EMPLOYMENT OPPORTUNITIES IN THE SOUTH AFRICAN HOTEL INDUSTRY, WITH SPECIAL REFERENCE TO TOURISM.

by

ERNST-AUGUST UKEN

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ABSTRACT

The continued growth of the South African tourist industry was assumed and projections up to year 2020 were made to establish the corresponding growth in employment opportunities in the hotel industry.

Overseas tourism is sensitive to and dependent on many factors. These were identified and the performance over the past two decades for bona fide overseas visitors, excluding mere border crossings, were extrapolated, accepting that oscillations about the suggested trend line will become greater in the future. In order to predict the growth of domestic tourism, cognisance had to be taken of the demographic development of the various population groups. The distribution of wealth among the various groups was estimated in the short, medium and long-terms. On it depends the choice of accommodation when going on holiday.

An evaluation was made of the employment pattern in the South African hotel industry. Published data from the Central Statistical Services and the Bureau of Financial Analysis (BFA) of the University of Pretoria were used. The 1982 Manpower Survey of the BFA proved particularly useful in establishing the present distribution of skilled staff in the industry by hotel grading and by geographical area. Performance ratios were calculated relative to capital invested and to revenue earned. The lowest staff to room ratios were used as criterion for optimal and most efficient usage of staff.

The model thus developed with the aid of the Hewlett Packard STATP computer program, was based on actual present performance of a certain category of hotels. Unlike other approaches reported in the literature, a clear distinction was here made between skilled and unskilled labour. This distinction is considered to be of prime importance to any developing country where a shortage of skilled staff generally prevails, in contrast to a vast supply of untrained labour.

The employment multiplier of the hotel industry, as a direct result of the development of the tourism industry to and within South Africa, was verified by simple statistical methods. Where feasible, correlations were measured between staff ratios and the performance of selected departments within the hotel - Anomolies, such as the concentration by 1* hotels on liquor, were identified, as well as those areas where staff appeared to be underutilized.

The most efficient present staff-usage patterns in the industry were used to develop a description of future staff needs on a rationalised basis. It was concluded that excellent future employment opportunities exist, especially for young, Black work-seekers.

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1. INTRODUCTION

1. INTRODUCTION

1.1 Preamble:

Immediately after the extensive drought of 1984, South Africa witnessed the worst economic depression since the 1930's. Many parallels may be drawn between these two depression periods, including business instability, unemployment, social disruption, political unrest and a general lack of confidence in the future.

Unemployment is a social evil, which has a particularly devastating effect on society. It therefore has to be combated vigorously to prevent the problem from becoming unmanageable. There are many different ways of doing this. The government has set aside R600-m for a wide range of projects that are intended to create job opportunities. Areas already identified include combating soil erosion, eradicating weeds and unwanted bush and shrubs, cleaning of canals, repairing and maintaining roads and building small dams. In urban areas projects are to include the cleaning of inhabited and uninhabited areas, upgrading sanitation systems, digging trenches for the provision of water and developing community recreation areas. The latter is particularly interesting as it involves and could help to promote the leisure industry of this country.

According to the chairman of the newly-established South African Tourism Board[1], the Republic earned about R650-m in foreign exchange, plus a further R1 000-m from local tourism during 1982. Tourism is therefore an obvious important generator of foreign capital, which warrants further attention. The hotel industry constitutes an essential part of this sector in providing accommodation, meals, refreshments and entertainment. In addition, this "peoples-business" is claimed to be fairly labour intensive, since services are rendered by people to people. The question therefore arises to what extent the hotel industry could assist in creating job opportunities? Performance surveys of local hotels have been conducted by the Bureau of Financial Analysis (BFA) of the University of Pretoria[2] since 1976.

As Executive Director of the Federated Hotel, Liquor and Catering Association of Southern Africa (FEDHASA), the author became deeply involved for 4 years, with the operational problems experienced by the 1 300 member hoteliers.

Consequently a personal interest was awakened to find out what the optimal parameters of staff utilization in the South African hotel industry could be. This desire must be seen against the background of creating new job opportunities for people, who are currently being threatened by the risk of ever-growing unemployment.

The notion of combining tourism with employment opportunities was strengthened when at the last Convention of the International Hotel Association, J Bodlender of Horwath and Horwath International[3] emphasised that:

> " the advantages of tourism to developing countries are regarded even more significant in the field of job creation than the more frequently quoted foreign exchange earnings".

From an initial literature search it became clear that the kind of information being sought was not readily available locally. Even if certain data did become available, the chances of easily calculating the potential growth in job opportunities in the hotel industry remained remote. This was due to the proliferation of approaches towards estimating the potential growth of tourism.

It was therefore decided to attempt some basic economic calculations as had been done by certain authors[4] [5]. Should this approach become too theoretical or complicated, then a more pragmatic approach would be adopted, based on available empirical data.

The objective would therefore remain to obtain a proper and suitable model of an employment multiplier that would fit the South African situation. Ideally it should satisfactorily identify the relationship between staff loads and hotel performance. A comparison of ideal ratios with actual manpower loads for hotels in various categories and in different geographical areas, should serve as an indicator of eventual problem areas and bottlenecks. This could become particularly important if and when the supply side to the hotel industry, namely tourism, starts to grow to reach unprecedented heights.

1.2 The Multiplier concept

According to traditional Keynesian theory, "a multiplier measures the relationship between an autonomous injection of expenditure into an economy and the resultant change in income which occurs"[4]. The multiplier therefore measures the result or impact which the extra expenditure introduced into an economy will have. By definition one here refers to 'extra' expenditure, implying that one is dealing with marginal rather than average changes.

In tourism, extra expenditure in an area may typically include the following:

- money spent on goods such as souvenirs clothing, leather goods, jewelry, food, drink and often consumables, etc.
- investment from outside in local business concerns, property, etc,resulting from tourism.
- government spending either in the form of foreign aid to the area under consideration, or domestic government spending on the local infrastructure[5].
- export of goods from the area as a result of tourism.

From the foregoing it becomes evident that the nature of expenditure is varied. It may be

- direct, by the tourists themselves or by tourism-related investment in that area or even for tourism-generated exports from that area;

- indirect, due to successive inter-business transactions resulting from the original, direct expenditure, or

- induced, since consumer spending has increased due to additional personal income in that area as a result of increased direct spending.

The indirect and induced effects are jointly referred to as secondary effects.

1.2.1 Types of multipliers

The following four types of multiplier[5] are commonly in use:

(a) Sales/Transaction multiplier is a measure of extra business turnover created by an extra unit of tourist expenditure.

(b) Output multiplier is similar to the above, but it also takes inventory changes into account. It could for example imply an increase in stock levels in hotels because of increased trading.

(c) Income multiplier measures the income generated by an extra unit of tourist expenditure, 'ΔE'. In this case all income, also that of foreign workers, should be included if it is spent locally.

(d) Employment multipliers may be expressed as:

- the ratio of direct plus secondary employment generated, or
- the employment created by tourism per unit of tourist expenditure.

The application of any of the above multipliers will have to take congnisance of inherent leakages from the economy, causing rounds of income and employment to diminish according to the Keynesian model.

Examples of leakages may be found in

- payment for goods/services imported into the area of study
- transfer of payment to elsewhere
- taxation revenue which is not ploughed back into the area, and
- unspent savings out of income.

1.2.2 Types of Models

Multipliers may be calculated by a range of different available models, of which there are three basic types[5]:

(a) Base models assume a simple, linear relationship between the export and local sectors. This simple model, which only identifies export activities as sole determinant of the level of income and employment, is seldom used in practise.

(b) Keynesian models recognise 'streams' of income and employment that are generated in 'rounds', which diminish in geometric progression as a result of leakages at each round. This concept is somewhat reminiscent of the Quantum Theory in nuclear wave mechanics, where quanta of energy released are the 'streams' and the energy levels are 'rounds'.

(c) Input-output models analyse the economy into its sectors, which are then expressed in matrix form according to the effects of tourist expenditure.

1.2.3 Limitations of tourism multipliers

Tourism multipliers generally suffer from the following limitations[5]:

(a) Data deficiency is very common. In this regard South Africa is no exception, which has led Ferrario[6] to state:

"TASA should establish what the South African Tourism Board's policies are regarding research and the collection and presentation of a meaningful tourist data bank. The South African Tourism Board, because publicly funded, should be responsible for providing information and data on tourism".

(b) Restrictive assumptions must be guarded against. This is particularly the case in the less specific models, namely the base model and the Keynesian types, where economies of scale are disregarded. Average production and consumption functions do not remain directly proportionate and supply constraints are often overlooked. Supply constraints could include the lack of available unemployed resources, such as capital, skilled labour, foreign exchange, etc.

(c) Homogeneous, continued consumption is often assumed, although increased income leads to a higher standard of living, hence higher demands.
Consequently leakages increase, thus reducing the multiplier effect. This shortcoming is particularly severe in developing countries, like the RSA, which tend towards a higher propensity to import.

(d) Inadequate provision is made for the time the multiplier effect requires to manifest itself in the economy. It has been estimated[5] that direct tourist expenditure is likely to turnover 5 to 6 times in a 12-month period.

(e) The sensitivity of a model may be inadequate to still describe extreme changes in the value of the coefficients used.

In many cases cost-benefit analyses render more direct and reliable results than those which are achievable with multiplier calculations, that invariably depend on numerous assumptions.

1.3 EMPLOYMENT MULTIPLIERS FOR HOTELS

Since the tourism industry is so diverse, "attempts to determine the precise relationship of tourism to direct and indirect employment are confounded by the difficulty and high cost of collecting data."[7] This is the valid conclusion Fujii, et al, came to when reviewing the literature for existing employment models.

By way of illustration, two of the simpler models are quoted here[7]:

(a) Diamond determined the number of employees "E" in category "j" by the equation:

$$\frac{E_j}{OCCRM} = a_0 + a_1 OCCRM + a_2 OCCRMSQ + a_3 RATE + a_4 FIT$$

where OCCRM = number of occupied rooms
OCCRMSQ = $(OCCRM)^2$
RATE = double room rate in $
FIT = proportion of guests travelling independently
a_0 to a_4 = constants, which are unfortunately not given.

(b) Similarly, Elkan determined the number of employees relative to full-time equivalent employees, by

$$\frac{FTE_j}{OCCRM} = b_0 + b_1 OCCRM + b_2 OCCRMSQ + b_3 RATE + b_4 FIT$$

where FTE = number of full-time equivalent employees, and
b_0 to b_4 = constants, that are again not given.

As far as the objectives of this investigation are concerned these models have the following limitations:

- Both Diamond and Elkan worked with data from individual hotels and their equations describe the number of employees per category or hotel department. This investigation, on the otherhand, sets out to describe the country-wide picture, distinguishing only on a star-grading or regional basis.

- Neither Diamond nor Elkan put forward models that clearly distinguish between skilled and unskilled workers. For a developing country, like South Africa, this is considered to be important since skilled employees are normally in short supply, whereas their unskilled counterparts are usually freely available. The latter may easily be switched from one job function to another and therefore place no constraint on the model.

- Substitution into the two Equations could only be made if the proportions for "FIT" are known. These figures are unfortunately not known in South Africa and a separate survey would have to be lauched. Estimates in this case seem to be unwarranted.

- Unfortunately the values for the constants "a" and "b" are not cited[7]. To establish these on the basis of at least five equations per job category per hotel, is beyond the scope of this investigation.

- Whether room rates, as described by "RATE" in these Equations, by themselves adequately describe the type or quality of an hotel is also a debatable point. The 5-star grading system of South African hotels is considered to be a closer approximation to quality as it is being applied uniformly on an extensive, country-wide basis, irrespective of the geographic location; whether coastal or inland region or whether in an urban or in a rural area. In fact an overlap of tariffs is being experienced with some two-star hotels being more expensive than some three-star hotels, for example, and so on.

These models and others not cited here[7] are therefore not considered to be suitable for the problem under investigation.

1.4 THE EMPIRICAL APPROACH

Most of the presently available multiplier models for the hotel and tourism industry would by necessity have to be based on insufficient or non-existent data as well as on too many assumptions, rendering the final results unrepresentative, if not totally unreliable.

A more basic approach was therefore followed in this study. Its rationale is to use only available and well- documented data on staff employmnet for each hotel category and in different areas of the country. These were then compared mathematically with hotel sizes, occupancy rates and revenues, all variables for which sufficient documentation is available, on a country-wide basis, through the BFA annual sample surveys.[2] The data base used for the present study refers to the BFA findings for the year 1982, unless otherwise stated.

By defining the mathematical relationship that correlates the behaviour of these variables, it should be possible to identify the expected level of performance of each variable, given the value of the others. In particular, it should be possible to define the optimum level of manpower requirements for the projected patterns of growth of the hotel industry in years to come. Alternatively, it should estimate the multiplier effect that tourist development may have on generating employment opportunities in the hotel industry.

This empirical approach is similar to any multiplier calculation in that the following two assumptions have had to be made:

(a) that future tourists will continue to patronise hotels as in the past. This implies that the hotel industry is expected to retain its present market share of the tourist trade. Should there be an increase in demand for cheaper accommodation,

then it is assumed that less luxurious hotels such as the overseas budget hotels will emerge to meet future demands. These could be in the form of pensions (without restaurants) or tavernas, concentrating on liquor. This assumption therefore has the nett effect that an increase in foreign and domestic tourism will result in a proportional increase in hotel occupancies.

(b) that the hotel industry will continue to rely primarily on the human factor for its services, thus discounting the prospect of major staff replacement as a result of automation. This assumption implies that in the short and medium terms, an expansion in the hotel industry will lead to a corresponding expansion in hotel employment.

A limitation that has had to be accepted in this particular calculation is that the study will of necessity have to be limited to the mutual interdependence of tourism and hotel business. For the sake of these calculations the all encompassing United Nations definition of tourism will generally be used. In cases where the more restrictive leisure sector is identifiable, special reference will be made to it in the text.

On the basis of these assumptions and the availability of reliable hotel statistics, this study was condcuted by using simple arithmetical procedures supported by accepted, straight-forward statistical techniques. The areas of prime interest of this dissertation therefore include the following three aspects:

- tourism to and within the Republic of South Africa,
- the local hotel industry, and
- employment opportunities in local hotels.

Subsequent chapters are devoted to these interrelated areas.

2. THE SOUTH AFRICAN TOURIST SCENE

According to the former Department of Tourism, South Africa attracted an increasing number of "quality" tourists from 1979. This implies an increase in demand for top hotel accommodation and improved services.

The exact nature of this interplay will become clearer in the following section, although comprehensive data are extremely difficult to come by in a young, developing country.

2.1 TOURISM

The industry may be divided into the following two categories in accordance with the origin of the various tourists:

2.1.1 Overseas Tourism

According to the Central Statistical Services,[8] there were some 659 913 foreign visitors to the RSA during 1982. Out of these no fewer than 502 366 are claimed to be on holiday or in transit; 143 557 came over on business and 13 990 came for study purposes. It is very unlikely that visitors coming over to study would stay in hotels. This therefore leaves a potential total of 645 923 visitors that could have stayed in hotels.

A survey[9] conducted on behalf of the Department of Industries, Commerce and Tourism for the period August to November 1982 revealed the holiday-accommodation pattern of overseas tourists to be as shown in Table 1:

TABLE 1: TOURIST HOLIDAY-ACCOMMODATION PATTERN

Overseas tourists[9]			Domestic tourists[10]				
Hotels %	Private houses %	Other %	Hotels %	Friends and family %	Holiday houses and flats %	Huts/ rondavels %	Caravans and camping %
56,3	28,8	14,9	19,7	37,0	18,3	12,3	12,8

Of the total number of foreign visitors therefore only 371 531 stayed in hotels during 1982. Comments made under section 1.2.3 on the lack of accurate data are also very appropriate here.

2. THE SOUTH AFRICAN TOURIST SCENE

2.1.2 Domestic Tourism

Even less information is available on domestic tourism. The most recent official survey dates back to January 1980. It is claimed[10] that 53,7 per cent of the White South African population normally go on holiday once a year, and approximately 50,4 per cent of the respondents are committed to school or university vacations. The choice of accommodation by local White tourists is quoted in Table 1. It would therefore appear that only 19,7 per cent of 53,7 per cent of the white population of 4,03 m in 1982 are potential hotel guests; hence a total of 426 330 domestic tourists. During 1980 most holiday respondents intended going to Cape Town (9,4 per cent), followed by Durban (8,2 per cent) and the average length of holiday respondents intended taking amounted to 17,9 days. Indications are, however, that such lavish holidays have subsequently had to be curtailed for economic reasons.

Nevertheless, according to Horwath and Horwath International[11]:

> "Tourism could become one of the top three industries in South Africa but development is hampered by poor marketing, lack of information and major differences between the private and public sectors. As a first step, the government has announced that it will set up a new board; the South African Tourism Board, to co-ordinate strategies on tourism".

This first step has now been reached and the South African public is anxiously awaiting demonstrable, practical results.

2.2 THE HOTEL INDUSTRY

For the sake of validating comparisons all statistics quoted are taken as at 31 December 1982, or for the year 1982, unless stated otherwise.

2.2.1 Analysis according to hotel grading

All registered hotels are graded on a 5-point scale with the 5* hotel being of the luxury standard.

TABLE 2: HOTEL STATISTICS BY GRADING, 1983

Type of Hotel	Total number in RSA		Average ratio of rooms per hotel	Average monthly room occupancies in per cent[12]
	Hotels	Rooms		
1*	1 043	22 100	21	45,8
2*	255	14 749	58	55,7
3*	66	7 331	111	67,8
4*	12	1 945	162	69,4
5*	9	2 163	240	64,8
Total	1 385	48 288	35	60,0

There are therefore far more lower-graded hotels than higher graded ones, but the latter are much larger individual units. For the year 1983, the average room occupancies for all hotels at 60,0 per cent are the lowest in 9 years since the Bureau of Financial Analysis (BFA) of the University of Pretoria started recording these.

According to the Central Statistical Services[13], the total trading revenue for 1983 was R1,4m. This is a 16,7 per cent growth on the previous year's figure of R1,2m.

The BFA once again conducted a survey to establish how the various departments performed within the different types of hotels. The following results[12] were obtained for 1983:

TABLE 3: DEPARTMENTAL INCOME BY GRADING, 1983

Type of Hotel	Respondents		Percentage Departmental Income[12]				
	No.	%	Accommodation	Catering	Bar	Off-Sales	Other
1*	129	12,4	11,03	12,52	19,62	54,26	2,57
2*	122	44,8	25,66	21,90	16,70	32,92	2,82
3*	47	71,8	39,43	25,63	16,01	13,98	4,95
4*	11	92,3	43,06	28,73	18,54	3,74	5,93
5*	9	100,0	42,14	32,77	15,03	2,18	7,88
Average	64	64,3	32,26	24,31	17,18	21,42	4,83

Although the percentage respondents of 1* hotels is low, the actual number of respondents of 129 compares favourably with the 122 replies received from 2* hotels. According to Table 3, 1* hotels rely for virtually three-quarters of their income from liquor, ie. bar (19,62 per cent) plus off-sales (54,26 per cent)=73,88 per cent. This trend is most unfortunate in view of the fact that 39,8 per cent of all hotel beds available in South Africa fall into this category. The off-sales facility was granted to hoteliers in the early sixties, to enable them to subsidise the costs involved in meeting the newly-introduced grading system by refurbishing the existing establishment. Originally the intentions were good, but it would appear that the 1* hotelier has in many cases reversed his priorities, and now relies mainly on his income from liquor.

According to Table 3, more reliable data is available from the 3*, 4* and 5* hotels, who depend primarily on income from accommodation, ie. generally around 40 per cent. They also have the best occupancy figures, as is shown in Table 2. Together with their relatively high income from catering, generally over one quarter of their totals, they are therefore far more tourist orientated than their smaller counterparts.

The income from bars is remarkably uniform for all hotel grades. This is probably due to the fact that ladies' and men's bars cater for both hotel guests and casual visitors.

2.2.2 Analysis by region

In the previous section it was shown how much the size and nature of an hotel can vary according to its grading. The source of income by department also varies accordingly. It now remains to be seen to what extent the region in which an hotel is encountered influences these parameters. Unfortunately the BFA defines different regions in different reports. These areas therefore had to be consolidated to permit direct comparisons between data from different studies. (see section 2.3.2).

TABLE 4: HOTEL STATISTICS BY REGION[12]

Region	Percentage response	Average monthly room occupancy in per cent	Percentage departmental income[12]				
			Accommodation	Catering	Bar	Off-sales	Other
Cape Town	10,8	63,7	41,76	28,21	19,15	6,51	4,37
Garden Route	18,2	56,8	31,78	24,42	11,65	30,61	1,54
Port Elizabeth & East London	36,7	64,3	32,35	23,79	18,44	21,94	3,48
Rest of Cape	16,6	44,3	11,59	14,37	14,71	58,76	0,57
Natal Inland	56,3	52,5	26,96	24,03	13,76	30,24	5,01
Natal Coastal	16,7	53,6	34,23	34,78	15,88	11,40	3,71
Rand & Pretoria	17,9	65,3	36,42	24,77	18,19	13,77	6,85
Rest of Transvaal	20,5	51,8	21,16	18,30	13,68	45,05	1,81
Orange Free State	11,7	57,4	26,94	20,74	12,91	36,68	2,73
Average	25,3	60,0	31,60	23,63	16,94	23,36	3,34

Once again, the percentage of response from the various areas was very irregular, with a predominance of answers from Natal, biasing therefore the overall national average.

From Table 4 it may, however, be deduced that hotels in areas where high room occupancies are recorded invariably show a low income from the off-sales department and a high income from accommodation and catering. This is particularly the case in the Cape Town, Port Elizabeth, East London, Johannesburg, the Rand and Pretoria regions. A notable exception are the Natal coastal hotels, who show a below-average occupancy figure, but who enjoy an above-average income from catering (34,8 per cent) This is presumably due to the fact that this holiday area has many cottages, purely accommodation establishments, etc, and tourists are invariably attracted to hotels for casual meals. The relatively high income from accommodation (34,2 per cent), not withstanding below-average occupancy (53,6 per cent) also suggests relatively higher profits by the Natal coastal hotels from accommodation.

At the other end of the spectrum it is interesting to note that hotels in the Rest of the Cape area experience the lowest room occupancy of 44,3 per cent. The corresponding low income from accommodation is therefore only 11,59 per cent. Income from catering remains low at 14,37 per cent and therefore income from the off-sales department is an all-time high at 58,76 per cent. The same reliance on the off-sales rather than accommodation is noted in the Rest of the Transvaal, and to a lesser extent in the Orange Free State.

2.2.3 Problem areas in the hotel industry

Combining these observations with those indicated under Section 2.2.1, it therefore would appear that particularly 1* hotels in certain areas, like the Rest of the Cape, are too liquor-orientated to be of importance to tourism. The Federated Hotel, Liquor and Catering Association of South Africa (FEDHASA), has therefore recommended to the authorities that permission be granted to these hotels to convert their liquor outlets to an ordinary bottle store. The other alternative would be to allow the unprofessional hotelier to convert his 'hotel' to a mere overnight accommodation establishment. In this way he would not be lost to the tourism industry, but he could concentrate on the simpler task of merely offering a clean room without having to prepare and serve meals. Budget hotels, a relatively new concept to the RSA, were mooted as far back as June 1982[14] and are now receiving more serious attention by the authorities. The trade seems to finally realize and accept that many hotels have outpriced themselves from the domestic tourist market. The average family cannot afford to stay in even an 1* hotel, where the average room rate, at the beginning of 1984, was R19,30 per day per person. For longer vacations for instance, alternatives to hotels are becoming imperative.

Thus, during the 1984 FEDHASA Congress, Peter Bacon, Managing Director of Sun International, quoted the following statistics:

- timesharing gained 4 per cent of the hotel market in 1983, assuming that timesharing customers were previously habitual hotel guests, and
- caravan sales since 1979, in the face of an economic downturn, have nevertheless, shown an annual growth of 43,0 per cent (1979); 32,6 per cent (1980); 10,8 per cent (1981) and 7,6 per cent (1982).

