows that the percentage of Black, Coloured and Asian apprentices is still very limited (negligible in fact).

Employers can only delay the day when they will be forced through economic and demographic factors to employ Black artisans and technicians. They cannot escape it.

5 THE PRICE OF LABOUR

We live in a wage economy and the worker's welfare depends not on how much money he receives in return for his labour but on the services and goods the money can buy, in other words on the relation of his wage to inflation. In this regard, economists have coined the term "real wages".

Figures 8 and 9 show the increase in average per capita wage (total wages paid divided by the total number employed) for the period August 1980 to February 1983 for two sectors of the economy namely manufacturing and construction.

During this period, employment in both sectors peaked in February 1982 with 1 487 500 workers employed in manufacturing and 444 600 in construction. In February 1983 these numbers were down to 1 405 800 and 425 800 respectively, both below the level of August 1980.

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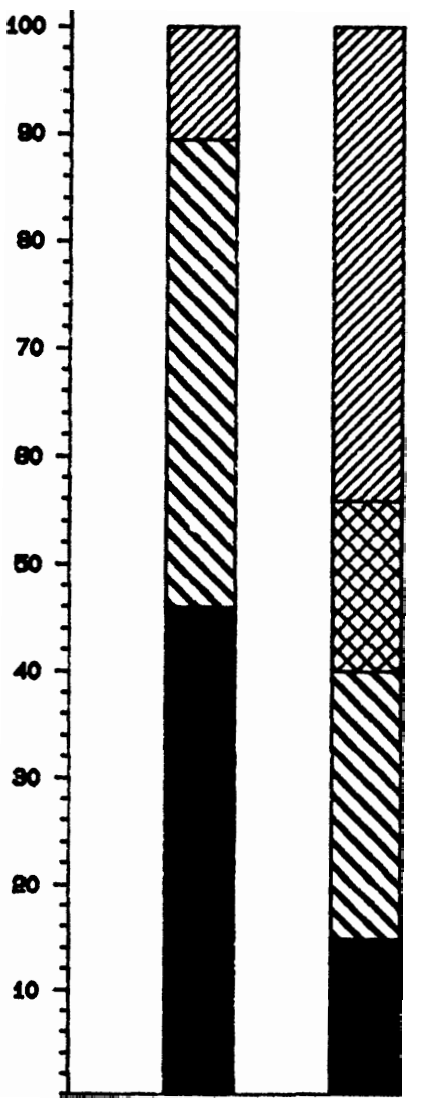
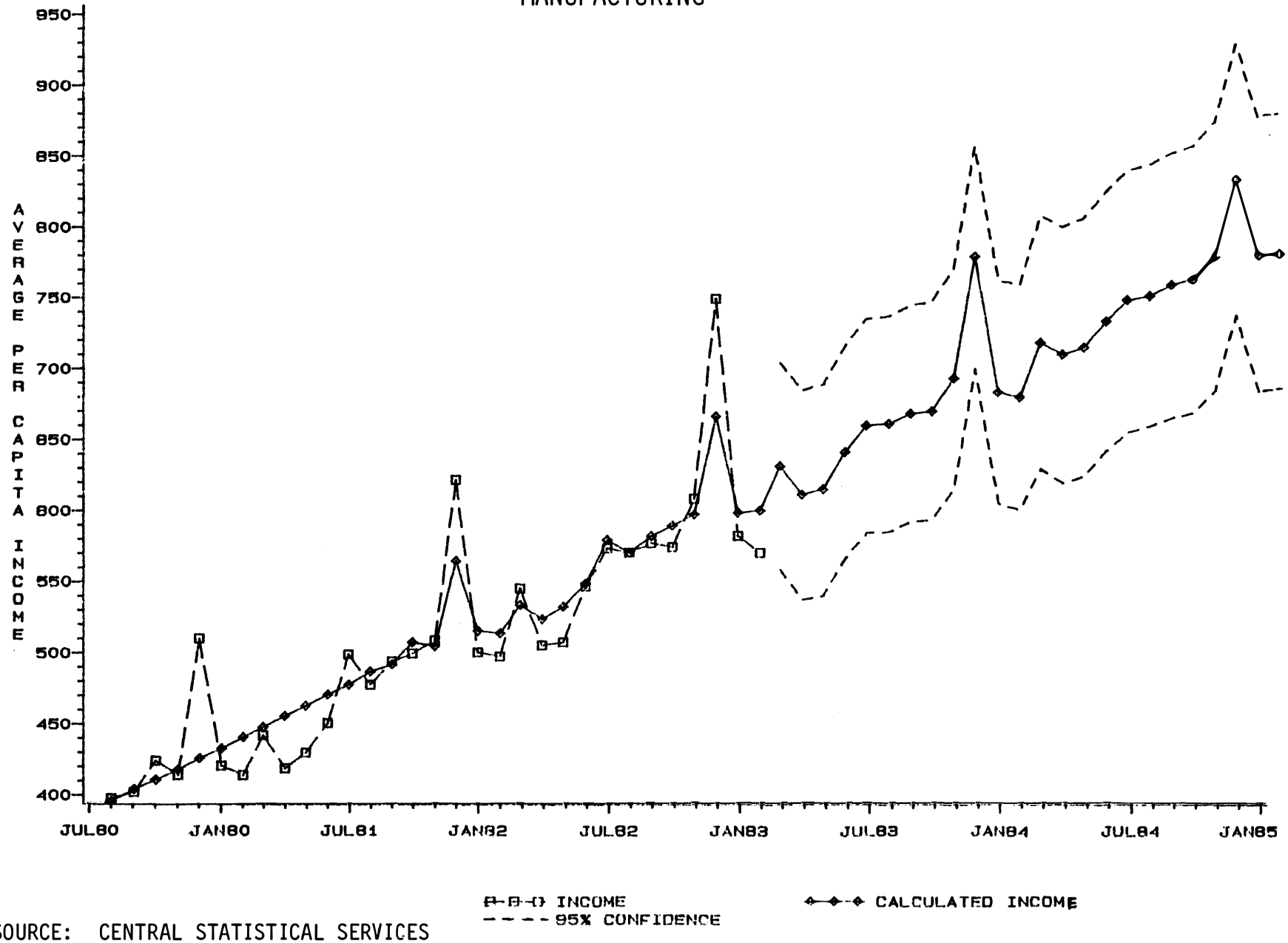
1) Twenty-six firms participated in the 1982 Manpower Monitor System (MMS), giving information on 2819 artisans in their service.