These new options may sound attractive to the tourist public, but they will eventually affect the hotel trade adversely. The hotel industry has invested a total of over R2,5 billion in property alone. Unfortunately, the incentives and investment allowances favour the erection of the large, higher-graded units,[15] which are too expensive for the use by the average

South African holiday-maker, under the present economic conditions. It therefore becomes more difficult to predict the future. One fact, however, remains certain and that is that the hotel industry will have to undergo a metamorphosis if it wishes to recapture the general domestic tourist market. A less stringent, or rather a more appropriate grading system at the lower end of the scale would help to bring facilities offered closer to the demands of the public. However, with cheaper airfares and better promotion, also the small, lower-graded hotels could hope to even attract the overseas tourist market.

2.3 EMPLOYMENT OPPORTUNITIES IN HOTELS

2.3.1 General employment market

According to the Department of Manpower, the registered number of unemployed Whites rose from 7 075 in July 1982 by 90,9 per cent reaching 13 505 in July 1983. Over the same 12-month period unemployment among Coloureds rose by 90,7 per cent and among Asians by 175,9 per cent. Unemployment among economically-active Blacks also rose from a minimum of 7,3 per cent in November 1981 to 8,4 per cent in June 1983, according to the Central Statistical Services[16]. If the Blacks from independent Black states are included, the picture becomes even gloomier.

Contrary to popular belief, little has recently been achieved in the attempt to create new job opportunities. According to the Quarterley Review of the South African Reserve Bank[17], the rate of increase in employment opportunities in the non-agricultural sector of our economy has dropped consistently since 1980, as shown in Table 5.

TABLE 5: RATE OF CHANGE IN EMPLOYMENT OPPORTUNITIES IN NON-AGRICULTURAL SECTORS

Year	Percentage change in growth
1980	+3,4
1981	+2,9
1982	+0,4
1983*	-1,0

*The 1983 value is an estimate by Sanlam[18].

It therefore becomes evident that South Africa will seriously have to look for new job opportunities in order to maintain a stable economy. Union activity is beginning to be felt and the frequency of work stoppages and strikes are also increasing appreciably. In many cases incidents are accompanied by dismissals. The hotel industry has by no means been immune to strikes. Particularly the larger hotel groups have been singled out in urban areas. During one week in May 1984 alone, three Johannesburg hotels dismissed a total of 237 workers, when on strike demanding an increase of 78,6 per cent of their present minimum wage.

2.3.2 Manpower scene in hotels

The most comprehensive information on hotel manpower was gathered by the BFA[19] in their confidential Manpower Survey for 1982 conducted on behalf of the South African Tourism Board and FEDHASA.

During 1982 postal questionnaires were distributed to white-owned hotels only throughout the country, by the former Hotel Board, now the South African Tourism Board. Employers were asked to codify each individual employee according to a prescribed list of job categories (See Table 7). Personal details asked included age, marital status, race sex, date of employment, whether full-time or part-time and salary or wage earned.

Employers were also asked to summarise all information according to total number of employees, their race and the total number of vacancies, classified according to the identified job categories.

A relatively good response was obtained, namely 51,7 per cent of all hotels. Representation of all grades was statistically significant being as follows:

TABLE 6: RESPONSE TO MANPOWER SURVEY BY THE BFA[19]

Grade of hotel	Percentage response
1*	49,3
2*	54,9
3*	66,7
4*	91,7
5*	88,9
Total	51,7

From results obtained, the following total number of skilled staff only, in white-owned hotels, were estimated for the 19 different selected job categories:

TABLE 7: DISTRIBUTION OF SKILLED STAFF IN HOTELS BY GRADING[19]

Job Title	Total number of staff	Hotel type by star grading				
		1*	2*	3*	4*	5*
Manager(ess)	1 385	1 043	255	66	12	9
Assistant Manager(ess)	662	351	184	73	16	38
Front office Manager(ess)	198	79	60	33	15	11
Other Departmental Manager(ess)	523	156	148	99	45	75
Management Trainee	295	41	87	64	27	76
Restaurant Manager(ess)	339	79	104	78	32	46
Administrative staff	4 069	793	1 149	1 133	303	691
Receptionist	1 444	542	528	216	56	102
Porter	1 078	256	384	228	87	123
Barman/Barmaid	3 395	2 158	705	308	94	130
Waiter/Waitress	7 155	2 712	2 197	1 240	376	630
Wine Steward	2 737	1 312	823	375	128	99
Chef	1 204	535	344	162	20	143
Assistant Chef	585	221	171	82	45	66
Cook	1 615	718	359	287	101	150
Assistant Cook	864	406	213	150	53	42
Kitchen Supervisor	347	187	102	43	3	12
Housekeeper	1 385	1 043	255	66	12	9
Counterhand	545	270	148	70	35	22
Projected total	29 825	12 902	8 216	4 773	1 460	2 474

Acknowledging the fact that the information available is incomplete, Zevenbergen[19] estimated that the following total labour force, skilled and unskilled, was employed in the white-owned hotel industry during 1982:

TABLE 8: TOTAL MANPOWER EMPLOYED IN HOTELS BY GRADING[19]

Type of worker	Hotel type by star grading					
	1*	2*	3*	4*	5*	Total work force
Skilled	12 902	8 216	4 773	1 460	2 474	29 825
Unskilled	8 644	5 670	2 768	686	1 286	19 054
Projected total work force	21 546	13 886	7 541	2 146	3 760	48 879
Average total work force per hotel	21	54	114	179	418	35

The figures given in Table 8 refer to white-owned hotels only and are therefore lower than those estimated by the Central Statistical Services[21]. Their official estimate is a total of 52 800 workers, with 8 900 Whites, 7 600 Coloureds, 3 500 Asians and 32 800 Blacks.

It is furthermore interesting to note that the South African hotel industry takes so little advantage of part-time workers, unlike overseas tourism-orientated establishments. In South Africa the percentage[19] varies from 4,6 per cent (1*); 2,1 per cent (2*); 0,7 per cent (3*); 0,6 per cent (4*) to a mere 0,3 per cent (5*). This aspect requires more attention, particularly during the high-season periods.

From Table 7 it becomes apparent that 85 per cent of all skilled staff serve in the 10 major job categories, namely as managers, administrative staff, receptionists, porters, barmen, waiters, wine stewards, chefs, cooks and housekeepers. Future analyses will therefore concentrate primarily on these job categories.

It is also interesting to note how these major job categories are spread on a regional basis and how they are filled according to race, sex, age and experience. Unfortunately however these regions[19] do not coincide with those identified by the BFA in their other reports[2 12 20]. In order to obtain comparable figures, some of the 18 regions cited in the BFA Manpower Survey[19] were summated as follows to yield the 9 consolidated regions used in Table 9 below:

Cape Town	=	Cape Peninsula + Western Province
Natal Inland	=	Pietermaritzburg + Newcastle + Rest of Natal
Natal Coastal	=	Durban + Umhlanga Rocks + Natal North Coast + Natal South Coast
Rand & Pretoria	=	Johannesburg + Reef + Pretoria
Orange Free State	=	Kimberley + Bloemfontein + Welkom + Rest of the Orange Free State
Rest of Cape	=	Rest of Cape
Rest of Transvaal	=	Rest of Transvaal
Port Elizabeth & East London	=	Port Elizabeth + East London
Garden Route	=	Garden Route

For want of a better criterion, these consolidated regions are tabled and eventually plotted in descending order of magnitude, according to the number of rooms available in each region. This procedure will be followed for the rest of this text. All things being equal, these trends should be comparable with those observed in cases where grading was used as basis.

TABLE 9 MAJOR STAFF CATEGORIES BY REGION[19]

Job Title	Name of consolidated region									Projected Total
	Rand and Pretoria	Natal Coastal	Rest of Cape	Rest of Trans-vaal	Cape Town	Orange Free State	Natal Inland	Port Elizabeth & East London	Garden Route	
Number of rooms available	10 292	7 775	5 475	5 293	4 078	3 099	2 797	2 169	2 040	43 018
Manager(ess)	218	171	223	205	195	120	116	49	88	1 385
Administrative staff	1 222	967	153	297	705	132	190	200	119	3 985
Receptionist	297	190	162	206	211	115	92	90	83	1 446
Porter	261	151	64	147	182	109	44	73	21	1 052
Barman/Barmaid	700	493	381	372	575	184	242	157	130	3 234
Waiter/waitress	1 620	1 423	596	787	913	501	526	370	355	7 091
Wine Steward	432	587	289	328	351	189	222	142	170	2 710
Chef	399	204	66	171	150	61	91	35	94	1 271
Cook	374	354	184	135	212	87	87	75	84	1 592
Housekeeper	218	171	223	205	195	120	116	49	88	1 385

It must be pointed out that the totals thus obtained in Tables 7 and 9 do not necessarily agree. This slight discrepancy is explained by the BFA[19] as being due to the fact that two separate projections were used: one as obtained on a geographical basis and the other as based on hotel grading.

A more important discrepancy will, however, be noticed between the total number of rooms available, since Table 9 refers to white-owned hotels only, and Table 2 gives the national total. Where possible the national figure of 48 288 rooms will be used, although the regional data are only available for the 43 018 rooms in white-owned hotels.

According to Section 1.4 two more important staff variables remain to be considered, namely those of age and of race. Figures quoted in Tables 10 and 11 refer to the BFA sample only. Projected values will be calculated later where deemed necessary, provided the sample's figures are validated.

TABLE 10: MAJOR STAFF CATEGORIES BY AGE OF PARTICIPATING EMPLOYEES[19]

Job Title	Age of participating employees in years								Sample Total
	Under 25	26-30	31-35	36-40	41-45	46-50	51-55	Over 55	
Manager(ess)	31	26	40	21	31	21	16	16	202
Administrative staff	553	465	392	265	232	163	142	239	2 451
Receptionist	419	108	62	45	37	25	37	55	788
Porter	241	105	74	51	44	30	28	42	615
Barman/Barmaid	302	247	229	209	207	166	118	104	1 582
Waiter/Waitress	1 206	809	582	416	258	225	158	183	3 837
Wine Steward	415	268	203	181	130	85	76	65	1 423
Chef	100	129	74	68	95	60	55	65	646
Cook	96	127	156	133	102	69	61	73	817
Housekeeper	28	37	36	41	52	61	54	95	404
Sample total	3 391	2 321	1 848	1 430	1 188	905	745	937	12 765

According to Table 10, skilled workers in the hotel industry are mostly very young, ie. under 25 years of age. In fact, according to this sample, 44,75 per cent of all skilled workers are under the age of 30 years. At the other end of the spectrum only 29,6 per cent of these workers are above the age of 40 years.

It now remains to take a closer look at the racial mix of the selected skilled job categories.

TABLE 11: MAJOR STAFF CATEGORIES BY RACE OF PARTICIPATING EMPLOYEES[19]

Job Title	Race of participating employee				TOTAL
	White	Coloured	Asian	Black	
Manager(ess)	645	9	15	5	674
Administrative staff	863	404	417	968	2 652
Receptionist	637	69	40	76	822
Porter	25	82	74	495	676
Barman/Barmaid	886	241	389	342	1 858
Waiter/Waitress	88	661	539	2 970	4 258
Wine Steward	20	222	304	1 002	1 548
Chef	164	37	44	460	705
Cook	24	162	44	733	963
Housekeeper	232	95	15	86	428
Sample total	3 584	1 982	1 881	7 137	14 584

According to Table 11, no fewer than 48,9 per cent of hotel workers are Blacks, followed by Whites (24,6 per cent), Coloureds (13,6 per cent) and Asians (12,9 per cent).

2.4 Concluding remarks

From this chapter it may be concluded that three-quarters of the 1* hotels rely on their income from liquor (Table 3). This trend is most unfortunate as far as tourism is concerned, since almost 40 per cent of all hotel beds available in this country fall into the "liquor hotel" category. Particularly the smaller hotels will have to undergo a shift in emphasis if they wish to recapture the growing tourist market. According to Table 3 the percentage income from bars is virtually independent of the hotel-star grading, ranging from 15 to 20 per cent across the entire range on the labour side. 85 per cent of all skilled staff serve in 10 major job categories (Table 7). Virtually one half of all skilled workers are Blacks, followed by one-quarter Whites (Table 11). Furthermore, forty-five per cent of all skilled workers are under 30 years of age, and about one-third are above 40 years of age (Table 10).

More use could generally be made of part-time staff, who number less than 5 percent in South African hotels.

3. CALCULATION OF STAFF REQUIREMENT RATIOS

3. CALCULATION OF STAFF REQUIREMENT RATIOS

In the previous chapter the three components that constitute this study were considered, namely tourism, the hotel industry and the characteristics of the staff employed by hotels. It now remains to establish meaningful relationships between these variables.

The hotel industry itself may be described by the amount of capital invested (given by the number of rooms available) or by the performance of hotels (as reflected by the number of rooms occupied). Both criteria were used in this investigation. According to Table 2 there is an appreciable difference in the size of hotels. In order to facilitate comparisons, it is therefore proposed to use the international denominator of 100 rooms, although this will yield small ratios for the smaller hotels. On this common basis, staff surpluses (or their levels of productivity) for hotels of every size should be measurable and directly comparable with one another.

3.1 STAFF REQUIREMENT RATIOS BY HOTEL GRADING

Based on data contained in Tables 2 and 7, the following average ratios for skilled staff may be calculated for the total number of rooms available in hotels:

TABLE 12: AVERAGE RATIOS OF MAJOR SKILLED STAFF PER 100 AVAILABLE ROOMS BY GRADING

Skilled staff categories	Skilled staff per 100 available rooms by grading					
	All hotels	1*	2*	3*	4*	5*
All skilled staff	61,76	58,4	55,7	65,1	75,1	114,4
Manager(ess)	2,9	4,7	1,7	0,9	0,6	0,4
Administrative staff	8,4	3,6	7,8	15,5	15,6	31,9
Receptionist	3,0	2,5	3,6	2,9	2,9	4,7
Porter	2,2	1,1	2,6	3,1	4,5	5,7
Barman/Barmaid	7,0	9,8	4,8	4,2	4,8	6,0
Waiter/Waitress	14,8	12,3	14,9	16,9	19,3	29,0
Wine Steward	5,7	5,9	5,6	5,1	6,6	4,6
Chef	2,5	2,4	2,3	2,2	1,0	6,6
Cook	3,3	3,2	2,4	3,9	5,4	6,9
Housekeeper	2,9	4,7	1,7	0,9	0,6	0,4

Apart from 1* hotels there is a logical increase in the skilled-staff complement as the grading of the hotel unit increases ie, also as the hotel unit increases in size.

According to Table 12, the management and housekeeper categories clearly are top heavy for the lower-graded hotels, since they are generally smaller units that still require somebody at the helm. More important is, however, the fact that the service-orientated staff complement becomes progressively greater in the higher-graded, larger hotels.

These invariably include administrative staff, porters and waiters. The same tendency, although less-clearly defined, also persists with receptionists, chefs and cooks.

It is furthermore interesting to note that the liquor-related jobs, namely barmen and wine stewards are over-represented in 1* hotels, dropping to a near-minimum in 3* hotels and then picking up again for the higher star categories. An exception to this trend are wine stewards in 5* hotels, who drop to a minimum.

These trends become clearer later on, when these values are plotted together with the occupied room ratios.

Information contained in Table 12 may also be interpreted in terms of the present degree of optimal staff utilization. The various skilled jobs may be ranked in accordance with the degree of labour requirement for various types of hotels. Table 13 thus serves as a guide to work seekers:

TABLE 13: DEGREE OF LABOUR REQUIREMENT IN DESCENDING ORDER ACCORDING TO STAR GRADING

Degree of labour requirement	Average staff ratio per 100 available rooms	Job by grading
Excellent	>20	administrative staff (5*) waiter (5*)
Very good	15 to 20	waiter (4*) waiter (3*) administrative staff (4*) administrative staff (3*)
Good	10 to 15	waiter (2*) waiter (1*)
Fair	5 to 10	barman (1*) administrative staff (2*) cook (5*) chef (5*) wine steward (4*) barman (5*) wine steward (1*) porter (5*) wine steward (2*) cook (4*) wine steward (3*)
Poor	<5	barman (2* to 4*) wine steward (5*) administrative staff (1*) cook (1* to 3*) receptionist (all) manager (all) housekeeper (all) chef (1* to 4*) porter (1* to 4*)

3.2 GENERAL DIFFERENCES IN STAFF REQUIREMENT RATIOS

Average ratios for major skilled staff by region may be calculated from data given in Table 9 for the total number of rooms available in white-owned hotels, as shown in Table 14. Average ratios for all hotels as a group are already quoted in the second column of Table 12.

TABLE 14: STAFF REQUIREMENT RATIOS BY REGION

Job Title	Skilled staff per 100 available rooms by region								
	Rand and Pretoria	Natal Coastal	Rest of Cape	Rest of Trans-vaal	Cape Town	Orange Free State	Natal Inland	Port Elizabeth & East London	Garden Route
All skilled staff	64,1	71,2	51,1	62,5	106,4	53,4	71,5	68,4	71,3
Manager(ess)	2,1	2,2	4,1	3,9	4,8	3,9	4,1	2,3	4,3
Administrative staff	11,9	12,4	2,8	5,6	17,3	4,3	6,8	9,2	5,8
Receptionist	2,8	2,4	3,0	3,9	5,2	3,7	3,3	4,1	4,1
Porter	2,5	1,9	1,2	2,7	4,5	3,5	1,6	3,4	1,0
Barman/Barmaid	6,8	6,3	7,0	7,0	14,1	5,9	8,7	7,2	6,4
Waiter/Waitress	15,7	18,3	10,9	14,9	22,4	16,2	18,8	17,1	17,4
Wine Steward	4,2	7,5	5,3	6,2	8,6	6,1	7,9	6,5	8,3
Chef	3,9	2,6	1,2	3,2	3,7	2,0	3,3	1,6	4,6
Cook	3,6	4,6	3,4	2,6	5,2	2,8	3,1	3,5	4,1
Housekeeper	2,1	2,2	4,1	3,9	4,8	3,9	4,1	2,3	4,3

Again "all skilled staff" in Table 14 refers to all skilled staff in white-owned hotels and not only to the selected major skilled staff categories discussed here.

Apart from Natal Inland, the coastal hotels generally appear to have a higher skilled-staff ratio than their inland counterparts. Cape Town and its environs is particularly high. This trend will also be influenced by the size and type of hotels in each region, as becomes apparent from Table 12.

From Table 14 it may be deduced, that with the exception of chefs, all major staff ratios are highest for the Cape Town (Cape Peninsula plus Western Province) region. The Natal Coastal region, which embraces Durban, Umhlanga Rocks, Natal north and south coasts, ranks second highest in the administrative staff ratio. The Garden Route has the next highest employment ratios for managers, receptionists, wine stewards, and housekeepers and the highest for chefs.

Johannesburg, the Reef and Pretoria have the lowest staff to available room ratios for managers, wine stewards and housekeepers ie. almost the exact opposite employment tendency to that of the Cape Peninsula and the Western Province.

It is interesting to note that the ratio for waiters remains fairly high on a country-wide basis. This trend is more or less followed by administrative staff. The Rest of the Cape is a notable exception in both these cases.

The ratios calculated in Table 14 may be expressed quantitatively in Table 15 by the same criterion of labour as used in Table 13. These values based on white-owned hotels only, once again serve as a guide to work-seekers, but this time on a geographical area basis:

TABLE 15: DEGREE OF LABOUR REQUIREMENT IN DESCENDING ORDER ACCORDING TO REGION

Degree of Labour requirement	Average Ratio per 100 available rooms	Job by Region
Excellent	>20	Waiter (Cape Town)
Very Good	15 to 20	Waiter (Natal Inland) Waiter (Natal Coastal) Waiter (Garden Route) Administrative staff (Cape Town) Waiter (Port Elizabeth & East London) Waiter (Orange Free State) Waiter (Rand & Pretoria)
Good	10 to 15	Waiter (Rest of Transvaal) Barman (Cape Town) Administrative staff (Natal Coastal) Administrative staff (Rand & Pretoria) Waiter (Rest of Cape)
Fair	5 to 10	Administrative staff (Port Elizabeth & East London) Wine Steward (Cape Town) Wine Steward (Garden Route) Barman (Natal Inland) Barman (Port Elizabeth & East London) Barman (Rest of Cape) Barman (Rest of Transvaal) Wine Steward (Natal Inland) Barman (Rand & Pretoria) Administrative staff (Natal Inland) Wine Steward (Port Elizabeth & East London) Barman (Garden Route) Barman (Natal Coastal) Wine Steward (Rest of Transvaal) Wine Steward (Orange Free State) Barman (Orange Free State) Administrative staff (Garden Route) Administrative staff (Rest of Transvaal Wine Steward (Rest of Cape) Cook (Cape Town) Receptionist (Cape Town)
Poor	<5	Wine Steward (Rand & Pretoria) Administrative staff (Rest of Cape & Orange Free State) Cook (all, except Cape Town) Receptionist (all, except Cape Town) Manager (all) Housekeeper (all) Chef (all) Porter (all)

3.3 STAFF REQUIREMENT RATIOS ON A PERFORMANCE BASIS BY HOTEL GRADING

In Sections 3.1 and 3.2, the criterion base was the number of hotel rooms available. This factor is directly dependent on the capital invested per hotel and need not show any relationship to the actual performance of an establishment. It is therefore not surprising that both Tables 12 and 14 show a wide scatter. No general correlation appears to emerge between the number of staff employed and the total number of rooms available. The latter may, however, also depend on the former, since 20 of the 24 larger, higher-graded hotels are clustered together in the metropolitan areas of Cape Town, Durban and Johannesburg.

It therefore remains to be seen whether the number of staff employed cannot be related to actual performance, such as actual number of rooms occupied, or revenue from the various hotel departments, etc. Based on data presented in Tables 2 and 7 the following staff ratios may be calculated for hotel rooms actually occupied according to hotel grading:

TABLE 16: STAFF REQUIREMENT RATIOS ON PERFORMANCE BY HOTEL GRADING

Skilled staff categories	All hotels	Skilled staff per 100 occupied rooms by grading				
		1*	2*	3*	4*	5*
Number of rooms occupied	28,973	10 122	8 215	4 970	1 350	1 402
Manager(ess)	4,8	10,3	3,1	1,3	0,9	0,6
Administrative staff	14,0	7,8	14,0	22,8	22,4	49,3
Receptionist	5,0	5,4	6,4	4,3	4,1	7,3
Porter	3,7	2,5	4,7	4,6	6,4	8,8
Barman/Barmaid	11,7	21,3	8,6	6,2	7,0	9,3
Waiter/Waitress	24,7	26,8	26,7	24,9	27,9	44,8
Wine Steward	9,4	13,0	10,0	7,5	9,5	6,3
Chef	4,2	5,3	4,2	3,3	1,5	10,2
Cook	5,6	7,1	4,4	5,8	7,9	10,7
Housekeeper	4,8	10,3	3,1	1,3	0,9	0,6

According to Table 16 there is a steady decline in the ratio of managers and housekeepers per 100 occupied rooms as one progresses from 1* to 5* hotels. This trend endorses the results obtained under section 3.1 for the number of available rooms ratio. The number of managers and housekeepers to be employed therefore depends on the initial investment, and the hotel's performance supports this criterion.

The opposite trend is again shown in the case of administrative staff and porters. The trends of the other categories are less clearly defined. In the 1* hotel type, managers, housekeepers and the liquor-orientated barmen and wine stewards are overrepresented. The 5* hotel type on the other hand is heavily serviced by administrative staff and waiters and to a lesser extent by receptionists, porters, chefs and cooks.

3.4 STAFF REQUIREMENT RATIOS ON A PERFORMANCE BASIS BY REGION

According to Tables 2 and 9, the following staff ratios may be calculated on a regional basis for white-owned hotels:

TABLE 17: STAFF REQUIREMENT RATIOS ON PERFORMANCE BY REGION

Skilled staff categories	Skilled staff per 100 available rooms by region								
	Rand and Pretoria	Natal Coastal	Rest of Cape	Rest of Transvaal	Cape Town	Orange Free State	Natal Inland	Port Elizabeth & East London	Garden Route
Number of occupied rooms	6 721	4 167	2 425	2 742	2 598	1 779	1 468	1 395	1 159
Manager(ess)	3,2	4,1	9,2	7,5	7,5	6,7	7,9	3,5	7,6
Administrative staff	18,2	23,2	6,3	10,8	27,1	7,4	12,9	14,3	10,3
Receptionist	4,3	4,6	6,7	7,5	8,1	6,5	6,3	6,5	7,2
Porter	3,9	3,6	2,6	5,1	7,0	6,1	3,0	5,2	1,8
Barman/Barmaid	10,4	11,8	15,7	13,6	22,1	10,3	16,5	11,3	11,2
Waiter/Waitress	24,1	34,1	24,6	28,7	35,1	28,2	35,8	26,5	30,6
Wine Steward	6,4	14,1	11,9	12,0	13,5	10,6	15,1	10,2	14,7
Chef	5,9	4,9	2,7	6,2	5,8	3,4	6,2	2,5	8,1
Cook	5,6	8,5	7,6	4,9	8,2	4,9	5,9	5,4	7,2
Housekeeper	3,2	4,1	9,2	7,5	7,5	6,7	7,9	3,5	7,6

Average ratios for all hotels within the Republic of South Africa are already shown in Table 16.

Table 17 may be considered to be a refinement of Table 14, being based on actual performance. In this case, the highest staff ratios for administrative staff, receptionists, porters and barmen are encountered in Cape Town (Cape Peninsula + Western Province). Natal Inland (Pietermaritzburg + Newcastle + Rest of Natal) has the highest staff per 100 occupied room ratio for waiters and wine stewards. The Natal coastal region (Durban + Umhlanga Roacks + Natal North Coast + Natal South Coast) has the highest score for cooks, implying that these holiday resorts appear to cater for more guests than are actually living in. This is quite a usual phenomenon in a holiday-resort area that has many chalets, caravan and camping sites or which has many day visitors. By the same token, Cape Town and the Garden Route generally have high staff to occupied-room ratios. Port Elizabeth and East London do, however, not appear to follow this tendency. For some unexplained reason the Rest of the Cape has the highest manager and housekeeper employment ratios.

According to Table 17, the Rand (Johannesburg + Reef) + Pretoria have the largest number of occupied rooms, but the lowest staff ratios, ie. best performance as far as managers, receptionists, waiters, wine stewards and housekeepers are concerned. The Orange Free State has low ratio values thus good performance for barmen and cooks; Port Elizabeth and East London is low thus efficient on chefs; the Garden Route on porters and the Rest of the Cape is lowest on administrative staff.

3.5 MAJOR STAFF EMPLOYED ACCORDING TO DEPARTMENTAL INCOME

Unfortunately the values for revenue earned in the various hotel departments are not available on a country-wide scale. The main BFA report[20] does, however, give trends on an index basis for the various types of hotels. An attempt will therefore be made to establish national values by using given data and extrapolating it as far as possible.

3.5.1 Staff and income ratios by grading

The average income[20] from accommodation, per room sold, in 1982 for various hotel types in the whole of the Republic of South Africa is given in Table 18.

TABLE 18: AVERAGE REVENUE EARNED PER HOTEL ROOM SOLD IN 1982 BY GRADING

Type of hotel room sold according to grading	Number of rooms sold per day	Average earned per room sold	Estimated total earned per day
1*	10 122	R14,65	R148 287
2*	8 215	R23,99	R197 078
3*	4 970	R38,82	R192 935
4*	1 350	R42,53	R 57 416
5*	1 402	R55,42	R 77 699
Total	26 059	R25,84	R673 415

By accepting the values calculated in the last column of Table 18 and using the ratios of percentage income from accommodation, catering, bar and off-sales given in Table 3, the following totals may be estimated:

TABLE 19: ESTIMATED DEPARTMENTAL DAILY INCOME FOR HOTELS IN 1982 BY GRADING

Type of hotel according to grading	Accommo-dation R	Cater-ing R	Bar R	Off-sales R	Estimated total revenue earned per day* R
1*	148 287	168 319	263 771	729 470	1 344 397
2*	197 078	168 200	128 262	252 837	768 036
3*	192 935	125 410	78 339	68 406	489 310
4*	57 416	38 306	24 721	4 987	133 340
5*	77 699	60 422	27 713	4 020	184 383
Total	673 415	560 657	522 806	1059 720	2 919 466

*Total includes other income not shown in Table.

According to Table 19, 1* hotels are responsible for almost one half of the total revenue earned by the hotel industry in South Africa. This is so since the off-sales department of the 1* hotel is such an important component ie. over 50 per cent of the earnings of all 1* hotels. If one adds the revenue earned from bars to that of the off-sales figure, then no less that 73,9 per cent of the total revenue, earned from 1* hotels is due to income received from liquor. At the other end of the spectrum, liquor sales only constitute 17,2 per cent of the revenue earned by 5* hotels.

The contributions of the 1* and 2* hotels are of equal importance as far as catering is concerned. Together they constitute 60 per cent of the total and the 1* and 2* plus 3* hotels earn 82 per cent of total catering revenue.

The same argument holds in the case of accommodation. Here the revenue earned by 2* and 3* hotels is similar and it constitutes 59 per cent of the total. Again, the 1* plus 2* plus 3* hotels are responsible for 81 per cent of the total accommodation revenue earned.

It now remains to be calculated how the staff complement relates to these sources of revenue. This may be done by calculating how many Rand are effectively earned per person in the different types of hotels. Based on information given in Tables 7 and 19, the following values are obtained:

TABLE 20: AVERAGE DAILY REVENUE EARNED IN 1982 PER SKILLED PERSON BY HOTEL GRADING

Type of hotel	Average daily revenue earned per person R
1*	104 20
2*	93,47
3*	102,52
4*	91,39
5*	74,53
Total average	97,89

An attempt will now be made to refine these values further according to the four selected departments of an hotel. Unfortunately a number of assumptions have to be made since the actual number of staff employed per department is not accurately known. The management team also straddles all four departments to a varying degree depending on the size of the establishment, its star grading and its shift of emphasis. Many 4* and 5* hotels have, for example, not even practised their right to an off-sales.

The following assumptions are therefore made:

(i) Managers, assistant managers, other departmental managers, management trainees, administrative staff and counterhands divide their time equally towards the accommodation, catering, bar and off-sales departments.

(ii) Front office managers, receptionists, porters and housekeepers devote their time only to accommodation.

(iii) Restaurant managers, waiters, chefs, assistant chefs, cooks, assistant cooks and kitchen supervisors are involved solely with catering.

(iv) Barmen are utilized exclusively in the bar, assisted by winestewards.

On this basis information contained in Tables 7 and 19 may be employed to yield the following estimated revenue earned per skilled person per day in each of the selected departments:

TABLE 21: ESTIMATED DEPARTMENTAL DAILY REVENUE EARNED IN 1982 PER SKILLED PERSON BY HOTEL GRADING

Type of hotel	Accommodation R	Catering R	Bar R	Off-sales R
1*	26,05	10,19	51,70	427,47
2*	114,60	35,00	107,09	513,11
3*	127,62	112,17	61,60	70,81
4*	205,79	43,93	121,78	45,75
5*	164,36	43,04	77,46	17,65

3.5.2 Staff and income ratios by region

Projections similar to those under the previous section, but based on Tables 4 and 9, will now be attempted on a regional basis.

TABLE 22: AVERAGE REVENUE EARNED PER HOTEL ROOM SOLD IN 1982 BY REGION

Region	Number of rooms sold per day	Average earned per room sold R	Estimated total earned per day from accommodation R
Rand and Pretoria	6 721	39,32	264 270
Natal coastal	4 167	27,60	115 009
Rest of Cape	2 425	19,45	47 166
Rest of Transvaal	2 742	27,70	75 953
Cape Town	2 598	39,28	102 049
Orange Free State	1 779	31,97	56 875
Natal inland	1 468	23,81	34 953
Port Elizabeth & East London	1 395	28,15	39 269
Garden Route	1 159	35,94	41 654

The calculated values in the last column of Table 22 and the ratios of percentage income from accommodation, catering, bar and off-sales given in Table 4 are then used to give estimates of the following departmental totals:

TABLE 23: ESTIMATED DEPARTMENTAL DAILY INCOME FOR HOTELS IN 1982 BY REGION

Region	Accommodation R	Catering R	Bar R	Off-sales R	Estimated total earned per day R
Rand and Pretoria	264 270	179 735	131 990	99 918	675 913
Natal coastal	115 009	116 857	53 355	38 303	323 524
Rest of Cape	47 166	58 479	59 863	239 126	404 634
Rest of Transvaal	75 953	65 687	49 104	161 705	352 449
Cape Town	102 049	68 937	46 797	15 908	233 691
Orange Free State	56 875	43 786	27 255	77 438	205 354
Natal inland	34 953	31 154	17 839	39 205	123 151
Port Elizabeth & East London	39 269	28 878	22 384	26 632	117 163
Garden Route	41 654	32 007	15 270	40 120	129 051
Total	777 198	625 520	423 857	738 355	2 564 930

Strictly speaking the totals of Table 23 should coincide with those given in Table 19. As indicated earlier, discrepancies exist in the BFA report as a result of projections made of values obtained from different sources[20]. The results cited in Table 19 are deemed to be the more accurate, since star-grading is more clearly defined than the boundaries of the various regions. No deductions are therefore made from Table 23, but it is merely being used to calculate staff ratios on a regional basis in the following chapter. Totals in the last column of Table 19 also include diverse income of approximately 5 per cent on average.

3.6 CONCLUDING REMARKS

From the results indicated in this chapter, it seems that there is a logical increase in the skilled-staff complement as the hotel size or its grading increases (Table 12). One-star hotels as a group appear to be an exception in this tendency. The opposite trend, is however noticeable for managers and housekeepers, who are over-represented in the lower-graded hotels on a number-of-room basis, since each establishment must have at least one manager (Table 16).

Tables 13 and 15 could serve as useful guides to work-seekers, since they indicate the skilled-job requirements by the various hotel types or their region in which they occur. Virtually all major skilled-staff ratios are highest for greater Cape Town (Tables 14 and 17).

According to Table 21 there is an interesting shift in emphasis of where revenue was earned by skilled-staff. Skilled employees in 5* hotels earned 9 times as much from accommodation than from the liquor off-sales. The opposite holds for 1* hotels, where skilled employees earned 16 times as much from the liquor-off-sales than from accommodation. The contribution to tourism by present 1* hotels is therefore appreciably less than in the case of higher-graded hotels.

4. STAFF EFFICIENCY RATIOS BY HOTEL TYPES

4. STAFF EFFICIENCY RATIOS BY HOTEL TYPES

The staff ratios calculated in the tables of the previous chapter reveal certain trends and staff utilization patterns for different regions, in different grades of hotels and within various departments of these hotels. It now remains to correlate these individual staff ratios with the actual income from the various departments. The latter should in turn be a function of the number of guests or tourists who have made use of these facilities. The results will indicate the patterns of staff required for the present performance of the local hotel industry, in its different categories.

By using the common international denominator of the number of staff employed per 100 rooms, a direct comparison is made possible, irrespective of the size of the hotel itself. For the smaller hotels the actual values worked with will, however, be small. A perfect correlation of staff ratios for all star grades or all regions will imply uniform efficiency throughout the whole industry. In such a case the number of staff required for a chosen income per department, or hotel type by grade or region, can easily be predicted by a mathematical equation.

On the otherhand, deviations from the expected ratios, in one or other hotel category or region, will indicate an over or under-utilization of staff in that particular category, or region, relative to the general norm set by the other units. In such instances predictions may be more difficult, since extraneous influences may be the cause for such deviations.

The eventual aim of this exercise is to try to correlate the present staff ratios in hotels to different categories and in different areas with the patterns of performance of hotels as indicated by the average returns from their different departments. The resulting picture will then indicate the level of efficiency or the bottle-necks that affect the South African hotel industry.

The data on staff requirements by hotel type and by region collected in the previous chapter, are here plotted graphically and linear relationships are shown where possible. By finding the mathematical formulae that determine the relationships, it will then be possible to define the expected ratio of staff requirements for each hotel type. This value may subsequently be compared with the actual manpower load for each category. Discrepancies will serve to identify problem areas or points that should be investigated further in relation to efficiency of staff utilization for each main category of skilled staff.

In all figures of this text, the symbol "●" indicates actual staff ratios per 100 occupied rooms, and "O" is used for available-room ratios. Where possible, straight solid lines are drawn, whereas dotted lines are reserved for approximations or projections.

This Chapter confines itself to ratios of skilled staff to hotel grading. Relationships on a regional basis are considered in Chapter 5.

4.1 MANAGERS

A plot of the two ratios, calculated in Tables 12 and 16 for managers by grading, yields the two curves shown in Figure 4.1:

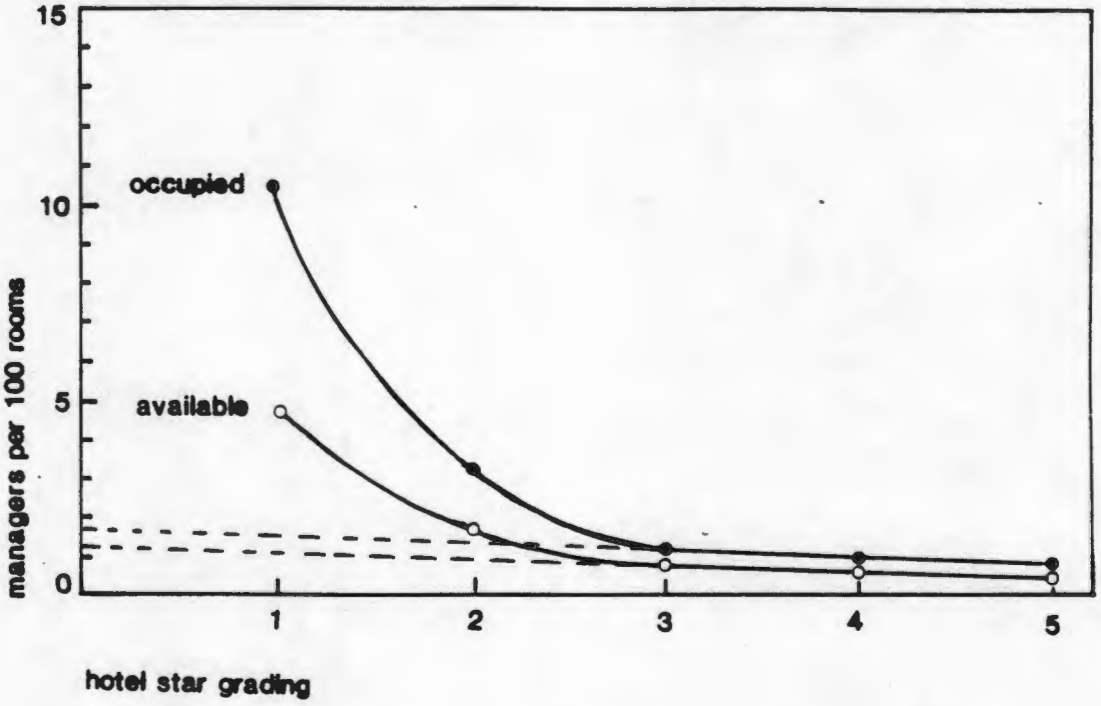

FIGURE 4.1 : MANAGERS BY GRADING

By means of the Hewlett-Packard STATP-program, used in conjunction with a HP1000 computer and a polynomial regression analysis of the values in Tables 12 and 16, the following equations (Eq) were obtained to desribe the curves in Figure 4.1 for managers:

For occupied rooms:

$$y_{M_o} = 0,29 + \frac{2,59}{x} + \frac{8,0}{x^2} \quad \text{.....Eq 1}$$

and for available rooms:

$$y_{M_a} = 0,24 + \frac{2,79}{x} + \frac{2,15}{x^2} \quad \text{.....Eq 2}$$

where y_{M_o} = number of managers per 100 occupied rooms

y_{M_a} = number of managers per 100 available rooms, and

x = hotel star grading from 1* to 5*.

Both curves in Figure 4.1 rise steeply for the lower-graded hotels. If, in fact, the number of managers for 1* and 2* hotels were reduced by at least one half, then they would lie closer to the norm shown by the projected dotted line, as laid down by 3*, 4* and 5* hotels. This argument holds on the basis of both staff per 100 occupied and staff per 100 available rooms. For 3*, 4* and 5* hotels, a more simplified, linear relationship holds, as shown in Figure 4.1. The two straight lines are described by:

$$y_{M_o} = -0,24x + 1,8 \quad \text{.....Eq 3}$$

and $$y_{M_a} = -0,16x + 1,2 \quad \text{.....Eq 4}$$

Both equations are fairly similar, indicating that the number of managers does not change much, whether rooms are occupied or not. Their numbers therefore have little impact in the actual performance of the hotel.

The same argument of overrepresentation in 1* and 2* hotels holds equally for housekeepers. The question therefore arises whether the manager and the housekeeper of 1* hotels and certain 2* hotels could not be one and the same person? If this is the case, then more attention should be given to the "manager-cum-housekeeper" position in hotels of the lower categories. However, since females generally have a traditional flare for housekeeping, it is put forward that females should be encouraged and trained to fill the proposed "manager-cum-housekeeper" positions of 1* hotels and of some of the smaller 2* hotels.

4.2 ADMINISTRATIVE STAFF

This term refers to cashiers, secretaries, accountants, clerks, maintenance and security staff, switchboard operators, drivers, etc. By plotting the two ratios of Tables 12 and 16 for administrative staff, the two very similar patterns shown in Figure 4.2 are obtained.

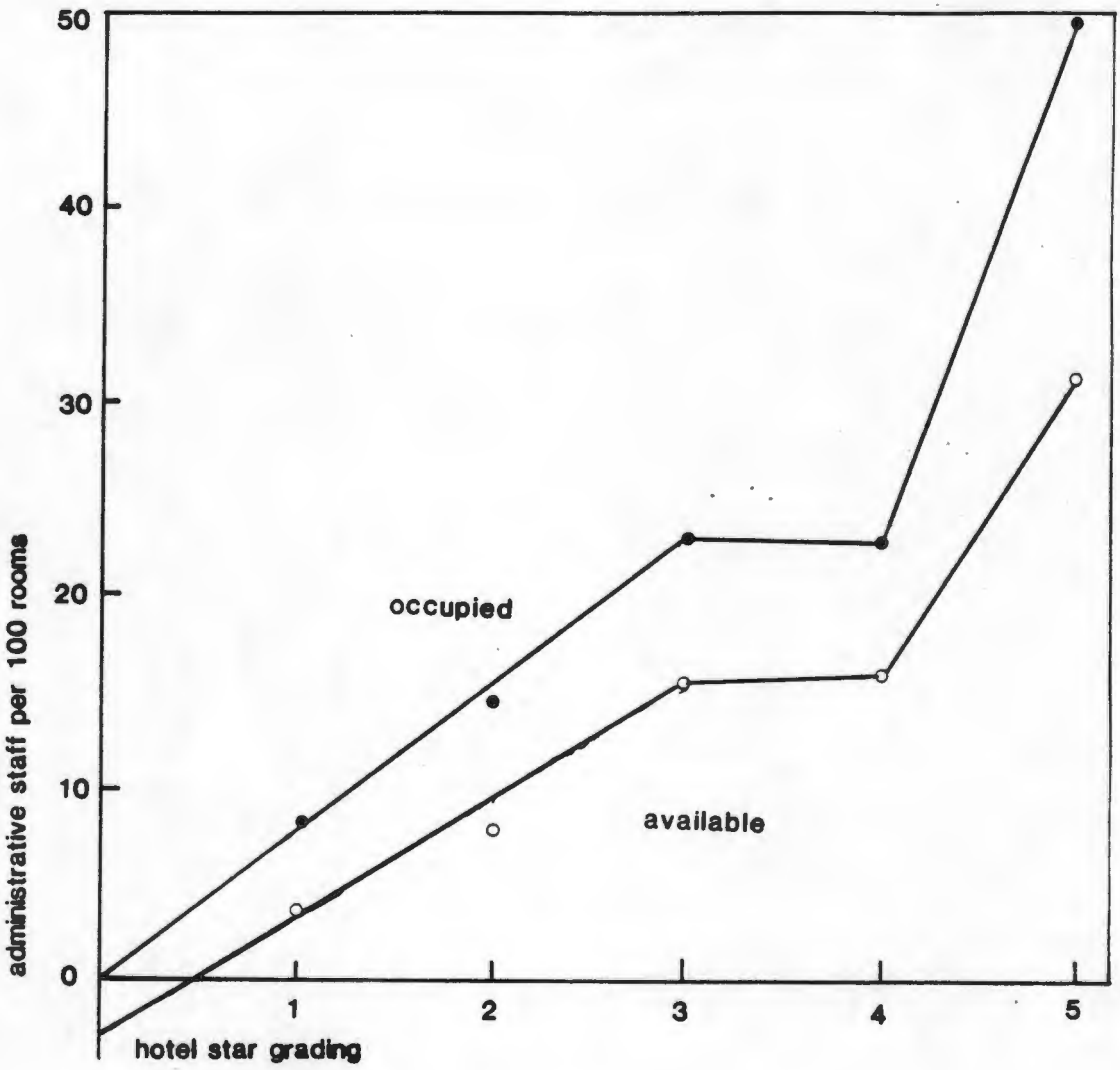

FIGURE 4.2 : ADMIN STAFF BY GRADING

Now the opposite trend is noticed and the positive slope of both graphs shows that the number of administrative staff employed per 100 rooms increases as the star grading increases, particularly for the 'rooms occupied' expression.

According to Figure 2, administrative staff appears to be overrepresented in 5* hotels and under-represented in 4* hotels, irrespective of whether available rooms are occupied or not. Should the 5* hotel management feel that they cannot cut back on their administrative staff, then this could mean that the sheer size of their units are beyond the optimum, manageable capacity. According to Table 2 the average size of a 5* hotel is 240 rooms against its 4* counterpart of 162 rooms. The argument of manageable size is further supported by the fact that in Figure 4.2, the 3* hotels (averaging 111 rooms for establishment) have a similar administrative staff ratio to the 4* hotels. It could, however, be argued that larger units invariably allot a fair percentage of staff to security which the smaller hotels seem to disregard in many cases.

Graphically the mathematical relationship between administrative staff and occupied or available rooms by grading for 1*, 2* and 3* hotels may be given in simplified form by:

$$y_{AS_o} = 7{,}6x \quad \text{.....Eq 5}$$

and $$y_{AS_a} = 6{,}8x - 3 \quad \text{.....Eq 6}$$

where y_{AS_o} = number of administrative staff per 100 rooms, and

y_{AS_a} = number of administrative staff per 100 available rooms.

It is interesting that the back-extrapolated curve for the relationship to occupied rooms should pass through the origin. This phenomenon is not important, but just simply means that there is no administrative staff if no rooms are occupied.

4.3 ACCOMMODATION DEPARTMENT

The major staff categories that fall within this department include housekeepers, receptionists and porters.

4.3.1 Housekeepers were dealt with in Section 4.1 and they satisfy the mutually similar Equations 1 and 3 for occupied rooms and Equations 2 and 4 for available rooms.

According to Figure 2, administrative staff appears to be overrepresented in 5* hotels and under-represented in 4* hotels, irrespective of whether available rooms are occupied or not. Should the 5* hotel management feel that they cannot cut back on their administrative staff, then this could mean that the sheer size of their units are beyond the optimum, manageable capacity. According to Table 2 the average size of a 5* hotel is 240 rooms against its 4* counterpart of 162 rooms. The argument of manageable size is further supported by the fact that in Figure 4.2, the 3* hotels (averaging 111 rooms for establishment) have a similar administrative staff ratio to the 4* hotels. It could, however, be argued that larger units invariably allot a fair percentage of staff to security which the smaller hotels seem to disregard in many cases.