FIGURE 7

QUALIFICATION LEVEL OF TECHNICIANS IN THE 1982 SURVEY GROUP



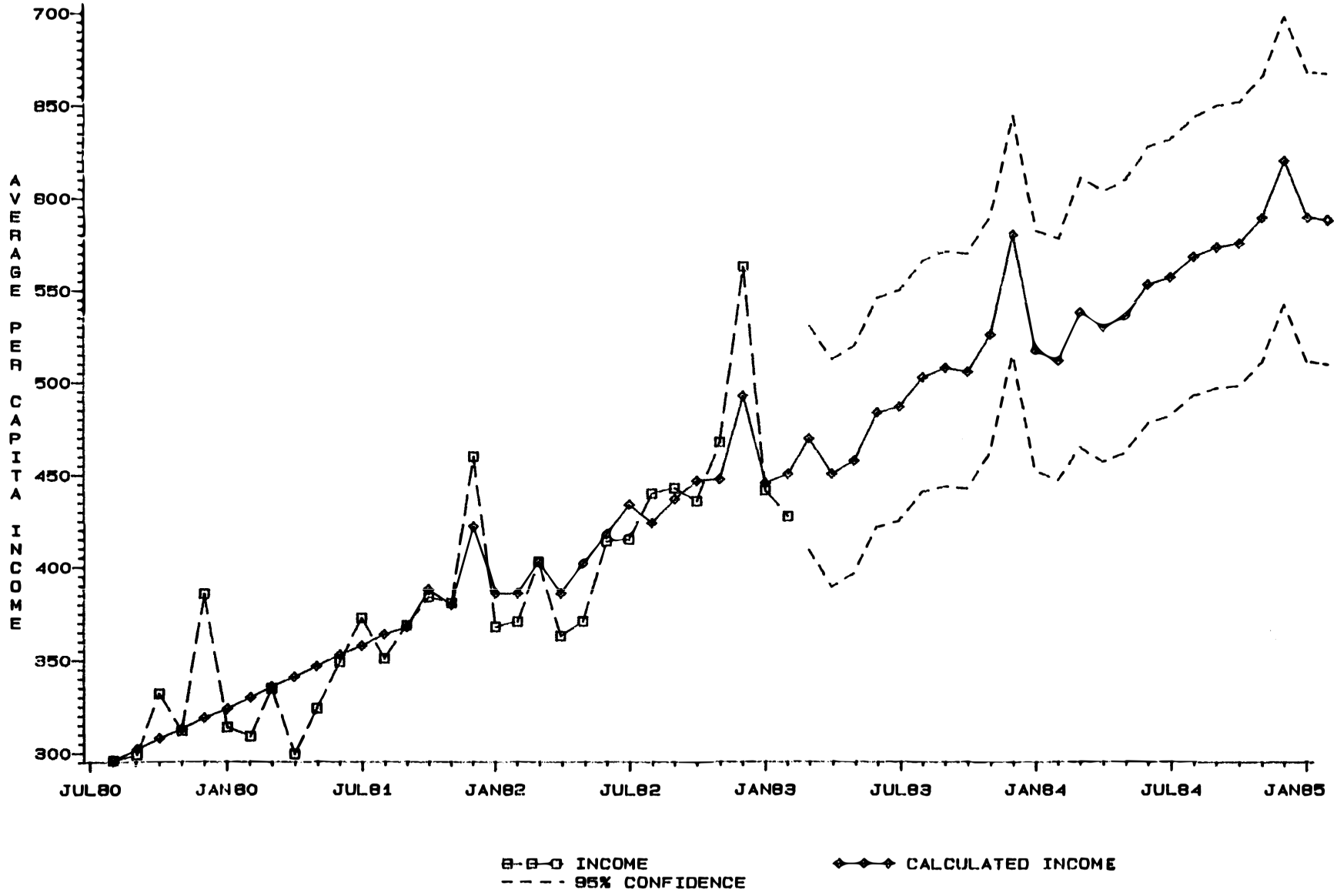
INCREASE IN AVERAGE PER CAPITA INCOME
MANUFACTURING



SOURCE: CENTRAL STATISTICAL SERVICES

FIGURE 9

INCREASE IN AVERAGE PER CAPITA INCOME
CONSTRUCTION



SOURCE: CENTRAL STATISTICAL SERVICES

Figures 8 and 9 show, however, that the average per capita income has continued to increase even while employment has dropped.

The average per capita income increased at the following annual rates:

	Jan. 1981-Jan. 1982	Jan. 1982-Jan. 1983
Manufacturing	19,7 %	16,3 %
Construction	19,7 %	16,5 %

The real income of workers increased even during the 1982-1983 period. The above figures also indicate that the rates of increase among these two sectors are about the same.

Forecasts of wage increases (including the upper and lower limits with a 95 % confidence level) up to January 1985 are also given in Figures 8 and 9. These forecasts show that should the past trends continue, wages could very nearly double in a four-year period.

Figures 8 and 9 give an indication of the increases in average per capita wage but not of occupational wage differentials. The MMS surveys supply information in this regard for a number of selected occupations. Table 3 gives the median wage for a group of employees who took part in both the 1981 and 1982 MMS surveys. The interpretation of the information in Table 3 is perhaps best clarified through the use of an example: According to the table, 74 artisans in the motor trades were employed by the companies taking part in the MMS survey in 1981. The artisans earned a median wage of R8 533 p.a. in 1981. In 1982 the median wage of the same 74 persons rose to R11 086, an increase of 29,9 %. This means that at least half the artisans in the motor trades received a substantial increase in real wages.

6 LABOUR TURNOVER

There are numerous factors which influence labour turnover. The rate of labour turnover (which can be calculated in various ways) usually has two components, namely an avoidable component which can be reduced by better management and an unavoidable component such as death and

retirement. Labour turnover remains costly to the organization not only because of direct expenses (recruitment, etc.) but also because most new workers are not immediately fully productive.

TABLE 3