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4.3.2 Receptionists

Ratios for receptionists as given in Tables 12 and 16, are plotted in Figure 4.3:

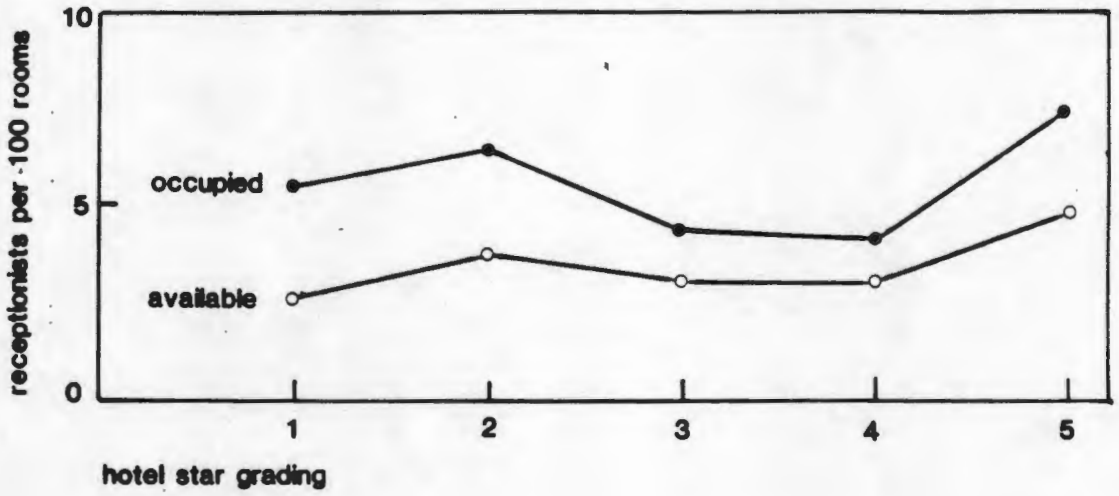

FIGURE 4.3 : RECEPTIONISTS BY GRADING

According to Figure 4.3, a similar pattern emerges for the number of receptionists employed, irrespective of whether the rooms are occupied or not. It is interesting to note that in both cases, similar ratios are obtained for 3* and 4* hotels.

No meaningful equation could be found to describe the curves of Figure 4.3

4.3.3 In the case of porters, both graphs obtained in Figure 4.4 increase postively with an increase in star grading, particularly for the 'rooms occupied' expression, although its scatter is wide.

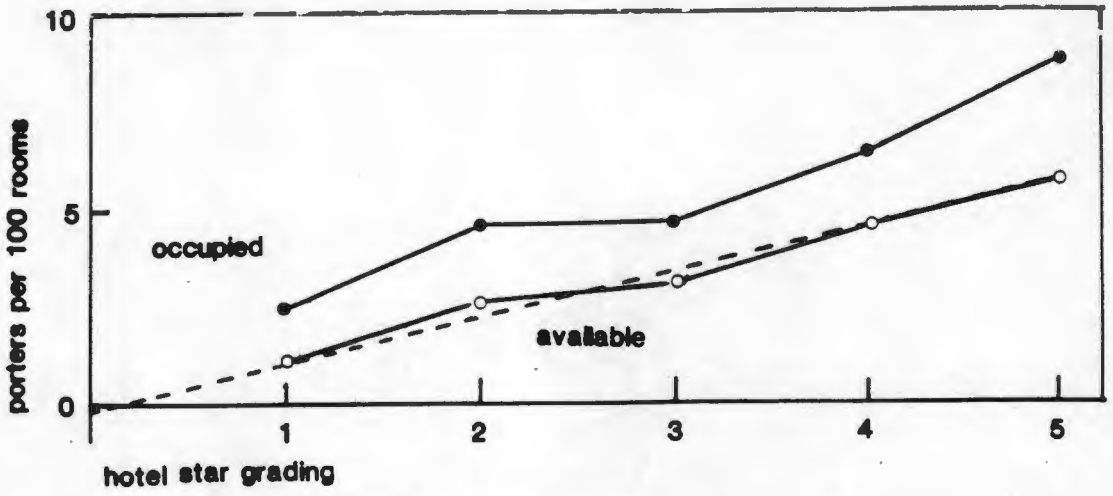

FIGURE 4.4 : PORTERS BY GRADING

For available rooms, as shown by the dotted line in Figure 4.4,

$$y_{P_a} = 1{,}1x - 0{,}2 \quad \text{.....Eq. 7}$$

This suggests a good correlation between the ratio of the number of porters employed per 100 available rooms and the type of hotel grading. No good linear fit was found for occupied rooms however. This therefore suggests supply to be the more important criterion for the number of porters employed, rather than demand, which is here shown by 'occupied rooms'.

4.3.4 In order to obtain the total picture of the accommodation department, the numbers of administrative staff, housekeepers, receptionists and porters given in Table 7 have to be added and, based on Table 2, ratios calculated, as shown in Table 24.

TABLE 24: RATIO OF MAJOR SKILLED STAFF IN THE ACCOMMODATION DEPARTMENT BY GRADING

Job Description	Hotel star grading				
	1*	2*	3*	4*	5*
Administrative staff	793	1 149	1 133	303	691
Housekeepers	1 043	255	66	12	9
Receptionist	542	528	216	56	112
Porters	256	384	228	87	123
Total accommodation staff	2 634	2 316	1 643	458	935
Staff per 100 available rooms	11,9	15,7	22,4	23,5	43,2
Staff per 100 occupied rooms	26,0	28,2	33,0	33,9	66,7

A plot of these ratios yields the final set of linear relationships for accommodation staff in Figure 4.5.

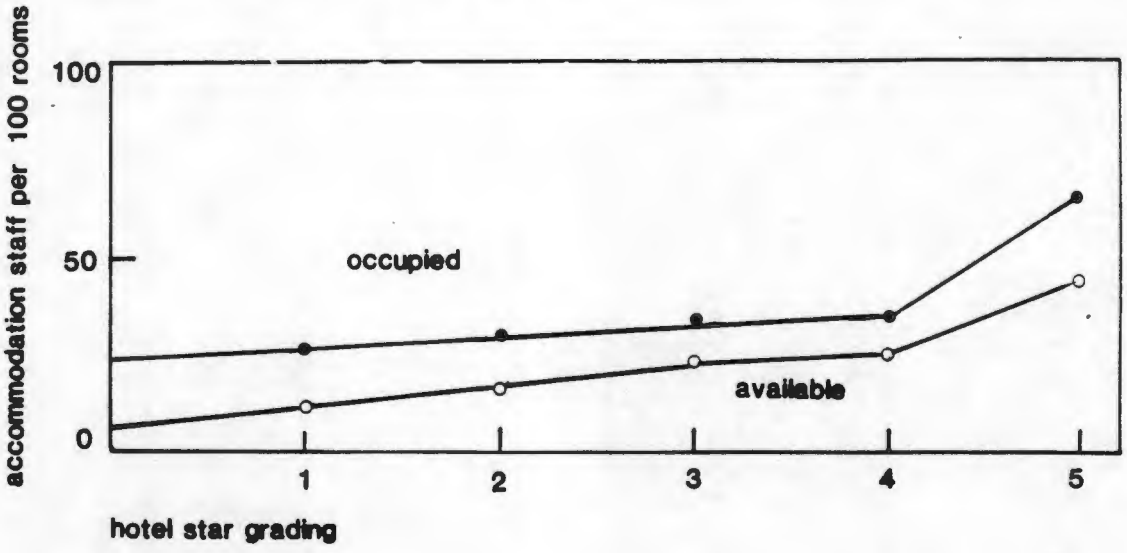

FIGURE 4.5 ACCOMMODATION STAFF BY GRADING

Both show an increase in size as one progresses from the 1* category upwards, particularly in the case of the 'rooms available' criterion.

Disregarding the values for 5* hotels, which are 25 to 40 per cent too high, it may be concluded that the number of major skilled staff in the accommodation department per 100 occupied rooms is given by

$$y_{A_o} = 1{,}8x + 23{,}0 \quad \ldots\ldots\ldots\ldots \text{ Eq 8}$$

Similarly the number of major skilled staff in the accommodation department per 100 available rooms is given by

$$y_{A_a} = 5{,}4x + 6{,}0 \quad \ldots\ldots\ldots\ldots \text{ Eq 9}$$

where 'x' = the hotel-star grading on a progressive 5-point scale

y_{A_o} = number of accommodation staff per 100 occupied rooms, and

y_{A_a} = number of accommodation staff per 100 available rooms.

The number of major skilled staff in the accommodation department of 5* hotels appears to be larger than that set by the norm of the other hotels, as reflected by both linear relationships. This is primarily due to the disproportionately large number of administrative staff (y_A) employed to cope with the many rooms and an impeccable service to the guest. It is interesting that in both cases the 4* hotels cope remarkably well and almost show too few members of staff, especially on the administration side. (Figure 4.2).

In view of the good fit on the slope line in Figure 5 of the number of key skilled accommodation staff per 100 occupied rooms versus the 1* to 4* hotel grading, it remains to be seen how well the total of (administrative staff + housekeepers + receptionists + porters) employed, matches up with the actual revenue earned by the accommodation department of these respective hotels. The degree of correlation may be calculated statistically in the following manner:

TABLE 25: CALCULATION OF THE CORRELATION BETWEEN MAJOR SKILLED ACCOMMODATION STAFF PER 100 OCCUPIED ROOMS AND REVENUE EARNED FROM ACCOMMODATION

X = Major accommodation staff per 100 occupied rooms from Table 24.

Y = Average revenue earned from accommodation per 100 occupied rooms in Rand from Table 18.

Hotel	X	Y	x	y	x^2	y^2	xy
1*	26,0	1465	-11,6	-2043	134,6	4173849	+23698,8
2*	28,2	2399	- 9,4	-1109	88,4	1229881	+10424,6
3*	33,0	3882	- 4,6	+ 374	21,2	139876	- 1720,4
4*	33,9	4253	- 3,7	+ 745	13,7	555025	- 2756,5
5*	66,7	5542	+29,1	+2034	846,8	4137156	+59189,4
n=5	M_x = 37,6	M_y = 3508			Σx^2 = 1104,7	Σy^2 = 10235787	Σxy = 88835,9

$$\text{Correlation Coefficent } r = \frac{\Sigma xy}{\sqrt{\Sigma x^2 \,.\, \Sigma y^2}}$$

$$= \frac{88835.9}{\sqrt{1104,7 \times 10235787}}$$

$$\therefore r = 0,8354$$

The standard error of 'r', when the population correlation is zero, is given by

$$\sigma_{ro} = \frac{1}{\sqrt{n - 1}}$$

$$= \frac{1}{\sqrt{4}}$$

$$= 0,50$$

The critical ratio is given by $\frac{r}{\sigma_{r_o}} = \frac{0,8354}{0,50}$

$$= 1,67$$

A value as large as 1,67 would occur by chance 10 times out of 100 according tables[22]. Hence 'r' is significantly different from zero ie. a significant relationship exists between key skilled accommodation staff per 100 occupied rooms and the respective revenue earned.

Graphically the correlation may be demonstrated as shown in Figure 4.6.

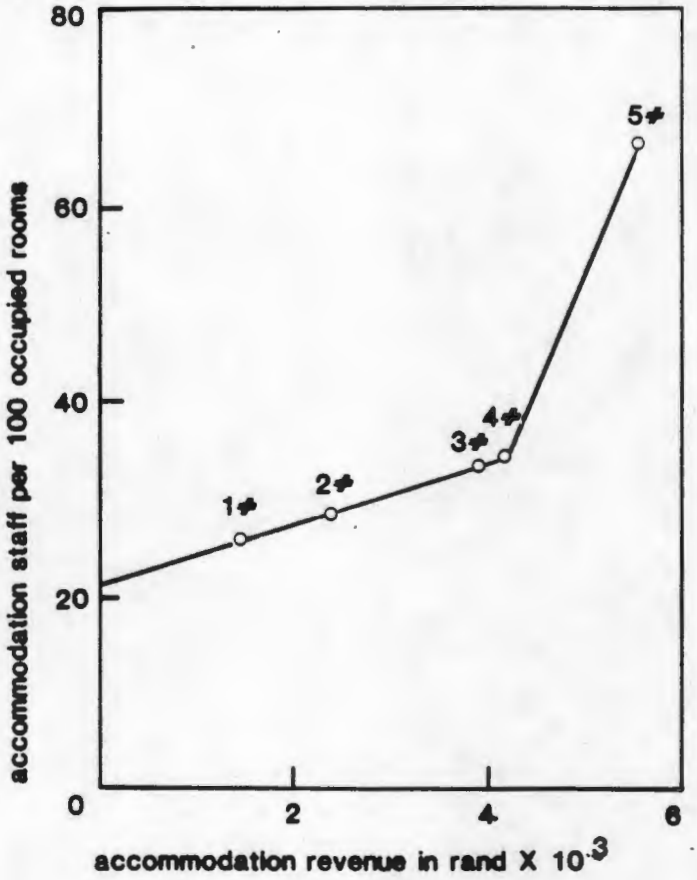

FIGURE 4.6 : ACCOMMODATION STAFF

AND REVENUE BY GRADING

For the 1* to 4* hotels, the relationship between revenue earned and the major skilled accommodation staff emplyed per 100 occupied rooms is linear and given by the simplified equation,

$$y_{A_o} = 3a + 21 \quad \ldots\ldots\ldots\ldots\ldots\ldots \text{Eq 10}$$

where 'a' is the revenue earned from accommodation.

It is significant to note that this fitted line cuts the y-axis at 21, meaning that this is the minimum number of major skilled accommodation staff required per 100 occupied rooms to show positive earnings from the accommodation side. Put differently, a 100-room hotel that is fully occupied should have at least a total of 21 administrative staff + housekeeper + receptionist + porter to show positive revenue earnings from its accommodation department.

According to the norms set by the other hotels as shown in Figure 6, the 5* hotels could consider reducing their key accommodation staff from 66,7 to 38,0 ie. a reduction of 43 per cent without perhaps causing any change in revenue earned from accommodation.

According to calculations not shown, the correlation between major accommodation staff per 100 available rooms and revenue earned from accommodation is much weaker. A coefficient of correlation of only 0,6590 is obtained, implying that on a star-grading basis, accommodation staff depends on the number of occupied rooms in preference to available rooms.ie. on demand rather than on supply.

4.4 CATERING DEPARTMENT

The major staff categories that fall within this department include chefs, cooks and waiters. Their ratios by grading as given in Tables 12 and 16, are plotted in Figures 7, 8 and 9 respectively.

4.4.1 Chefs according to Figure 4.7, show a reduction in number as one proceeds from 1* to 4* hotels.

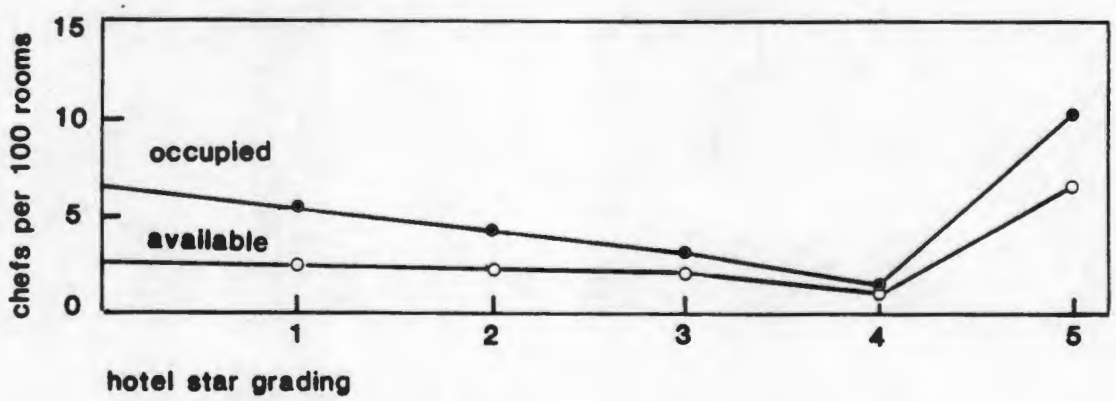

FIGURE 4.7 : CHEFS BY GRADING

The number of chefs in 5* hotels is overrepresented by between 70 and 90 per cent, according to the norms set by the other hotels, whether the rooms are occupied or not. It is again noteworthy that the staff ratios for 4* hotels are slightly on the low side. Both lines show a good fit for the 1*, 2* and 3* categories.

For 1* to 4* hotels, the number of chefs is given mathematically

per 100 occupied rooms, by $^{y}C_{o} = -1,1x + 6,4$ ..... Eq 11

and per 100 available rooms, by $^{y}C_{a} = -0,1x + 2,4$ ..... Eq 12

where 'x' is the hotel star grading from 1* to 4*. It is interesting to note that the ratio for 'occupied rooms' is more sensitive to a change in hotel grading than the 'available room' ratio, which remains virtually constant with a mere slope of -0,1.

4.4.2 Cooks, on the otherhand, show an increase in numbers as one proceeds from 2* to 5* hotels, according to Figure 4.8.

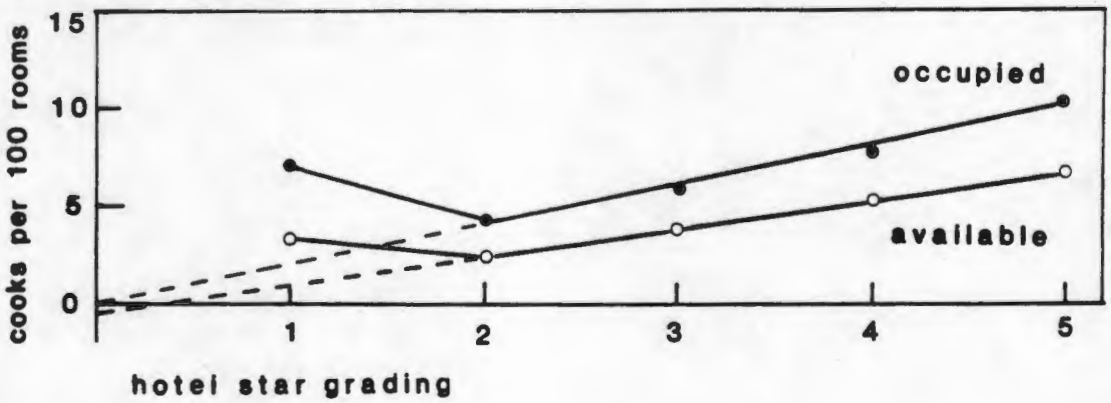

FIGURE 4.8 : COOKS BY GRADING

A good linear fit is obtained as shown, for the 2* to 5* hotels. Cooks in 1* hotels appear to be overrepresented in both cases.

The two curves may be expressed mathematically

for occupied rooms, by $^{y}K_{o} = 10,7x$ ..... Eq 13

for available rooms, by $^{y}K_{a} = 1,5x - 0,4$ ..... Eq 14

where 'x' again stands for hotel grading. The number of cooks employed is slightly less dependent on the star grading in the case of the 'available rooms' expression. According to Figure 8 the number of cooks in 1* hotels could be reduced by at least 70 per cent to meet the efficiency norms set by other hotels.

4.4.3 Waiters, according to Figure 4.9, show a good steady relationship for 1* to 4* hotels.

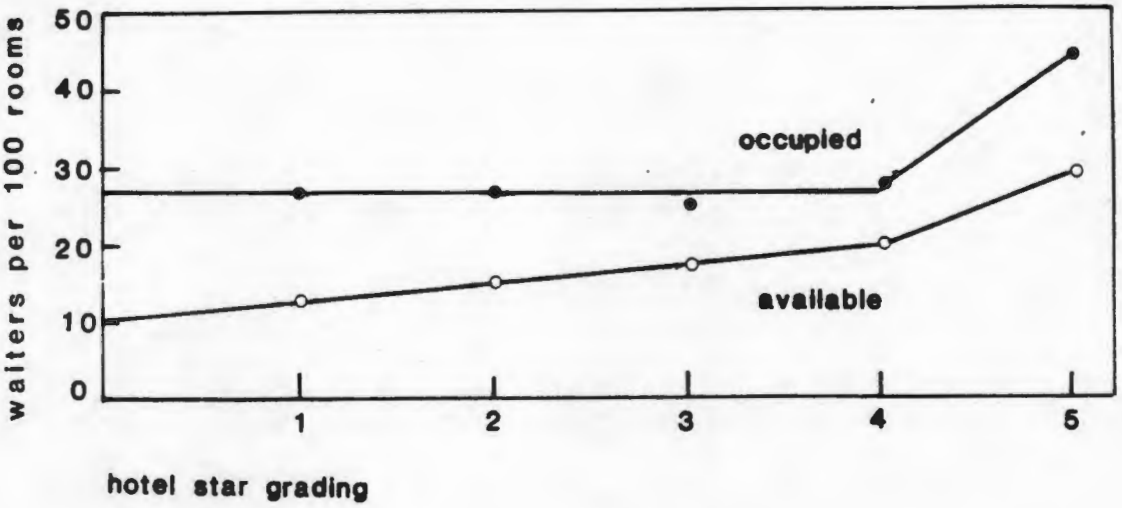

FIGURE 4.9 : WAITERS BY GRADING

Waiters in 5* hotels appear to be overrepresented by between 25 and 45 per cent. For 1* to 4* hotels, the following two linear equations from Graph 4.9 may be deduced:

For occupied rooms, $^{y}W_{o} = 26{,}5$ ..... Eq. 15
being parallel to the x-axis.

For available rooms, $^{y}W_{a} = 2{,}4x + 10$ ..... Eq. 16
where 'x' = hotel grading.

In the case of waiters, the situation is therefore, that for 1* to 4* hotels, their ratio to the number of occupied rooms remains constant irrespective of the hotel-star grading. There is however a steady increase in their numbers relative to the available number of rooms with an increase in star grading. The number of waiters employed therefore appears to be determined by the facilities available, rather than by the demand by guests.

4.4.4 The catering department as a whole may be calculated from values given in Tables 2 and 7, to consist of the following key staff ratios shown in Table 26:

TABLE 26: RATIO OF MAJOR SKILLED STAFF IN CATERING BY GRADING

Job description	Hotel star grading				
	1*	2*	3*	4*	5*
Chefs	535	344	162	20	143
Cooks	718	359	286	106	150
Waiters	2712	2197	1240	376	628
Total catering staff	3965	2900	1688	502	921
Staff per 100 available rooms	17,9	19,7	23,1	26,4	41,9
Staff per 100 occupied rooms	39,2	35,4	34,1	38,1	64,6

A plot of these ratios yields the composite set of graphs for catering staff shown in Figure 4.10.

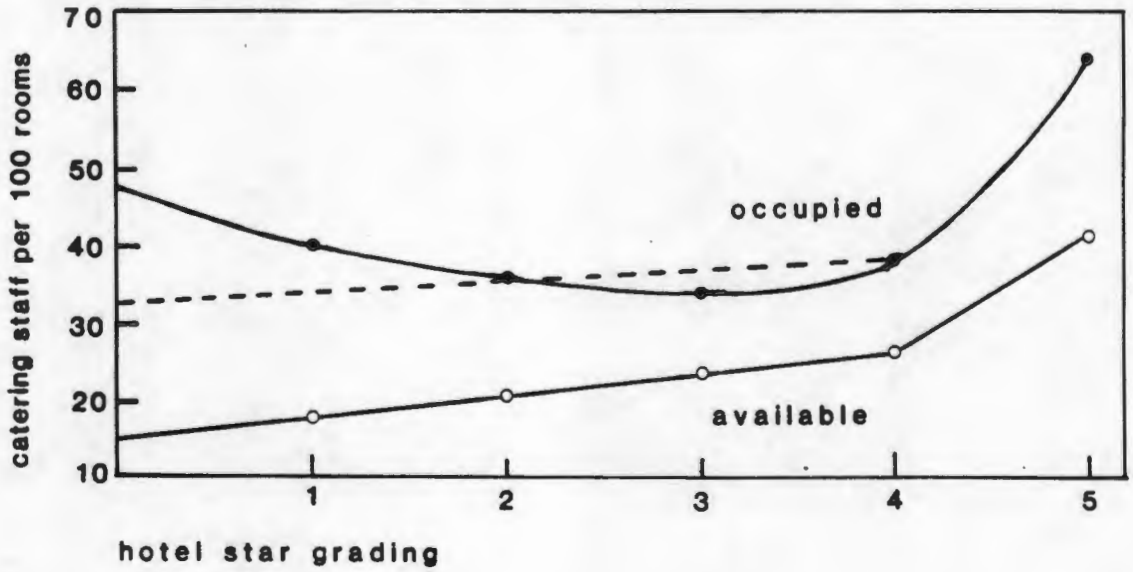

FIGURE 4.10 : CATERING STAFF BY GRADING

The parabolic curve for catering staff per 100 occupied rooms ($y^1_{CC_o}$) is according to the STATP computer program satisfied by the equation:

$$y^1_{CC_o} = 57,1 - 32,4x + 19,4x^2 - 5,5x^3 + 0,6x^4 \ldots\ldots \text{Eq. 17}$$

Since chefs and waiters in 5* hotels tend, however, to be overrepresented, it is to be expected that the total major skilled catering staff in 5* hotels will also be too high. For 1* to 4* hotels the following linear equation results for the number of major skilled catering staff per 100 occupied rooms:

$$y_{CC_o} = 1,4x + 32,5 \quad \text{..... Eq. 18}$$

Similarly, the number of major skilled catering staff employed per 100 available rooms is given by

$$y_{CC_a} = 2,9x + 15,0 \quad \text{..... Eq. 19}$$

where 'x' indicates the hotel-star grading for 1* to 4* hotels.

Although a good fit is obtained for the latter curve, the relationship of catering staff to occupied rooms shows a wider scatter. The overrepresentation of cooks in 1* hotels shows up in the composite curve, as do the large numbers of chefs and waiters in 5* hotels. According to Figure 10, the 5* hotels could consider reducing their catering staff by between 30 and 40 per cent, in terms of the norms set by the other hotels.

Unlike the reliable dependence of accommodation staff on the number of occupied rooms, the catering staff appears to depend more closely on the number of available rooms according to Figure 10. This makes good business sense since accommodation staff deals with hotel guests, whereas catering staff serves guests and visitors that may come in for a casual meal. Income is therefore in the latter case assumed to be a measure of the number of rooms available or rather, the amount of capital invested.

It therefore remains to be seen how well the total major catering staff (ie. chefs + cooks + waiters) employed in hotels matches up statistically with the revenue earned from catering by a particular hotel type.

TABLE 27: CALCULATION OF THE CORRELATION BETWEEN MAJOR SKILLED CATERING STAFF PER 100 AVAILABLE ROOMS AND REVENUE EARNED FROM CATERING

X = Major catering staff per 100 available rooms from Table 26

Y = Average revenue earned per 100 available rooms from catering in Rand, calculated from Tables 2 and 19.

Hotel	X	Y	x	y	x^2	y^2	xy
1*	17,9	762	-7.9	- 913	62.4	833569	+ 7212,7
2*	19,7	1140	-6,1	- 535	37,2	286225	+ 3263,5
3*	23,1	1711	+2,7	+ 36	7,3	1296	+ 97,2
4*	26,4	1969	+0,6	+ 294	0,4	86436	+ 176,4
5*	41,9	2793	+16,1	+1118	259,2	1249924	+17999,8
n=5	M_x = 25,8	M_y = 1675			Σx^2 = 366,5	Σy^2 = 2457450	Σxy = +28749,6

Correlation coefficient 'r' = $\frac{\Sigma xy}{\sqrt{\Sigma x^2 . \Sigma y^2}}$

Hence 'r' = $\frac{5772,4}{\sqrt{42,5 \times 803650}}$

$\therefore$ r = 0,9580

The standard error of 'r' is still σ_{ro} = 0,5

Hence the critical ratio = $\frac{r}{\sigma_{ro}}$

= $\frac{0,9580}{0,50}$

= 1,92

According to tables[22], a value as large as 1,92 would occur by cha 5 times out of 100. Since 'r' is still significantly different fr zero, a sufficiently significant relationship exists between catering staff per 100 available rooms in 1* to 5* hotels and their revenue earned. The sample used is however fairly small, introducing possible errors.

The relationship between catering staff per 100 available rooms employed and the revenue earned is shown in Figure 4.11.

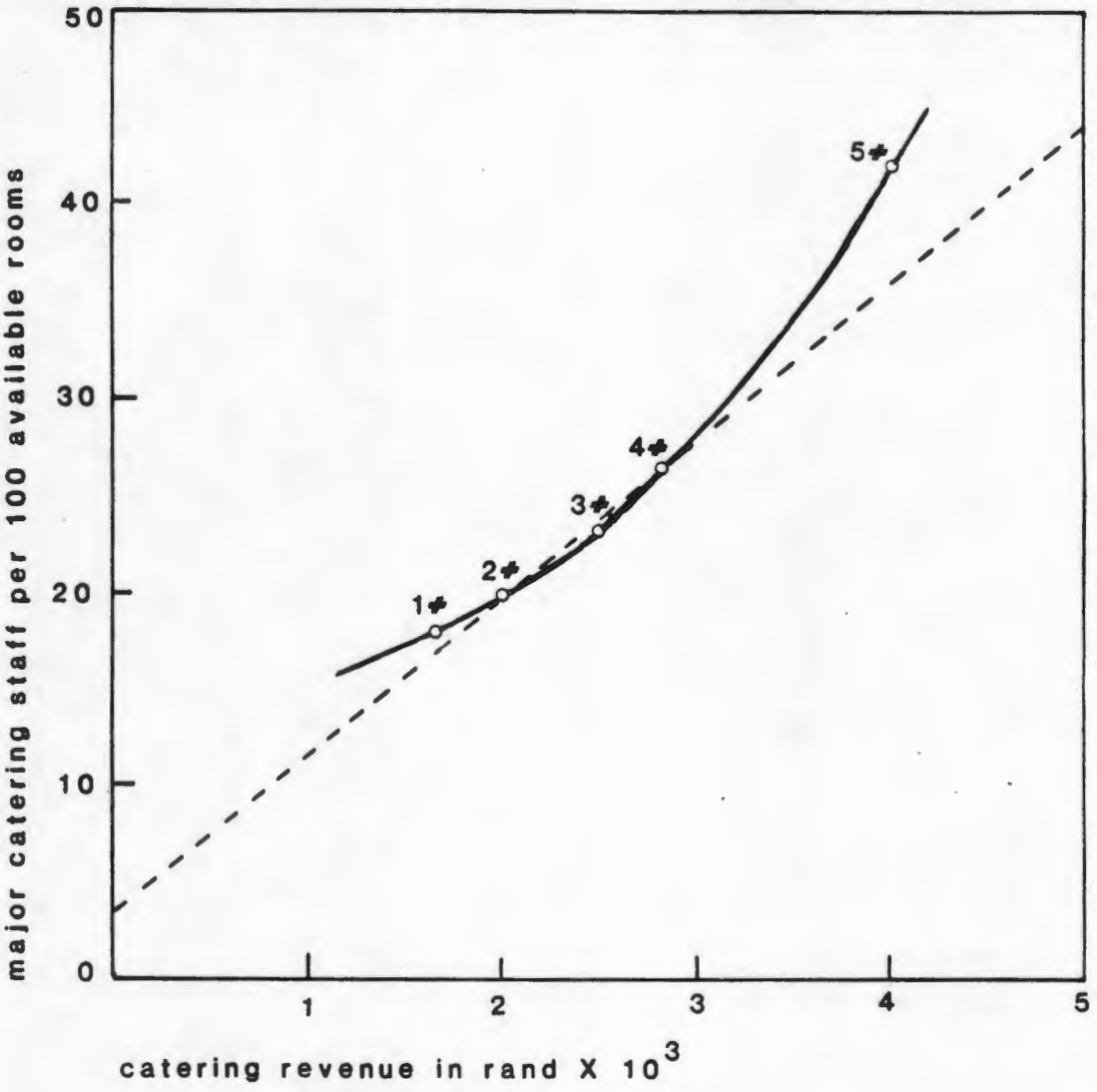

FIGURE 4.11 : CATERING STAFF AND REVENUE BY GRADING

According to the STATP computer programme this curve is satisfied by:

$$y_a = 12,6 + 0,7c + 1,4c^2 \quad \text{..... Eq. 20}$$

Accepting that the 5* staff value is relatively too high the relationship between revenue earned and major catering staff employed per 100 available rooms of 1* to 4* hotels may be considered to be the straight-line equation represented by the dotted line in Figure 4.11 as:

$$y'_a = 6,4c + 3,4 \quad \text{..... Eq. 21}$$

where 'c' is the revenue earned in Rand from catering.

This line cuts the Y-axis at 3,4 and therefore implies that this is the minimum number of major skilled catering staff required per 100 available rooms to show positive earnings from catering. According to Figure 11 the 5* hotels could cut back on their catering staff by some 14 per cent, without significantly affecting their revenue earned, provided the standard set by the other hotels is acceptable to the 5* hotel category.

4.5 THE BAR

The staff categories to be considered here include barmen and winestewards. Although the latter are mostly seen in lounges and dining rooms, their stock comes from and their takings go to the bar. For this reason they are included in this category, where ratios are based on values from Tables 12 and 16.

4.5.1 Barmen, according to Figure 4.12, do not show a linear but rather a U-shaped relationship.

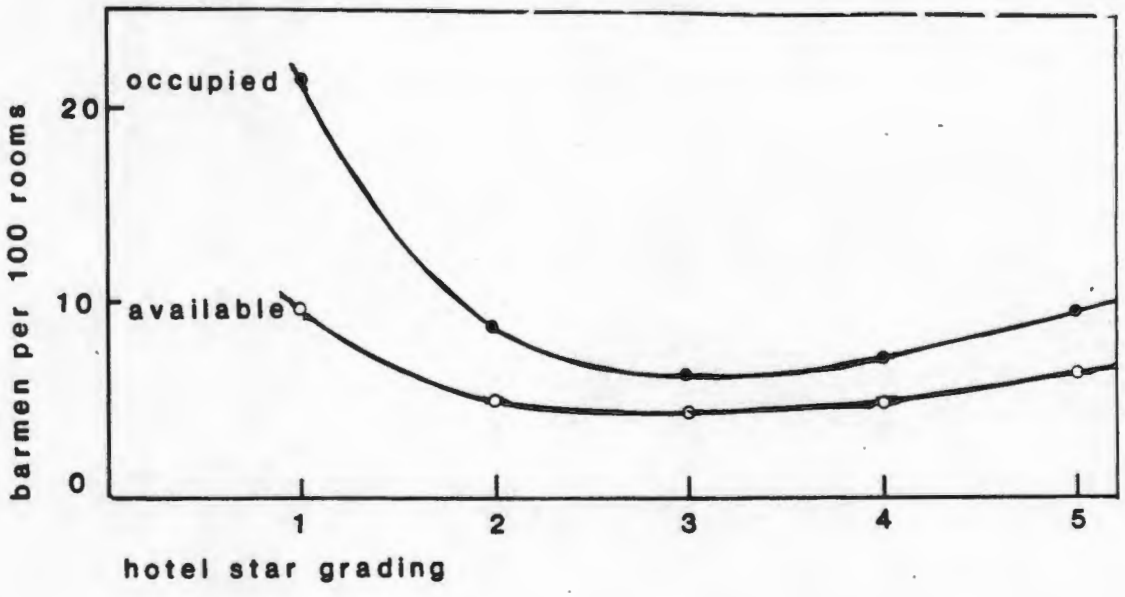

FIGURE 4.12 : BARMEN BY GRADING

The best fit of this curve is given by the STATP computer program, per 100 occupied rooms, as

$$y_{B_o} = 56,8 - 52,4x + 20,1x^2 - 3,4x^3 + 0,2x^4 \quad \text{.....Eq. 22}$$

and for 100 available rooms, as

$$y_{B_a} = 25 - 22,9x + 9,2x^2 - 1,6x^3 + 0,1x^4 \quad \text{.....Eq. 23}$$

4.5.2 Wine stewards according to Figure 4.13 show a linear relationship relative to available rooms, for all star gradings, but for the 4* category, which appears to be too high. A wider scatter is observed in relation to occupied rooms.

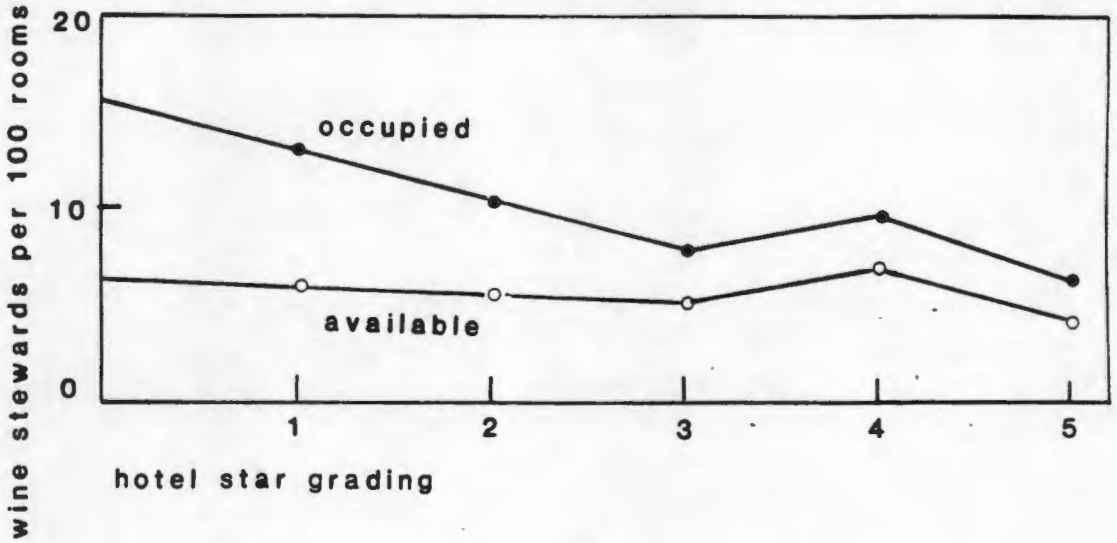

FIGURE 4.13 : WINE STEWARDS BY GRADING

A line put forward for wine stewards per 100 occupied rooms of 1*, 2* and 3* hotels, is satisfied by the equation

$$y_{WSo} = -1,3x + 16,0 \quad \text{.....Eq 24}$$

The ratio of wine stewards per 100 available rooms is given by

$$y_{WSa} = -0,9x + 6,4 \quad \text{.....Eq 25}$$

The high value for wine stewards is noted in the 4* hotel category and could be reduced by 30 per cent to meet the fairly consistent norms set by the other hotels.

4.5.3 The bar as a whole has the following major skilled staff ratios as calculated from the values given in Tables 2 and 7:

TABLE 28: RATIO OF MAJOR SKILLED STAFF IN BARS BY GRADING

Job description	Hotel star grading				
	1*	2*	3*	4*	5*
Barmen	2158	705	306	94	130
Wine stewards	1312	823	375	128	89
Total skilled bar staff	3470	1528	681	222	219
Staff per 100 available rooms	15,7	10,4	9,3	11,7	10,1
Staff per 100 occupied rooms	34,3	18,7	13,7	16,9	15,6

A plot of these ratios yields the somewhat similar, yet mathematically undeterminable set of lines shown in Figure 4.14

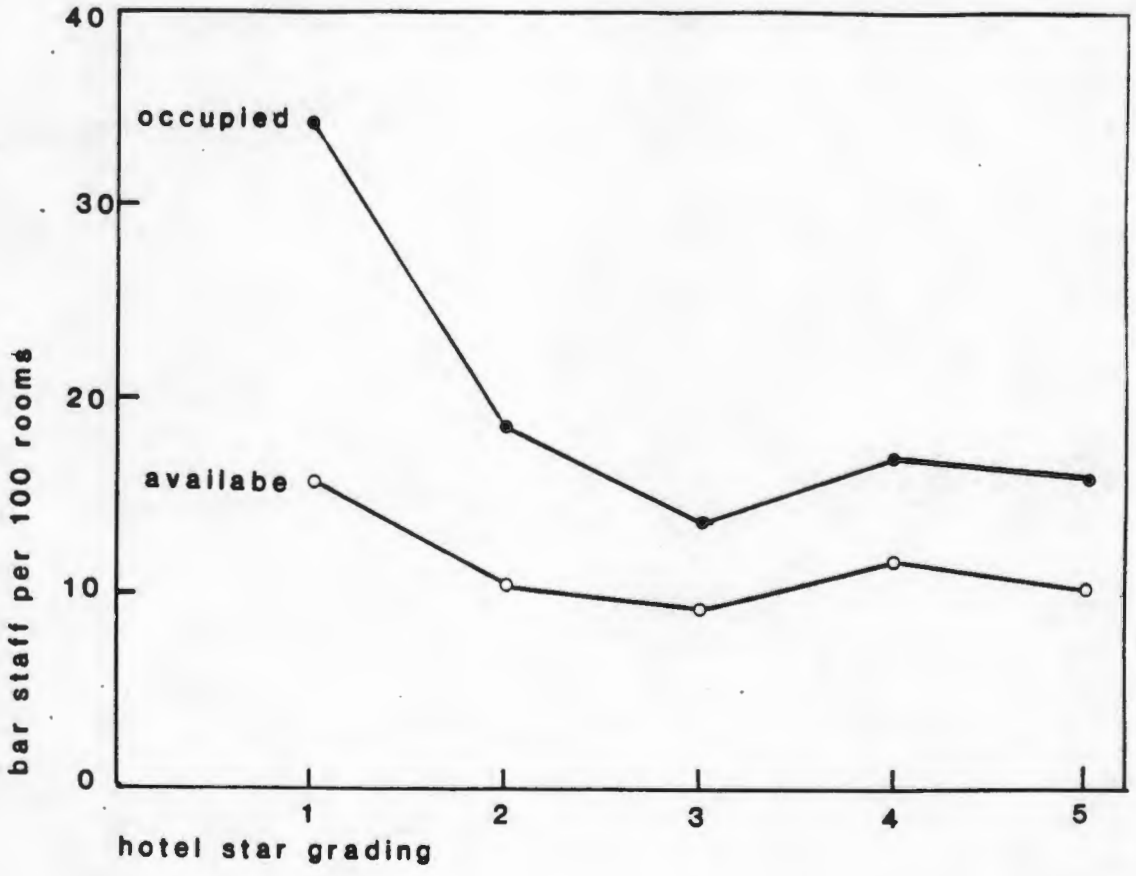

FIGURE 4.14 : BAR STAFF BY GRADING

According to Figure 4.14 no simple relationship appears to exist that can be formulated easily mathematically. It does, however, remain to be seen how well the number of major skilled bar staff (ie. barmen and winestewards) employed in hotels corresponds with the revenue earned by them in the various hotel types. This relationship may be established statistically as follows:

TABLE 29: CALCULATION OF CORRELATION BETWEEN MAJOR SKILLED BAR STAFF PER 100 OCCUPIED ROOMS AND REVENUE EARNED FROM THE BAR

Hotel	X	Y	x	y	x^2	y^2	xy
1*	34,3	2606	14,5	+696	210,2	484 416	+10 092,0
2*	18,7	1561	-1,1	-349	1,2	121 801	+ 383,9
3*	13,7	1576	-6,1	-334	37,2	111 556	+ 2 037,4
4*	16,9	1831	-2,9	- 79	8,4	6 241	+ 229,1
5*	15,6	1977	-4,2	+ 67	17,6	4 489	- 28,4
n = 5	M_x = 19,8	M_y = 1910			Σx^2 = 274,6	Σy^2 = 728 503	Σxy = + 12 714

$$\therefore r = \frac{12714}{\sqrt{274,6 \times 728503}}$$

$$= \frac{12714}{14143,8}$$

$$= \underline{0,9696}$$

and $\sigma r_o = 0,5$

$$\therefore \frac{r}{\sigma r_o} = \frac{0,9696}{0,5} = \underline{1,939}$$

According to tables[22], a value as large as 1,94 would occur by chance 5 times out 100. Since 'r' is still significantly different from zero, a sufficiently significant relationship exists between bar staff per 100 occupied rooms in hotels and their revenue earned.

Calculations not shown here reveal that a very poor correlation exists between major skilled bar staff per 100 available rooms and revenue earned from the bar, of only 0,2697. In this case the frequency of a chance occurrence is as high as 60 times out of 100.

The number of skilled bar staff employed in 1* to 5* hotels is therefore dependent on the number of occupied rooms.

4.6 Concluding remarks

Since managers and housekeepers are overrepresented in the smaller hotels relative to their larger counterparts (Figure 4.1), it is suggested that the same individual fill these two positions in certain smaller establishments.

The number of administrative staff generally increases with the star-grading or the size of an hotel (Figure 4.2).

Accommodation staff show a statistically-meaningful increase in number as one proceeds from the 1* category upwards (Figure 4.5). According to Figure 4,6, it would appear that the 5* category could consider reducing its accommodation staff complement appreciably, without this causing a drop in revenue earned. Furthermore, the ratio of skilled accommodation staff per 100 occupied rooms should never be allowed to drop below 21 members (Figure 4.6).

According to Figure 4.10 the number of catering staff employed in 5* hotels are 30 to 40 per cent higher than the norms set by other hotels and according to Figure 4.11, such cut-backs should make no significant difference to the revenue earned.

The number of skilled staff employed in bars is dependent on the room occupancy of that particular hotel type, rather than on the number of rooms available.

5.1 REGIONAL DIFFERENCES IN STAFF EFFICIENCY RATIOS

5. REGIONAL DIFFERENCES IN STAFF EFFICIENCY RATIOS

Having searched for meaningful correlations on the basis of hotel grading, it was then attempted to extend this exercise to the regional basis. For want of a better sequence, the regions will be considered in descending order of magnitude of the number of available rooms, given in Table 9. The sequence used, is adhered to throughout. It is also important to remember that this chapter concerns itself with White-owned hotels only, i.e. 89 per cent of the total number of rooms dealt with in the previous chapter. Staff ratios for the various regions are given in Table 14 (on the available-rooms basis) and Table 17 (for the occupied rooms).

5.1 MANAGERS (AND HOUSEKEEPERS)

The ratios calculated in Tables 14 and 17 were not plotted, since they show too wide a scatter. There exists, however, a clustering of values for the 'available-rooms' ratio around the 4,1 value. This means that on a regional basis there are generally 4,1 managers (and housekeepers) per 100 available hotel rooms. Regions where this value does not hold include the Rand and Pretoria, Natal coastal, as well as Port Elizabeth and East London, where a much lower ratio is scored, closer to 2,2 managers (and housekeepers) per 100 available rooms.

For the 'rooms-occupied' ratio an even wider scatter resulted. The values lie mainly around 7,5 managers (and housekeepers) per 100 occupied rooms. Notable exceptions again on the low side, include Rand and Pretoria, Natal coastal as well as Port Elizabeth and East London. The Rest of Cape region scores a higher ratio than the apparent average. In general, a high staff to room ratio for managers (and housekeepers) indicates that that particular region has relatively many hotels with only a few rooms each; and vice-versa.

5.2. ADMINISTRATIVE STAFF

The dispersion of the various ratios in this category is again so wide that no effort was made to plot their values. Neither the 'available rooms' nor the 'occupied rooms' ratios revealed any consistent pattern. The only possible comment is that, according to Tables 14 and 17, Cape Town seems to have an extremely high ratio for both staff to room ratios.

5.3 ACCOMMODATION DEPARTMENT

The major staff categories that fall within this department include receptionists and porters. Housekeepers were already dealt with in Section 5.1 .

5.3.1 Receptionists:

Their ratios again show a wide scatter, but the general trend suggests a proportionate increase in the number of receptionists employed as the number of available or occupied rooms decreases. An overrepresentation in both ratios is suggested in Cape Town and the Rest of Transvaal, and for the Rest of the Cape, only in the case of the 'occupied-rooms' ratio.

5.3.2 Porters also show a very wide scatter for both ratios.

5.3.3 The Accommodation department as a whole is obtained by combining the values given in Table 9 for administrative staff, housekeepers, receptionists and porters. The required ratios are calculated by using the additional data cited in Table 4, yielding the values shown in Table 30.