MEDIAN ANNUAL SALARY OF EMPLOYEES WHO TOOK PART IN BOTH THE 1981 AND 1982 MMS SURVEYS

Occupational group	N	1981 median salary p.a. (R)	1982 median salary p.a. (R)	% increase
Registerable engineers	65	23 095	26 422	14,4
Engineering technologists	71	13 440	17 694	31,7
Selected natural scientists	41	20 634	22 613	9,6
Qualified engineering technicians	162	13 116	16 031	22,2
Selected technicians in science & applied science	17	11 340	12 696	12,0
Artisans: Metal & engineering	348	10 640	12 744	19,8
Electrical trades	101	10 588	12 519	18,2
Motor trades	74	8 533	11 086	29,9
Building trades	71	9 940	12 247	23,2
Apprentices: Metal & engineering	128	4 401	5 605	27,4
Electrical trades	55	4 546	5 184	14,0
Motor trades	33	4 752	6 488	36,5
Supervisory occupations	773	9 612	12 348	28,5
Computer occupations	66	13 195	17 760	34,6
TOTAL	2005			

Labour turnover can also be an indication of the supply of labour. In certain areas especially, there are too many jobs chasing too few people with the result that wages become inflated.

Table 4 indicates the average loss rate of the companies taking part in the 1981 and 1982 MMS surveys. The table shows that job-specific loss rates differ appreciably. Loss rates and wage increases show a slight positive relationship (r=0,3) which indicates that wages tend to increase faster for those occupations showing a high loss rate.

The artisan groups have by far the highest loss rates. The firms participating in the MMS surveys lost more than a third of their labour force in these groups. The loss rate among computer personnel was also high (25 %). A loss rate of this order must bring high costs with it and this also increases the total labour-connected costs of the organization.

TABLE 4

MMS LABOUR TURNOVER, JULY 1981 - JUNE 1982

Occupational groups	Average staff complement	Average loss rate
Registerable engineers	133	5,3
Engineering technologists	101	10,9
Selected natural scientists	57	3,5
Qualified engineering technicians	367	9,5
Learner engineering technicians	103	12,6
Selected technicians in science	97	22,6
Artisans: Metal & engineering	1061	31,5
Electrical trades	241	31,5
Motor trades	123	32,4
Building trades	158	16,5
Apprentices: Metal & engineering	551	12,0
Electrical trades	137	10,9
Supervisory occupations	1050	9,3
Computer occupations	108	24,9
TOTAL	4353	17,9

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