TABLE 30: RATIO OF MAJOR SKILLED STAFF IN THE ACCOMMODATION DEPARTMENT BY REGION

Region	Administrative staff	Housekeepers	Receptionists	Porters	Total Accommodation staff	Staff/100 rooms	
						available	Occupied
Rand & Pretoria	1222	218	291	261	1992	19,3	29,5
Natal coastal	967	171	190	151	1479	19,0	35,4
Rest of Cape	153	223	162	64	602	11,0	24,8
Rest of Transvaal	297	205	206	147	855	16,1	31,1
Cape Town	705	195	211	182	1293	31,5	49,4
Orange Free State	132	120	115	109	476	15,3	26,6
Natal inland	190	116	92	44	442	15,8	30,1
Port Elizabeth & East London	200	49	90	73	412	19,0	29,5
Garden Route	119	88	83	21	311	15,2	26,8
TOTALS	3985	1385	1440	1052	7862	18,3	30,5

The ratios obtained in the last two columns of Table 30. plotted in Figure 5.1. By inspection, a good correlation exists between the number of staff employed and the number of available and occupied-room ratios.

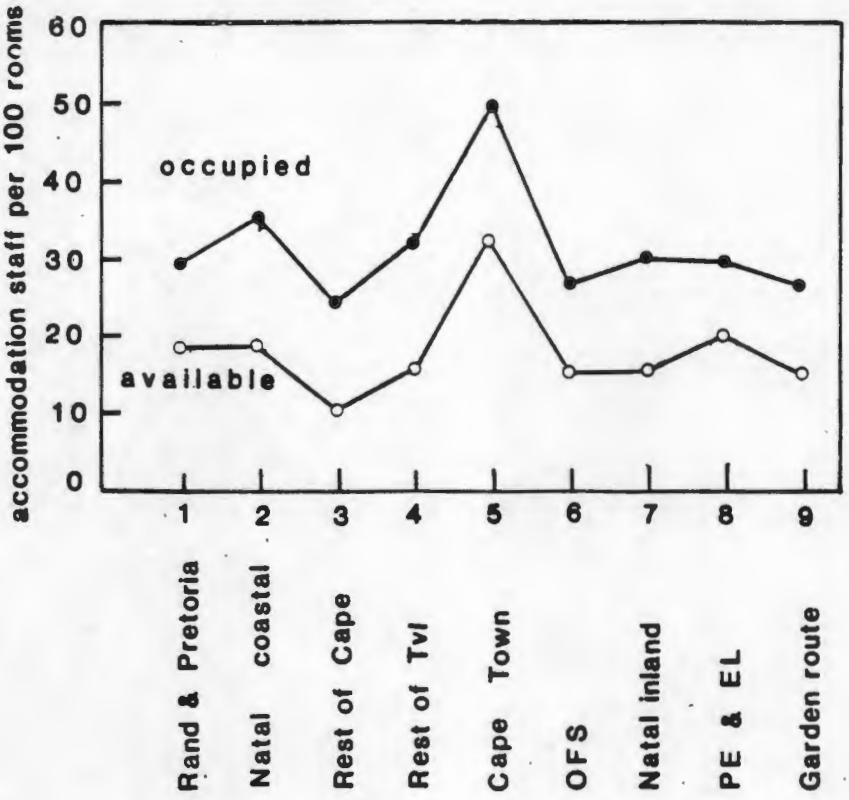

FIGURE 5.1 : ACCOMMODATION STAFF BY REGION

A comparison of the values in the last two columns of Table 30 with the ratios already obtained in Table 24 serves as an indication of the hotel-type mix in each region. The low staff-to-available-room ratios of only 11,0 in the Rest of Cape implies that there are many 1*, or generally lower-graded, hotels in this region. is borne out in the literature[20] where 83 per cent 1* and no 5* and only one 4* hotels are reported. The high value of 31,5 scored by Cape Town, suggests a relatively higher-graded hotel-type composition in this region. In fact, Cape Town alone had three 5* hotels and three 4* hotels in 1982.

The same argument holds also for the major skilled accommodation staff-to-occupied-room ratios.

Accommodation staff ratios on a regional basis does at least lead to a meaningful correlation with the revenue earned. To this end the estimated departmental incomes quoted in Table 23 were utilized. The corresponding pairs are plotted in Figure 5.2, where the 'rooms-available' ratios are indicated by open dots and the 'rooms-occupied' ratios by closed dots. For convenience the code for the region, in accordance with Table 30, is shown above each point.

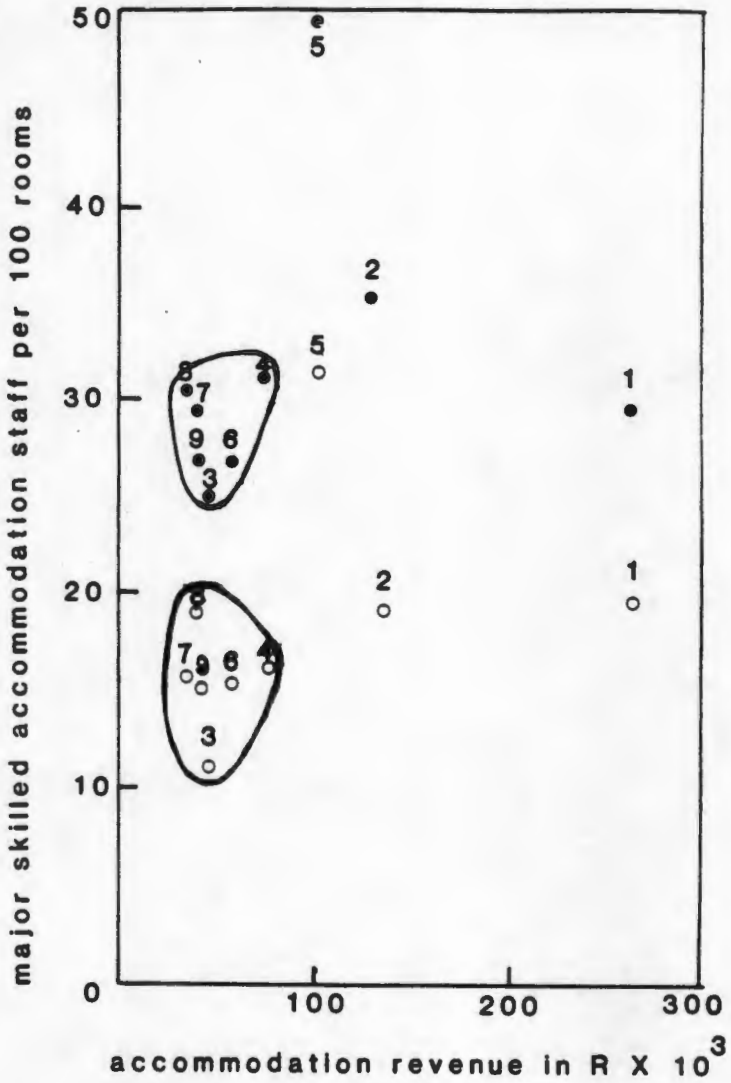

FIGURE 5.2 : ACCOMMODATION STAFF AND REVENUE BY REGION

According to Figure 5.2, a reasonable cluster is found for both sets of ratios, with the exception of regions 1, 2 and 5. These represent the Rand and Pretoria, Natal coastal, and Cape Town regions, respectively. Both ratios show the skilled accommodation staff ratios in Cape Town, with its larger proportion of higher-graded hotels, to be high, since its ratios lie above the cluster formed by the other regions. On the Rand and Pretoria as well as in the Natal coastal regions, both ratios suggest very high income returns in relation to their accommodation staff ratios, when compared with the other regions, since they lie well to the right of each cluster.

For the regions within the cluster themselves, a statistical evaluation not shown here was carried out to quantify the apparent correlation between major skilled accommodation staff employed per 100 occupied rooms and the actual revenue earned from accommodation by White-owned hotels, but this time on a regional basis.

A value for r as low as 0,04 was obtained, excluding the Cape Town, Natal coastal, Rand and Pretoria regions. The inclusion of the latter regions gave an even lower value for 'r', the coefficient of correlation.

These values are so close to zero that no further analyses are required. No correlation therefore exists on a regional basis, between skilled accommodation staff employed in white-owned hotels and revenue earned therefrom.

Since this ratio has failed to deliver a meaningful relationship, it remained to be seen whether the 'rooms available' ratio fares any better, as suggested by the plot in Figure 5.2.

TABLE 31: CALCULATION OF THE CORRELATION BETWEEN MAJOR SKILLED ACCOMMODATION STAFF PER 100 AVAILABLE ROOMS AND REVENUE EARNED FROM ACCOMMODATION

X = Major accommodation staff per 100 available rooms in White-owned hotels, from Table 29.

Y = Average revenue earned from accommodation per 100 available rooms in Rand from Tables 9 and 22.

Region*	X	Y	x	y	x^2	y^2	xy
3	11,0	861	-4,4	-678	19,36	459684	+2983,2
4	16,1	1435	+0,7	-104	0,49	10816	- 72,8
6	15,3	1835	-0,1	+296	0,01	87616	- 29,6
7	15,8	1250	+0,4	-289	0,16	83521	- 115,6
8	19,0	1810	+3,6	+271	12,96	73441	+ 975,6
9	15,2	2042	-0,2	+503	0,04	253009	- 100,6
n=6	M_X = 15,4	M_Y = 1539			Σx^2 = 33,02	Σy^2 = 968087	Σxy = +3640,2

*Regions are codified in accordance with Table 29.

Correlation coefficient 'r' $= \dfrac{\Sigma xy}{\sqrt{\Sigma x^2 . \Sigma y^2}}$

$= \dfrac{3640,2}{\sqrt{33,02 \times 068087}}$

$\therefore \quad r = 0,6438$ excluding Cape Town, Natal coastal, Rand and Pretoria regions.

The Standard Error of 'r', when population correlation is zero, is given by

$$\sigma_{ro} = \frac{1}{\sqrt{n-1}}$$

$$= \frac{1}{\sqrt{5}}$$

$$= 0,44721$$

The Critical Ratio is given by $\dfrac{r}{\sigma_{r_o}} = \dfrac{0,6438}{0,44721}$

$= 1,44$

A value as large as 1,44 would occur by chance 15 times out of 100, according to tables[22]. A reasonably significant relationship therefore exists between major skilled accommodation staff per 100 available rooms in White-owned hotels in certain regions and the revenue earned from accommodation. These regions include the Rest of Cape; Rest of Transvaal; Orange Free State; Natal inland; Port Elizabeth and East London and the Garden Route. The relatively small sample could, however, have a bearing on these conclusions.

By including the other regions, namely the Rand and Pretoria; Natal coastal and Cape Town, the coefficient of correlation drops from 0,6438 to 0,1420, thus destroying any meaningful relationship.

From the aforegoing it would appear that the skilled accommodation staff ratios in Cape Town are appreciably higher than those in other regions (Figure 5.2). High returns from accommodation are suggested on the Reef and the Natal coastal regions. It is interesting to note that eight of the nine 5* hotels of the Country are found in these three regions[20] that fall outside the cluster of Figure 5.2.. The other is in region 8, which has the highest skilled accommodation staff ratio per 100 available rooms within the cluster. Similarly, ten of the twelve 4* hotels are found in regions outside the cluster. Clearly therefore, deviations from the average number of skilled accommodation staff employed per 100 available rooms are due to the number of higher-graded hotels within that region. Statistical calculations reveal that skilled accommodation staff in most regions (see Figure 5.2) seem to be employed on a basis of how many rooms are available (r = 0,6) rather than on how much business they generate by being used (r = 0,04).

5.4 CATERING DEPARTMENT

Once again chefs, cooks and waiters are included in this category. Their ratios by region are given in Tables 14 and 17.

5.4.1 Chefs, whether compared to available or occupied rooms, show too wide a scatter and are therefore not plotted. There does, however, appear to be an even dispersion about 6 chefs per 100 occupied rooms and 3 chefs per 100 available rooms. Notable lows in both cases are Regions 3, 6 and 8, ie. the Rest of Cape, Orange Free State, and Port Elizabeth plus East London, respectively.

5.4.2 Cooks, also show a similar wide dispersion about 7 cooks per 100 occupied rooms and 4 cooks per 100 available rooms.

5.4.3 Waiters, also show a wide scatter with a wide dipersion about 30 waiters per 100 occupied rooms and 15 waiters per 100 available rooms. High values for the number of waiters employed are obtained in Regions 2; 5 and 7 ie. Natal coastal, Cape Town and Natal inland, respectively. Region 3 (Rest of Cape) on the otherhand, has in comparison an exceptionally low ratio for waiters per number of available rooms in that region.

5.4.4 The Catering department as a whole will therefore be expected to show an overall wide scatter in the ratios of the number of staff employed per 100 rooms. From Tables 4 and 9 the totals for major skilled catering department staff may be calculated to give the results shown in Table 32.

TABLE 32: RATIO OF MAJOR STAFF IN THE CATERING DEPARTMENT BY REGION

Regions	Chefs	Cooks	Waiters	Total Accommodation staff	Staff/100 rooms	
					Available	Occupi
Rand & Pretoria	399	374	1620	2393	23,2	35,5
Natal coastal	204	354	1423	1981	25,5	47,6
Rest of Cape	66	184	596	846	15,4	34,8
Rest of Transvaal	171	135	787	1093	20,6	39,8
Cape Town	150	212	913	1275	31,3	49,1
Orange Free State	61	87	501	649	20,9	36,4
Natal inland	91	87	526	704	25,2	48,0
Port Elizabeth & East London	35	75	370	480	22,1	34,4
Garden Route	94	84	355	533	26,1	46,0

An attempt to plot the values obtained in the last two columns of Table 32 revealed no meaningful correlations between catering staff employed per 100 available or occupied rooms of White-owned hotels.

A comparison of these values with those cited in Table 26 serves as an indicator of the hotel mix per region. Low ratios for the available or occupied rooms suggest that that particular region contains many lower-graded hotels. This is the case with the Rest of Cape; the Orange Free State and Port Elizabeth and East London. The Rest of the Transvaal is low relative to the number of rooms available and so is the Rand plus Pretoria, relative to the number of rooms occupied.

Cape Town, as in the case with the accommodation department, scores a persistent high result, because of a large number of higher-graded rooms in this area[20]. The same applies, but to a lesser extent, to Natal coastal and Natal inland regions and along the Garden Route.

Once again an attempt was made to see whether the wide dispersion of catering staff ratios on a regional basis cannot at least be related to the revenue earned.

The estimated departmental income cited in Table 23 was used and corresponding pairs of ratios were plotted in Figure 17. The same nomenclature was used as in Figure 16.

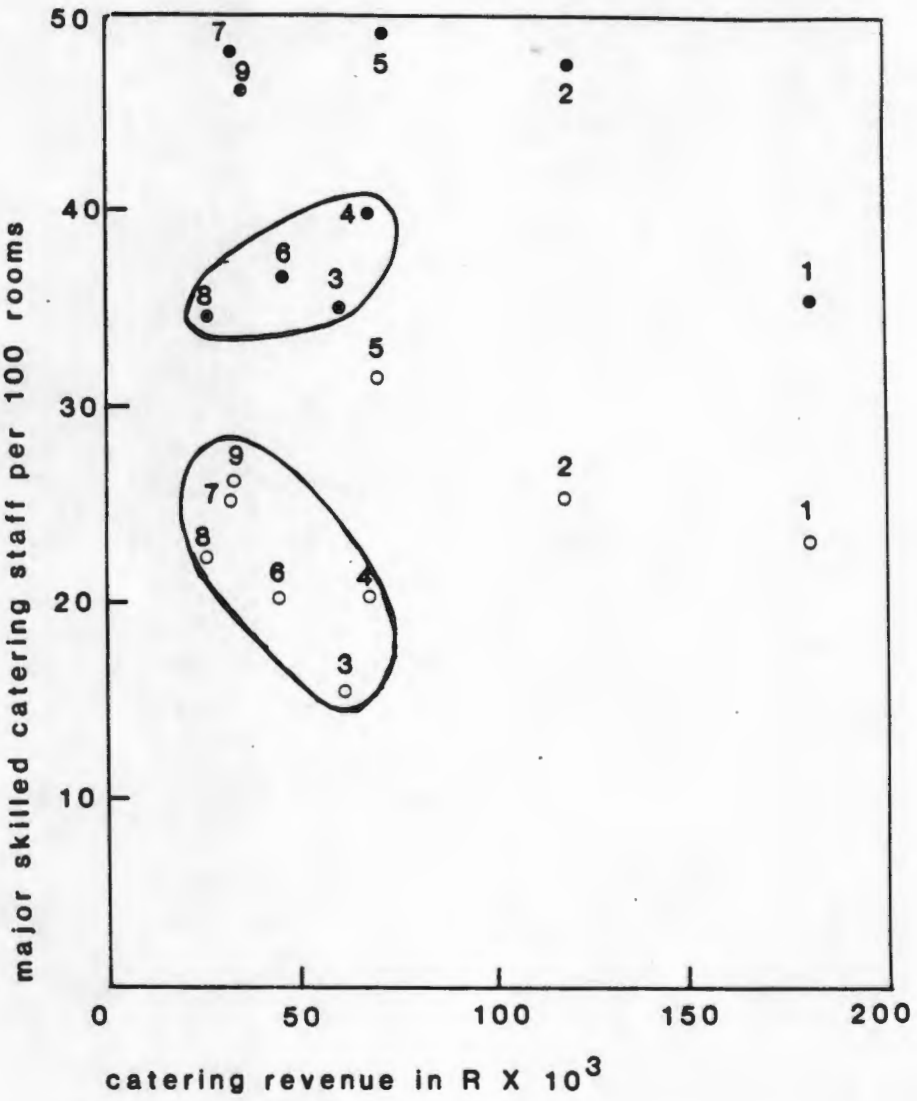

FIGURE 5.3 : CATERING STAFF AND REVENUE BY REGION

According to Figure 5.3 the scatter of both sets of data is very wide. Regions 1; 2 and 5 ie. Rand plus Pretoria, Natal coastal and Cape Town are particularly far removed from any sort of grouping; as are Regions 7 (Natal inland) and 9 (Garden Route) in the case of the 'rooms-occupied' ratio.

A statistical evaluation shown in Table 33 was therefore only attempted in the case of the 'rooms available' basis of skilled catering staff relative to revenue earned. Regions 1; 2 and 5 were ignored, in which 85 per cent of the country's 4* and 5* hotels occur[20].

TABLE 33: CALCULATION OF THE CORRELATION BETWEEN MAJOR SKILLED CATERING STAFF PER 100 AVAILABLE ROOMS AND REVENUE EARNED FROM CATERING

X = Major skilled catering staff per 100 available rooms of white-owned hotels, from Table 32.

Y = Average revenue earned from catering per 100 available rooms in Rand, from Table 23.

Region*	X	Y	x	y	x^2	y^2	xy
3	15,4	585	-6,3	+151	49,69	22801	-951,3
4	20,6	657	-1,1	+223	1,21	49729	-245,3
6	20,9	438	-0,8	+ 4	0,64	16	- 3,2
7	25,2	312	+3,5	-122	12,25	14884	-427,0
8	22,1	289	+0,4	-145	0,16	21025	- 58,0
9	26,1	321	+4,4	-113	19,36	12769	-497,2
n=6	M_X = 21,7	M_Y = 434			Σx^2 = 73,31	Σy^2 = 121224	Σxy = -2182,0

*Regions are codified in accordance with Table 32.

Correlation coefficient 'r' $= \dfrac{\Sigma xy}{\sqrt{\Sigma x^2 . \Sigma y^2}}$

$= \dfrac{-2181}{\sqrt{73,31 \times 121224}}$

$\therefore \quad r = -0,732$ excluding Cape Town, Natal coastal, Rand and Pretoria regions.

The Standard Error of 'r', when population correlation is zero, is given by

$$\sigma_{ro} = \frac{1}{\sqrt{n-1}}$$

$$= \frac{1}{\sqrt{5}}$$

$$= 0,44721$$

The Critical Ratio is given by $\dfrac{r}{\sigma_{ro}} = -\dfrac{0,732}{0,44721}$

$= -1,64$

A value as large as -1,64 would occur by chance 11 times out of 100 according to tables[22]. A significant relationship therefore exists between major skilled catering staff per 100 available white-owned hotel rooms in certain regions and the revenue earned from catering. These regions include Rest of Cape; Rest of Transvaal; Orange Free State; Natal inland; Port Elizabeth and East London and the Garden Route. The relatively small sample worked with in the calculation could have a bearing on these conclusions. The negative sign for "r" could suggest that productivity per capita will drop as the team of skilled catering staff increases.

By including the other regions, which contain 86 per cent of the 4* and 5* hotels, namely the Rand and Pretoria, Natal coastal and Cape Town, however, the coefficient of correlation drops from -0,732 to -0,277, thus destroying any meaningful correlation and discounting any notions of negative returns as the staff ratio increases. On a regional basis therefore little correlation exists between the catering staff per 100 rooms employed and the revenue earned.

5.5 THE BAR

The opening remarks under Section 4.5 are equally applicable here. Ratios for barmen and wine stewards are based on Table 14 and 17.

5.5.1 Barmen show a relatively steady ratio to the number of available rooms for all regions except for Cape Town, according to Figure 5.4.

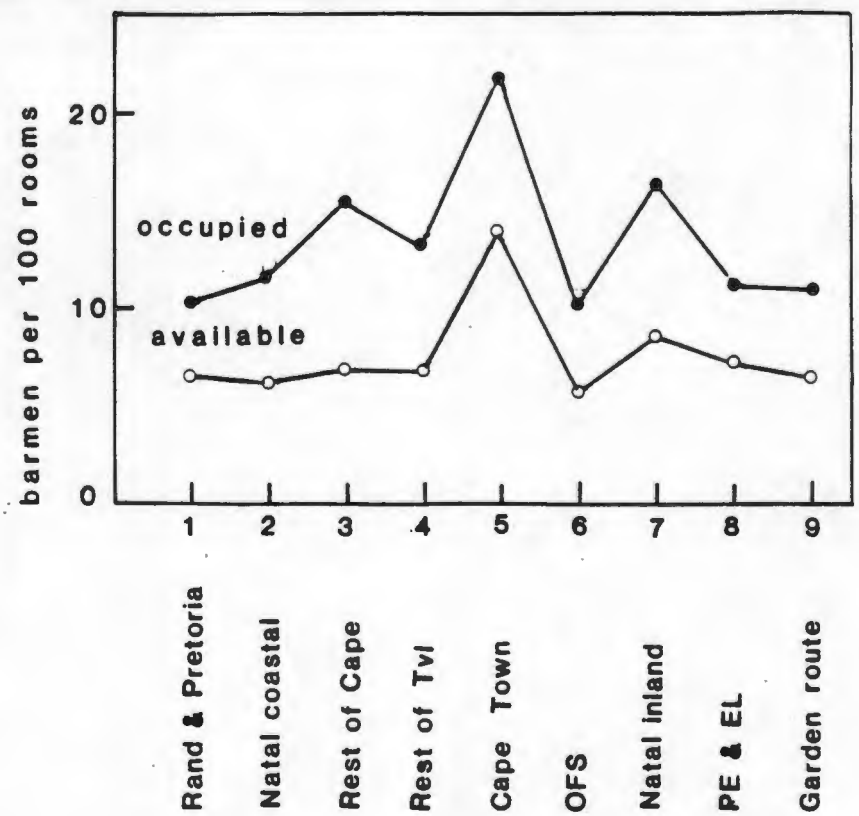

FIGURE 5.4 : BARMEN BY REGION

A constant ratio of approximately 6,5 barmen per 100 available white-owned hotel rooms is suggested. In Cape Town this value is twice as high, as a result of a large proportion of higher-graded hotels.

According to Figure 5.4 there is a wide scatter in the barmen-to-occupied-rooms ratio, implying little correlation of barmen to the performance of the accommodation side of the hotel.

5.5.2 Wine stewards also show a better albeit similar relationship to available rooms rather than to occupied rooms according to Figure 5.5.

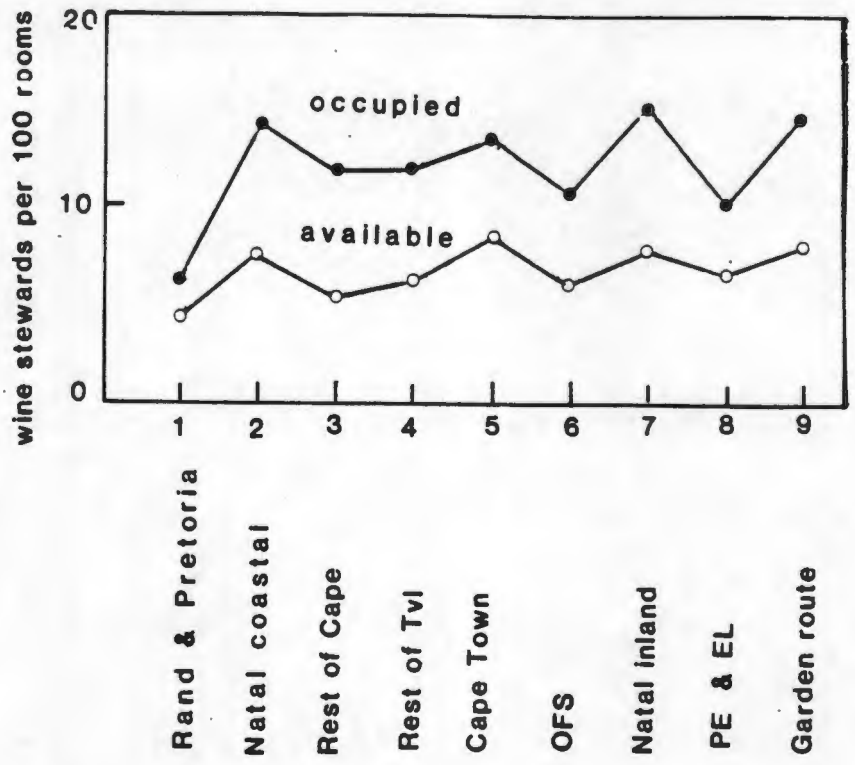

FIGURE 5.5 : WINE STEWARDS BY REGION

The mean value is slightly higher than that for barmen, at about 7,0 wine stewards per 100 available rooms.

5.5.3 The bar as a whole is thus expected to have a staff ratio more dependent on the number of available rooms rather than on occupied rooms. From values given in Tables 4 and 9 the following results are obtained from major skilled staff in the bar:

TABLE 34: RATIO OF MAJOR SKILLED STAFF IN BARS BY REGION

Region	Barmen	Wine stewards	Total bar staff	Staff/ 100 rooms	
				Available	Occupied
Rand & Pretoria	700	432	1132	11,0	16,8
Natal coastal	493	587	1080	13,9	25,9
Rest of Cape	381	289	670	12,2	27,5
Rest of Transvaal	372	328	700	13,2	25,5
Cape Town	575	351	026	22,7	35,6
Orange Free State	184	189	373	12,0	20,9
Natal inland	242	222	464	16,6	31,6
Port Elizabeth & East London	157	142	299	13,8	21,5
Garden Route	130	170	300	14,7	24,9

A plot of the ratios obtained in Table 34 gives the similar patterns shown in Figure 5.6. They confirm that a closer correlation exists between major skilled staff employed in bars and the number of rooms available, rather than the number of rooms occupied. Cape Town is employing relatively more barmen and wine stewards according to the norms set by the other regions.

No worthwhile comparison could be made with Table 28, since no meaningful trend could be obtained on a star-grading basis.

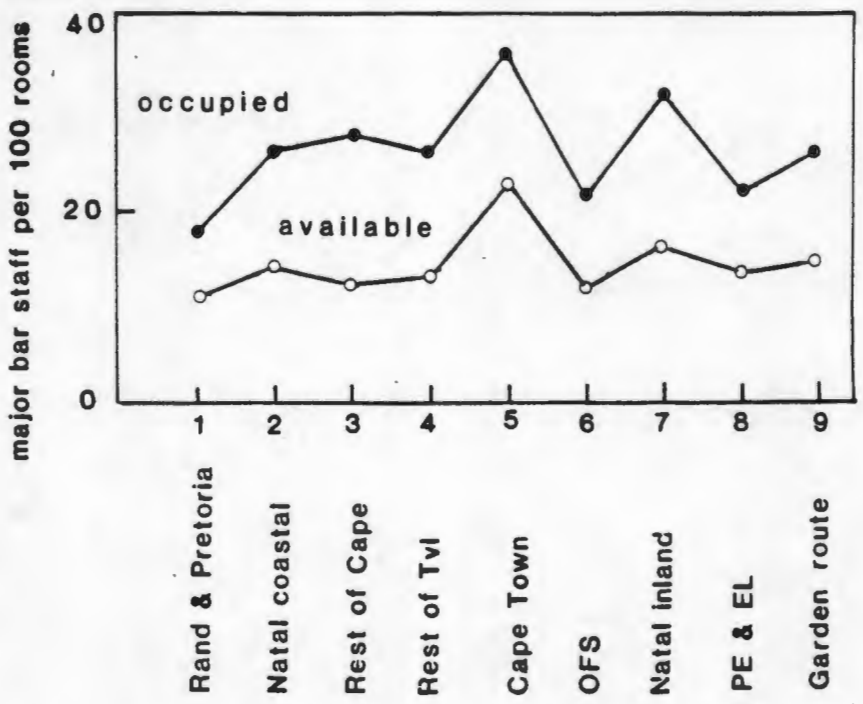

FIGURE 5.6 : BAR STAFF BY REGION

No worthwhile comparison could be made with Table 28, since no meaningful trend could be obtained on a star-grading basis.

It now remains to be seen whether the number of major skilled staff employed in bars, relative to the number of rooms available or occupied in White-owned hotels, has any bearing on the actual revenue earned in a bar. Estimated values for the latter are cited in Table 23 and are plotted in Figure 5.7. The same nomenclature is used in Figure 5.7 as explained in Section 5.3.3.

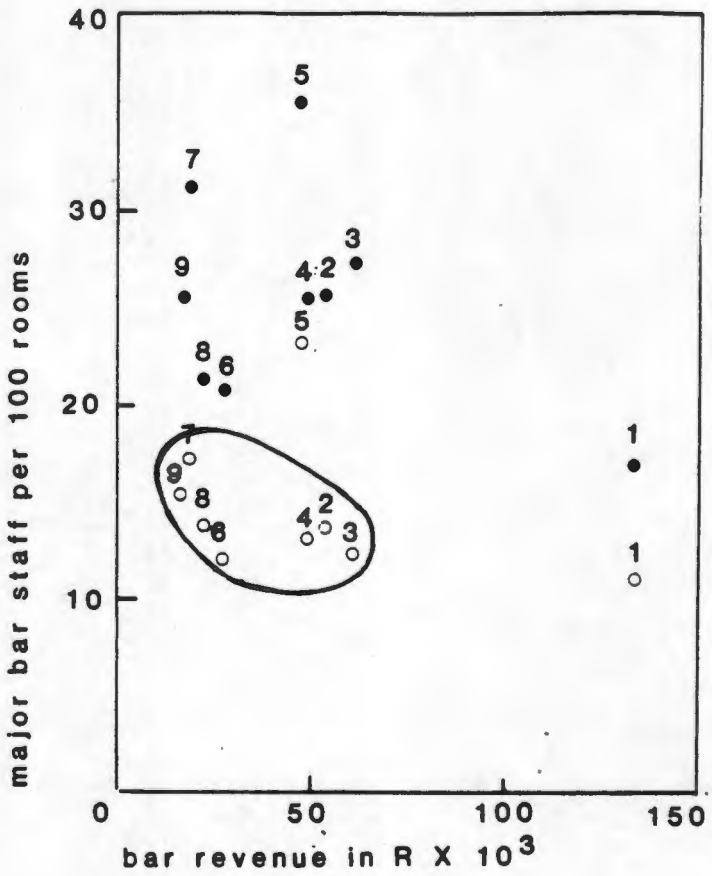

FIGURE 5.7 : BAR STAFF AND REVENUE BY REGION

According to Figure 5.7 a reasonable cluster is obtained for the ratio of major skilled bar staff employed per 100 available rooms and their revenue earned. Notable exceptions are Regions 1 (Rand and Pretoria) and 5 (Cape Town) in which 62 per cent of all 4* and 5* hotels are found. In the former case the revenue earned appears excessive since the point lies to the right of the cluster, and in Cape Town they appear to have employed almost twice as many barmen and wine stewards than their counterparts in other regions.

A statistical evaluation follows to establish the correlation between major skilled bar staff employed per 100 available rooms in white-owned hotels and the actual revenue earned from the bar on a regional basis.

TABLE 35: CALCULATION OF THE CORRELATION BETWEEN MAJOR SKILLED BAR STAFF PER 100 AVAILABLE ROOMS AND REVENUE EARNED FROM THE BAR

X = Major skilled bar staff per 100 available rooms in white-owned hotels from Table 34

Y = Average revenue earned from the bar per 100 available rooms in Rand from Tables 9 and 23.

Region*	X	Y	x	y	x^2	y^2	xy
2	13,9	686	+0,1	-172	0,01	29584	- 17,2
3	12,2	1093	-1,6	+235	2,56	55225	-376,0
4	13,2	928	-0,6	+ 70	0,36	4900	- 42,0
6	12,0	879	-1,8	+ 21	3,24	441	- 37,8
7	16,6	638	+2,8	-220	7,84	48400	-616,0
8	13,8	1032	0	+174	0	30276	0
9	14,7	749	-0,9	-109	0,81	11881	+ 98,1
n=7	M_X = 13,8	M_Y = 858			Σx^2 = 14,82	Σy^2 = 180707	Σxy = -990,9

*Regions are codified in accordance with Table 34.

Coefficient of correlation 'r' $= \frac{\Sigma xy}{\sqrt{\Sigma x^2 . \Sigma y^2}}$

$= \frac{-990,9}{\sqrt{14,82 \times 180707}}$

$\therefore \quad r = -0,605$ excluding Rand and Pretoria and Cape Town.

The Standard Error of 'r', when population correlation is zero, is given by $\sigma_{ro} = \frac{1}{\sqrt{n-1}}$

$= \frac{1}{\sqrt{6}}$

$= 0,40825$

The Critical Ratio is given by $\frac{r}{\sigma_{ro}} = \frac{-0,605}{0,40825}$

$= -1,48$

A value as large as -1,48 would occur by chance 14 times out of 100 according to tables[22]. A reasonable, although negative relationship therefore exists between major skilled bar staff per 100 available rooms of White-owned hotels in all areas, except in the Rand and Pretoria and Cape Town regions.

By including these regions the coefficient of correlation drops from 0,605 to 0,047, thus destroying the existing weak negative correlation completely.

It may therefore by concluded that on a regional basis similar employment patterns for skilled bar staff exist relative to the number of available and occupied rooms. The bar income is, however, not very dependent on the number of rooms available nor on the number of rooms occupied, ie. somewhat independent of the performance and potential of the accommodation side of the hotel.

5.6 Concluding remarks

In general, far weaker correlations were obtained for skilled staff ratios on a geographical basis, than with the type of hotel as reflected by its grading.

High manager (and housekeeper) ratios per 100 rooms on a regional basis, merely reflect the presence of a large number of small units within that region, and vice versa.

As far as skilled accommodation staff is concerned, greater Cape Town seems to boast high staff ratios, although the returns from accommodation appear more impressive on the Reef and the Natal coastal regions (Figure 16). Statistical analyses indicate that skilled accommodation staff, in most regions, appear to be employed on a basis of investment in rather than on performance of, an hotel.

The staff ratios for skilled catering staff are very varied, defying any meaningful correlation, on a regional basis, with the revenue earned by that department.

As far as the bar is concerned, little correlation could be found between revenue earned and the performance of the hotel as a whole. A slightly closer correlation seems to hold between the number of skilled staff employed in the bar and the investment in the hotel.

6. EXPECTED DEVELOPMENT OF THE SOUTH AFRICAN TOURIST INDUSTRY.

6. THE EXPECTED DEVELOPMENT OF THE SOUTH AFRICAN TOURIST INDUSTRY

From the data discussed so far on staff utilization and efficiency levels in the South African hotel industry, it is possible to determine some general relationships between hotel-staff performance and the level of market demand, indicated by ratios of staff to occupied rooms.

By taking into account the present and future patterns of tourist demand, it is possible with a reasonable degree of accuracy, to extract the expected numbers of future hotel guests. By interrelating these values with the staff utilization levels, the resulting expected manpower requirements for the decades ahead may be determined. Essentially, such an exercise should identify, as far as feasible, the level of efficiency or the possible problem areas the South African hotel industry may experience in relation to the expected development of South Africa's tourist industry.

This chapter concentrates on developing a reasonable evaluation of the expected patterns of growth of the South African tourist industry. This projection will then be used in Chapter 7 to estimate future staff requirements of the hotel industry.

In Section 2.1 the current tourism situation was sketched and reference was made in Section 1.2.3 to the lack of the availability of accurate statistical data. Efforts to project both performance and requirements of the tourist industry into the future, can therefore not rest on too sound a base. An attempt will nevertheless be made to make intelligent estimates of future scenarios of probable tourist developments.

The following three phases are discussed:

- short-term, depicting immediate expected developments during the mid-eighties up to 1990.
- medium-term, from 1991 to the turn of the century, and
- long-term, beyond the year 2000, up to 2020 at the utmost.

For the sake of convenience, the tourism scene is divided into foreign visitors to South Africa and domestic tourists. These two components will be considered against the three phases of development in the short, medium and long-term, as defined above.

6.1 FUTURE FOREIGN TOURISM

According to Medlik, the dimensions of international tourism in the early eighties may be summarized by indicating that some 208m tourist arrivals represent an expenditure of US $100 billion in the various countries visited[23]. Furthermore, less than 20 per cent of world-tourism flows are international.

The annual average growth of global international tourist arrivals from 1950 to 1960 was recorded to be almost 11 per cent. During the sixties this growth rate slowed down to 9 per cent and during the seventies fell to below 6 per cent. The European Travel Commission as well as the World Tourism Organisation have adopted an expected average annual-growth rate of at least 5 per cent for the eighties[23]. Clearly therefore there is a global slowing down in the growth rate of international tourism.

South Africa is no exception to this trend, as will become evident from the comparison made in Table 36. Values quoted are based on the 1983 Annual Report of the South African Tourism Board[25]. The set of figures for overseas visitors disregards border crossings from neighbouring African states, which in 1983 amounted to some 299 939, or 42 per cent of the total arrivals.

TABLE 36: COMPARISON OF TRENDS OF FOREIGN ARRIVALS GLOBALLY AND IN SOUTH AFRICA

Period	Average annual growth of foreign arrivals in per cent	
	World	Republic of South Africa
1950's	+ 11%	-
1964	-	+ 19,8
1965	-	+ 13,6
1966	-	+ 24,0
1967	-	+ 19,0
1968	-	+ 20,0
1969	-	+ 19,0
1960's	+ 9%	+ 19,2%
1970	-	+ 28,0
1971	-	+ 34,1
1972	-	+ 14,0
1973	-	+ 14,4
1974	-	+ 7,1
1975	-	+ 27,2
1976	-	- 12,8
1977	-	- 16,3
1978	-	+ 14,6
1979	-	+ 13,3
1970's	+ 6%	+ 12,4%
1980	-	+ 5,9
1981	-	+ 10,1
1982	-	- 12,8
1983	-	+ 4,2
1980's	+ 5%	+ 1,9% or + 6,7% if the poor performance during 1982 is ignored.

The actual overseas arrivals in the Republic of South Africa are plotted in Figure 6.1.

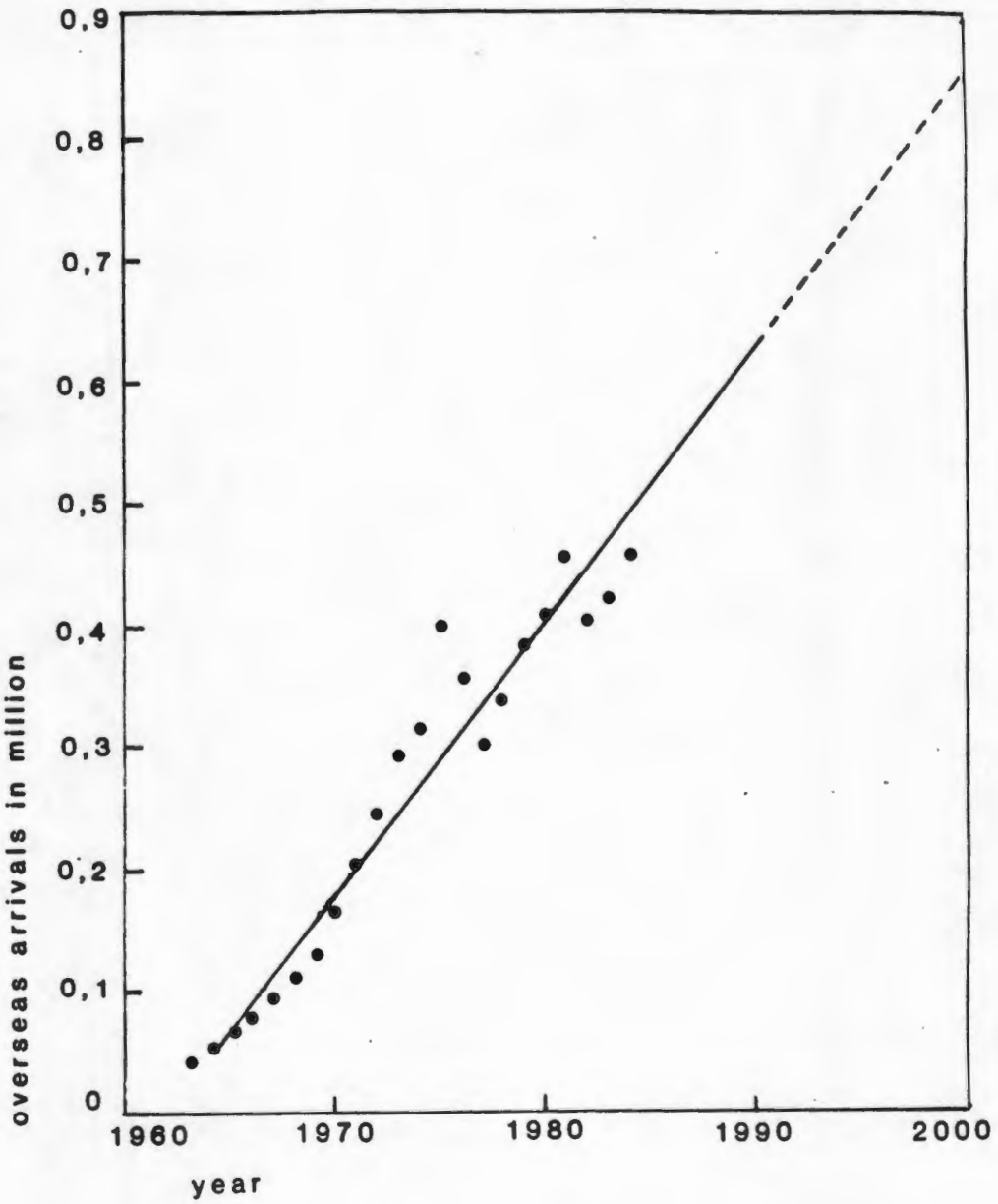

FIGURE 6.1 OVERSEAS ARRIVALS

There is no reason to believe that cross-border arrivals are going to increase appreciably in the near future. In the past, economic opportunities have attracted migrant workers, but this potential has been off-set by the Republic's political policies. It would appear that a reversal of these two forces is a possibility in future, thus more or less fixing the present numbers.

In this study the year of interest is 1982, during which 389 155 overseas visitors were recorded[25]. To this figure should be added the number of visitors from neighbouring African states if the total number of foreign visitors is required. In an economic review the actual number of foreign visitors 'on holiday' to South Africa was estimated to be 502 500 during 1982[26].

According to the Chairman of the South African Tourism Board: "South African tourism, like most other international tourist industries, suffered losses because of the international recession during 1982, but it bounced back in 1983 and South Africa recorded a 4,0 per cent gain over the previous year". He anticipated an 8,0 per cent growth for 1984[27].

6.1.1 Short term: From Figure 22 it would appear to be quite valid to extrapolate the trend line from the early sixties through to 1990. Such a short-term projection yields an expected total of about 640 000 overseas visitor by then. This increase amounts to an average growth rate of 6,42 per cent per annum.

Assuming that the same proportion of overseas to African visitors as in 1982 persists, then by 1990 a total of 1,1 million foreign visitors to South Africa could be expected. Figure 22 may also be used to give an estimate of the number of overseas arrivals to be expected in any individual year.

During 1982 an official survey was conducted among some 6776 overseas visitors at airports to establish their demand patterns for hotel accommodation. It indicated that overseas visitors tended to patronise the local hotels as shown in the second column of Table 37. Assuming that virtually all overseas visitors arrive by air, then the following demand for hotel accommodation may be calculated for 1990:

TABLE 37: PROJECTED DEMAND BY OVERSEAS TOURISTS FOR HOTEL ACCOMMODATION IN 1990

Type of hotel	% Use by visitors[9]	Number of tourist guests	Average length of stay	Hence number of bed-nights
5-star	30,2	332 200	7,7	2 557 950
4-star	23,4	257 400	8,0	2 059 200
3-star	28,4	312 400	12,4	3 873 750
2-star	14,0	154 000	7,8	1 201 200
1-star	7,4	81 400	7,9	643 050
All hotels	103,4*	1137 400	8,9	10,3 m

*Note: A total use of hotels of over 100 per cent is explained by the fact that some visitors used more than one type of hotel grading.

6.1.2 Medium-term: No good estimate for the nineties or the medium-term could be found in the literature. Assuming that world economies will have fully recovered, that interest in travelling will persist and that international trade with South Africa will continue and even improve slightly, a reasonable average annual growth may be expected. According to Figure 6.1 the expected year-to-year deviations from the mean will become larger. If an average annual-growth rate of + 6,5 per cent is maintained, then the number of annual overseas arrivals by the turn of the century may be expected to reach 0,85 million. Good marketing could increase the annual growth to 10 per cent p.a. All indications are, however, that in the medium-term, tourists will increasingly tend to require alternative accommodation for their holidays. Options like hutted camps, chalets, guest farms, caravans, camping, etc are likely to attract more and more future tourists. On the other hand, disjointed promotional efforts and political disasters could even reduce the future growth rate to below 5 per cent p.a.

On the basis of the anticipated annual growth rate of 6,5 per cent, the 0,85 million overseas visitors could mean a total of 1,47 m foreign tourists. Assuming that their length of stay in hotels does not fall off too drastically, these foreign visitors could demand up to 13,0 million bed-nights p.a. towards the turn of the century. No attempt will be made to specify which type of hotel accommodation will be required by then, although the introduction of garni-type of hotels or pensions is likely. One star hotels could become tavernas, since their income is largely from liquor.

6.1.3 Long-term: Estimates beyond the turn of the century are very difficult to make, because much wider possible fluctuations as a result of better communications and even greater sensitivity to political developments and unrest are to be expected. Very little is known as to when tourist saturation of a particular country is reached, although the World Tourism Organisation is starting to address this problem. However, South Africa has an encouraging record for repeat visits, which can help to keep the flow of foreign visitors at relatively high levels.

Assuming that a very conservative 2 per cent p.a. growth is averaged in the long-term, 2,0 m foreign visitors could be expected by the year 2020 with a probable demand of 19,2 m bed-nights in hotels.

These probable projections may therefore be tabulated as follows:

TABLE 38: PROJECTED GROWTH IN OVERSEAS TOURISM

Period	Probable growth rate %	Overseas tourists m	Overborder visitors m	Expected total m	Expected number of hotel bed-nights m
1990's	6,4	± 0,64	± 0,46	± 1,10	± 10,1
2000's	6,5	± 0,85	± 0,62	± 1,47	± 13,0
2020's	2,0	± 1,16	± 0,84	± 2,0	± 19,2

6.2 FUTURE DOMESTIC TOURISM

The composition of the population in South Africa is such that the numbers, growth rates and income of the various population groups must be estimated individually if any sort of realistic scenario is to be deduced.

6.2.1 Population Mix: The last census was conducted in 1980 and its results, with the approximate annual growth rates[28] were as follows:

Whites	:	4,5 m + 1,66 % p.a.
Asians	:	0,8 m + 2,57 % p.a.
Coloureds	:	2,6 m + 2,27 % p.a.
Blacks	:	20,4 m + 4,0 % p.a.

On this basis, predictions of future population sizes appear to be fairly accurate in the short-term, say up to 1985. Thereafter, this approach has to be refined, since cognisance must be taken of the fact that birth rates normally decline when a specific population group develops to higher socio-economic levels. This tendency may perhaps be off-set to a certain extent by a lower mortality rate, as a result of a greater contribution by medical science.

A most refined estimate of future population growth has been published by the Human Sciences Research Council[29], shown below:

TABLE 39: ESTIMATED FUTURE POPULATION MIX OF SOUTH AFRICA

Population group	Short-term 1985	Medium-term 1990	2000	Long-term 2020
Whites	4,82 m	5,16 m	5,82 m	6,65 m
Asians	0,89 m	0,96 m	1,11 m	1,34 m
Coloureds	2,79 m	3,07 m	3,61 m	4,44 m
Blacks	23,70 m	27,10 m	34,60 m	53,60 m
TOTAL	32,20 m	36,29 m	45,14 m	66,03 m

According to Table 39, therefore, the total population in South Africa is expected to virtually double itself by the year 2020, or possibly every 31 years[28].

Under normal circumstances the present demand on accommodation and tourist facilities should therefore also double itself every 31 years. This claim must, however, be dismissed as an over-simplification of the real situation, since major reforms are taking place in the political and social scenes and to a lesser extent in the economy. These developments can eventually only lead to a more even distribution of wealth among the various population groups. Social and economic development of the lower-income groups will mean that they will also start to enter the tourism market place. Major upswings may be expected in the medium to long-term, since the developing groups will, by then, constitute the majority of the population.

6.2.2 Distribution of Income: The most recent, and fairly reliable information available on this subject is that obtained during the 1980 national census, as reported by the Central Statistical Services, Pretoria[30]. The twenty-eight different income categories were regrouped for convenience as shown in Table 40. The cut-off point for the lower-income group is taken as R2 000 p.a., since this is the value below which state-housing loans are being offered for certain population groups in certain areas. At the other end of the spectrum the upper margin was chosen as an annual income above R20 000. This grouping appears to be realistic and yields an equal number of whites in the lower and upper-income brackets.

TABLE 40: DISTRIBUTION OF ANNUAL INCOME OF HEAD OF FAMILY IN 1980

Race	Income group in per cent		
	Lower (below R2 000 pa)	Middle (R2 000-20 000)	Upper (Over R20 000)
Whites	8,9	82,9	8,2
Asians	35,1	64,0	0,9
Coloureds	62,7	37,2	0,1
Blacks	71,7	28,2	0,1

According to Table 40, at least 99 per cent of the 1980 Asian, Coloured and Black population was found in the lower to middle-income brackets, whereas 83 per cent of the White population fell into the middle-income group.

There are many indications that this situation will change in years to come. For want of better information, the following general estimates of ratios out of a total of 10 per each population group are put forward, representing the expected socio-economic mix of each group at different stages, starting off with the composition given in Table 40. The periods chosen are the same as described at the beginning of this chapter.

TABLE 41: ESTIMATED POPULATION RATIOS ACCORDING TO INCOME IN THE SHORT , MEDIUM AND LONG-TERM

Race and Term		Population ratio per income group		
		Lower	Middle	Upper
Whites	short	1	8	1
	medium	1	8	1
	long	2	7	1
Asians	short	3	6	1
	medium	2	7	1
	long	2	7	1
Coloureds	short	6	4	0
	medium	5	5	0
	long	4	5,5	0,5
Blacks	short	7	3	0
	medium	6	4	0
	long	5	4,5	0,5

In Table 41 it is shown that the White middle class is expected to remain fairly constant at first, but it will then lose some to the lower-income group after the turn of the century. Asians show growth in the middle class fairly soon, but with an appropriate reduction of the numbers in the lower-income group. The same trend is also expected among the Coloureds, but possibly this shift will take a little longer, because of the present fairly large lower-income group. In the case of Blacks, the same trend is expected but at an even slower pace, because of the present very large lower-income group. An upper-income class is expected to become more noticeable during the next century.

6.2.3 Potential Hotel Guests: As an approximation it may be assumed that the present economic climate precludes the lower-income group as important users of hotel accommodation. At present hotel guests are largely Whites from the middle and upper-income groups. The restrictions on black guests using white hotels are being lifted so as not to confine members of the Black community only to the higher-graded international hotels. No immediate major influx of additional guests is expected, as a result of these relaxations, although the administrative hassles before being allowed to accommodate Blacks are being removed.

6.2.3.1 Whites: According to Section 2.1.2, the indication of a 1980 survey of the tourist market was that 53,7 per cent of all White families were taking one or more holidays in one year, of these, 19,7 per cent were using hotel accommodation, or only 10,58 per cent of the total White population. The "business" market is in this case not accounted for.

From Table 41, therefore, it is possible to infer that a socio-economic ratio of 9:1 or (upper + middle-class) to (lower-class) will produce a turnover of hotel guests, among White domestic tourists, of 10,6 per cent of the population. The same ratio and presumably the same percentage turnover, are expected in the medium-term future, while in the long-term period an expected socio-economic ratio of 8:2 will produce a proportionally lower turnover of about 9,4 per cent of the population.

Summarizing these indications one can expect the percentage of the White domestic-tourist market using hotel accommodation to be as follows:

10,58 per cent by 1990,
10,58 per cent by 2000, and
9,40 per cent by 2020.

6.2.3.2 Asians: In the case of Asians the income ratios from Table 41 are

7:3 by 1990
8:2 by 2000 and remaining
8:2 thereafter.

Assuming that for the same income group, the same proportion of Asians who go on leave will stay in hotels as in the case of Whites, then by direct proportion the respective percentages for Asians will reduce to

8,23 per cent by 1990
9,40 per cent by 2000, and remain
9,40 per cent thereafter.

6.2.3.3 Coloureds: According to Table 41, their income ratios are

4:6 by 1990;
5:5 by 2000, and
6:4 by 2020.

Again assuming that equal income groups will display similar hotel utilization patterns, the respective percentages reduce to

4,70 per cent by 1990;
5,88 per cent by 2000 and
7,05 per cent by 2020.

6.2.3.4 Blacks, on the otherhand have even lower income ratios according to Table 41 of

3:7 by 1990
4:6 by 2000 and
5:5 by 2020.

By the same assumptions as before, the respective percentages for Blacks work out to

3,53 per cent by 1990;
4,70 per cent by 2000 and
5,88 per cent by 2020.

6.2.3.5 General: According to a report just published by the Institute for Futures Research, a growth rate in GDP of only 3,2 per cent per annum is considered realistic until the end of this century[31]. They are of the opinion that for such a slow growth rate 'changes in the relative distribution in personal income between the various population groups are likely to be small - - - - and - - - - high rates of economic growth would benefit the black population the most'.

In accordance with present economic trends the Institute for Futures Research expects the following growth on the 1980 per capita income by the year 2000:

Whites	+ 44,7 per cent
Asians	+ 85,5 per cent
Coloureds	+ 89,1 per cent
Blacks	+ 14,1 per cent

In the light of these estimates it would appear that the model put forward in Table 41 is acceptable for Asians and Coloureds, but on the optimistic side for the Blacks. Economic factors however, are, not the only determinants of tourism. Education and better communications play an important role, particularly among the Blacks. The Asians and Coloureds are bound to feel freer to travel as a result of their newly-acquired political status. Their future holiday patterns and choice of accommodation still remains to be established.

6.2.4 Expected number of hotel guests: From Table 38 and the aforegoing, the number of expected hotel guests may be calculated as shown in Table 42. The demand for bed-nights is based on the findings from a survey conducted in 1980. It was established that the average number of days that local holidaymakers were away from home was 14 days[26]. This average period is utilized as a basis to calculate the expected holiday patterns of each group in the future.

TABLE 42: PROJECTED DEMAND BY DOMESTIC TOURISTS FOR HOTEL ACCOMMODATION IN THE SHORT, MEDIUM AND LONG-TERM

Population group	Hotel demand in millions		
	1990	2000	2020
Whites	0,546	0,616	0,591
Asians	0,098	0,104	0,126
Coloureds	0,144	0,212	0,313
Blacks	0,957	1,626	3,152
Total guests	1,74	2,56	4,18
Total bed-nights	24,2	35,8	58,5

6.3 FUTURE DEMAND ON HOTELS

The estimates of tourism growth obtained in Section 6.1 and 6.2 may appear high at present, but according to Horwath and Horwath International, it must be remembered that by the turn of the century,

(a) "there will be almost 600 million international tourists".

(b) "the world may move from being perhaps 25 to 30 per cent developed to being perhaps 50 to 60 per cent developed. And the world's population is rising fast - - - By early next century there are likely to be 2,5 to 3,0 times as many people as there are today living in countries with a standard of living making participation in tourism possible for many of them"[23].

TABLE 43: ESTIMATED FUTURE DEMAND ON SOUTH AFRICAN HOTELS

Period and term	Total number in million					
	Hotel guests			Hotel bed-nights		
	Foreign	Domestic	Total	Foreign	Domestic	Total
Short (by 1990)	1,10	1,73	2,83	10,30	24,2	34,5
Medium (by 2000)	1,47	2,56	4,03	13,0	35,8	48,8
Long (by 2020)	2,0	4,18	6,18	19,2	58,5	77,7

According to Table 43 there is a relatively faster growth rate in domestic tourism than in foreign arrivals. This trend may be explained as being due to the fact that a developing nation has to reach the level of development where personal income permits travel and finally hotel accommodation. In the long-term it is shown that there will be more than twice as many domestic hotel guests than foreign guests. This figure may even be low, since Bodlender claims that "domestic tourism is probably at least three times greater (than international tourism)"[3].

As a cross-check, the following calculation may be carried out: According to Table 43 there will be 2,56 million domestic hotel guests by the turn of the century. The former Minister of Finance stated that "only 14 per cent of South Africans on holiday stay in hotels - - - "[33]. If this trend persists then by the year 2000, there will be approximately (100 ÷ 14 x 2,56) = 18,3 million South African tourists. This figure is in agreement with the 18 million estimated by a former Secretary of Tourism[34].

6.4 Concluding remarks

The lack of reliable tourist data has made projections into the future far more difficult, particularly since 1982 appears to have been an exceptionally bad year for the tourist industry in South Africa (Table 36). Based on the trend line shown in Figure 22 only a short-term extrapolation for overseas visitors appears reasonably reliable. (Table 38).

In order to be able to estimate the development of domestic tourism, the future composition of the South African population is cited (Table 39) and the anticipated future income ratios of the various population groups was estimated (Table 41). Far more research needs to be done in this regard.

Finally, any major movement away or towards the popularity of hotels would render the future demand for hotel beds cited in Table 43, totally unreliable.

7. FUTURE EMPLOYMENT OPPORTUNITIES IN HOTELS

7. FUTURE EMPLOYMENT OPPORTUNITIES IN SOUTH AFRICAN HOTELS

In Section 1.1 the importance of tourism as a generator of employment opportunities was emphasized. According to Horwath and Horwath International: "tourism offers that opportunity at a relatively low cost ..... compared to any other industrial or commercial activity. In England the cost of creating a job in tourism is approximately £7 000 (R18 420)"[3]. The hotel industry is so intimately interwoven with tourism as a whole, that similar arguments should also apply here.

7.1 FUTURE STAFF NEEDS WITHOUT ANY RATIONALISATION

According to Section 2.1, some 371 530 foreign visitors and 426 330 domestic tourists, ie. a total of 797 860 tourists stayed in South African hotels during 1982. Furthermore, some 48 879 members of staff (Table 8) were employed in hotels offering 48 288 rooms (Table 2). Assuming that the room occupancy remains at a steady 60 per cent and that there are no changes in the composition of the staff complement whether in white-owned or other hotels, then the following demand values may be calculated by direct proportion in the short, medium and long-terms.

TABLE 44: FUTURE STAFF DEMANDS WITHOUT ANY RATIONALISATION

Number of	Short-term, by 1990 in million	Medium-term, by 2000 in million	Long-term, by 2020 in million
Hotel guests (Table 43)	2,830	4,030	6,180
Available rooms required	0,171	0,242	0,371
Total staff required	0,173	0,247	0,379

According to Tables 7 and 44 hotels will require the following additional staff in future:

By 1990 : (173 000 - 48 879) ≈ 124 120 employees
By 2000 : (247 000 - 48 879) ≈ 198 000 employees
By 2020 : (379 000 - 48 879) ≈ 330 000 employees

In the short-term, therefore, 15 515 additional members of staff are required per annum up to 1990. Thereafter (247 000 - 173 000) = 74 000 employees ie. 7 400 additional members are required per annum up to the end of this century. Finally in the long-term, (379 000 - 247 000) = 132 000 persons ie. 6 600 additonal members of staff are required per annum after the turn of the century, up to year 2020.

In Table 44 the total number of staff required is given for the years 1990, 2000 and approximately 2020. It now remains to establish the needs for the various skilled staff categories. These are given in Table 45 as based on Table 7:

TABLE 45: FUTURE DEMANDS FOR SKILLED STAFF WITHOUT ANY RATIONALISATION

Job Title	Short-term, by 1990	Medium-term, by 2000	Long-term, by 2020
Manager(ess)	4 902	6 999	10 739
Assistant Manager(ess)	2 317	3 345	5 133
Front Office Manager(ess)	693	1 000	1 535
Other departmental Manager(ess)	1 851	2 643	4 055
Management trainees	1 044	1 491	2 287
Restaurant Manager	1 200	1 713	2 628
Administrative staff	14 402	20 562	31 550
Receptionist	5 111	7 297	11 196
Porter	3 815	5 447	8 359
Barman/Barmaid	12 016	17 156	26 324
Waiter/Waitress	25 324	36 156	55 479
Wine steward	9 687	13 831	21 222
Chef	4 261	6 084	9 336
Assistant Chef	2 071	2 956	4 536
Cook	5 716	8 161	12 522
Assistant Cook	3 058	4 366	6 699
Kitchen Supervisor	1 228	1 753	2 691
Housekeeper	4 902	6 999	10 739
Counterhand	1 929	2 754	4 226
TOTAL (Skilled)	105 527	150 713	231 256

7.2 FUTURE STAFF NEEDS WITH RATIONALISATION

In the previous section, projections were made without any specific refinements. There is, in fact, no reason to believe that the room occupancy figures will continue to remain as low as at present. A better economic climate, more market-orientated tariffs and improved promotion could all change very effectively this weak market performance. The values obtained in Table 45 should, however, all be viewed as representing the upper level of each period as far as staff requirements are concerned, although the industry could accommodate appreciably more than indicated in Table 43.

More realistic scenarios may be calculated from the following assumptions:

(a) Better room occupancies need not always imply the appointment of additional staff.

(b) Seasonal demands need not always be met with full-time staff appointments. See comments under Section 2.3.1, where it is stated that only under 5 per cent of staff is serving on a part-time basis. It would appear that too little short-term employment is offered to meet seasonal demands adequately.

(c) Computerisation could reduce many chores that are largely still done manually by front-office and administrative staff.

(d) Computer networks will facilitate reservations, reduce errors, losses and staff requirements in certain instances.

(e) Elimination of unrealistic minimum requirements, as laid down by the South African Tourism Board would enable particularly the small hotelier to cut back on certain unnecessary services, for which there is no real demand. The 'pension' or budget hotel concept would, for example, allow the disbandment of porter services, restaurants that have to serve meals three times a day for specified periods of time, a-la-carte menues, room service, continuously manned telephone exchanges, etc[14]. The elimination of these services implies a reduction in the corresponding staff complement.

(f) Regrouping of staff, as discussed in Section 4.1 would also be effective in increasing the productivity of managers and housekeepers in smaller establishments.

Should these rationalisation proposals take place, then the staff requirements of the various hotels would also be affected. In attempting to determine the most efficient staff ratios for the future, the effect of these rationalisation possibilities must therefore be taken into account. Instead of attempting to quantify each factor and then calculating its expected effect separately, a better approximation could be obtained by relying on the most efficient staff ratios already identified in the previous chapters, with special reference to Tables 2, 7 and 12.

According to the previous projections, some hotel categories were able to maintain the same level of performance in their various departments with staff ratios lower than their counterparts in other categories. These more efficient ratios are therefore to be chosen as guidelines for future development in the whole hotel industry. They are used in Table 46 to determine the most efficient level of expected staff requirements in the short, medium and long-term periods. In Table 46 the lowest staff ratios (indicating in brackets in which hotel category they are presently to be found), have been multiplied by the anticipated number of available rooms cited in Table 44.

TABLE 46: FUTURE DEMANDS FOR SKILLED STAFF AFTER RATIONALISATION

Job title	Most efficient staff ratio per 100 available rooms (hotel type in brackets)	Future demand in actual numbers		
		Short-term, by 1990	Medium term, by 2000	Long-term, by 2020
Manager(ess)	2,86 (Footnote)	4 891	6 921	10 611
Assistant Manager(ess)	0,82 (4*)	1 402	1 984	3 042
Front Office Manager(ess)	0,36 (1*)	616	871	1 336
Other Departmental Manager(ess)	0,71 (3*)	1 214	1 718	2 634
Management Trainee	0,19 (1*)	325	460	705
Restaurant Manager	0,36 (1*)	616	871	1 336
Administrative staff	3,59 (1*)	6 139	8 688	13 319
Receptionist	2,45 (1*)	4 190	5 929	9 089
Porter	1,15 (1*)	1 966	2 783	4 266
Barman/Barmaid	4,20 (3*)	7 182	10 164	15 582
Waiter/Waitress	12,27 (1*)	20 982	29 693	45 522
Wine steward	4,57 (5*)	7 815	11 059	16 955
Chef	1,03 (4*)	1 761	2 492	3 821
Assistant Chef	1,11 (3*)	1 898	2 686	4 118
Cook	2,43 (2*)	4 155	5 881	9 015
Assistant Cook	1,44 (2*)	2 462	3 485	5 342
Kitchen Supervisor	0,15 (4*)	256	363	556
Housekeeper	0,42 (5*)	718	1 016	1 558
Counterhand	0,95 (3*)	1 625	2 299	3 524
TOTAL (skilled staff only)	-	70 213	99 363	152 331

Footnote: Normally the ratio to use would be 0,42 (5*), but since each establishment must have at least one manager, this suggests an average of approximately 1 manager per 35 rooms (Table 2), ie. 2,86 managers per 100 available rooms, provided the balance between small and large hotels persists as in 1982. It is furthermore accepted that managers in small establishments could also fulfil the housekeeper function (see Section 4.1).

7.3 DIFFERENT PROJECTIONS FOR SKILLED-STAFF REQUIREMENTS

Many different scenarios could be developed to anticipate future hotel-staff employment ratios. The two possibilities given in Tables 45 and 46 do, however, present a reasonable upper and lower limit, respectively.

7.3.1 The upper limites of staffing (Table 45), may be defended on grounds of a straight-forward projection of the present situation assuming a reasonable growth in both domestic and foreign tourists. These could only come about internationally by large-scale reduced airfares, a continued and even more drastic fall of the value of the Rand relative to North American and European currencies, unprecedented marketing drives by both the public and private sectors, or other general-interest-generating events.

On the domestic front the biggest uncertainty is the future of the small hotel. It is very unlikely that the 1* hotels will generally continue operating as they are at present. The authorities are bound to relax some requirements in the short-term that do not meet with market demands[35]. Concessions such as garni hotels, would have the net result of reducing the numbers of staff required in existing establishments. Because of economic pressures it is unlikely that the luxury of having too many employees is going to persist for very long. On the contrary, through mechanisation, computerisation and better training it is more than likely that staff complements are going to drop appreciably below the upper margins of Table 45. Some observers also feel that future holiday makers will not mind serving themselves, to a far greater extent.

Strong competition from other more reasonably-priced types of accommodation such as caravans, timesharing, holiday flats, chalets (both private and at public resorts), holiday farms, camping, etc, also have to be taken into account. The small hotels are the most vulnerable. In addition their present reliance on profits from liquor sales (Table 19) are also going to be affected by the expected continued strong competition from the sale of wine products in supermarkets. Once the authorities permit beer sales in grocery stores as well, then the future of the small hotel in its present form becomes even more precarious. Certain small hoteliers are therefore favouring a taverna-type of hotel, where accommodation is of secondary importance.

7.3.2 The lower limits of staffing (Table 46), is probably closer to the real scenario that is likely to be encountered. It is expected that the large staff turnover of over 60 per cent per annum will improve, which will help to force the real demand closer to this model.

A greater share of the foreign tourist market by the lower-graded hotels would help to improve low room-occupancy figures getting them closer to the higher values of the 3*, 4* and 5* counterparts (see Table 2). This would not necessarily mean more staff, although values in Table 46, for seven of the 19 skilled job categories do depend on 1* hotel ratios. A comparison between Tables 46 and 45 suggests that for all three scenarios considered the numbers of management trainees, restaurant managers, administrative staff, porters, chefs, kitchen supervisors and housekeepers could be reduced by virtually one half if the lowest staff to room ratio is to be followed throughout.

Domestic tourism is expected to improve as soon as the economic recession has passed over. To what extent these positive forces from Asians and Coloureds and finally Blacks (Table 42) will alleviate or even cancel these arguments raised under Section 6.2.3 will depend on various socio-economic-political factors.

7.3.3 The most probable scenario for skilled staff: According to the aforegoing it is therefore most likely that in the short-term, between 70 000 and 105 000 skilled workers will be required by 1990. This implies an additional demand of at least 35 000 skilled hotel workers above the 1982 figure (Table 7), or an increase of 5,2 per cent per annum until 1990.

In the medium-term, at least 99 000 skilled hotel workers are estimated to be required by the turn of the century (Table 46) assuming that a total of 4,0 million hotel guests will be realized by then. (Table 44).

In the long-term, at least 152 000 skilled hotel workers are required by the year 2020 (Table 46), provided that 6,2 million hotel guests are accommodated. (Table 44).

If the age distribution persists as shown in Table 10, then the demand will be particularly high for young employees, since almost 45,0 per cent of the major categories of skilled workers are under the age of 30 years. By 1990, therefore an additional 15 750 newcomers under the age of 30 years above the 1982 value, conservatively speaking, will be required as skilled workers in the hotel industry. This remains an appreciable challenge to the training establishments.

As far as race is concerned, Table 11 indicates that virtually one half, ie. 48,9 per cent of skilled workers are Blacks, followed by Whites (24,6 per cent), Coloureds (13,6 per cent) and Asians (12,9 per cent). In the near-term this means that the 1982 staff complement will have to grow by at least an additional 19 750 Black skilled workers by the year 1990. Read together with the previous paragraph, it therefore becomes obvious that training needs to be urgently stepped up, particularly for young, Black incumbents, to enable them to fulfil various skilled functions in hotels.

An important factor that has not been taken into account is the very high mobility of hotel staff. According to one source it was 65 per cent during 1982[36]. Naturally, not all staff is lost to the industry, but with turnover rates as high as 90 per cent p.a. for Whites and 55 per cent p.a. for Blacks, this does underline the fact that the quoted demands for staff are the very minimum requirements. It is also interesting to note that the highest staff turnovers were recorded for staff having worked for less than one year (56 per cent), and under 25 years of age (33 per cent) earning less than R500 per month (39 per cent)[36].

7.4 Total staff needs: Having determined the skilled staff needs for the short, medium and long-terms, it remains to complete the total picture. By assuming that the present ratio of skilled to unskilled workers in hotels remains the same, future total demands may be calculated by direct proportion. In Table 47 these results are given relative to the total number of hotel guests p.a. for each chosen period.

TABLE 47: TOTAL NUMBER OF EMPLOYEES REQUIRED IN THE SHORT, MEDIUM AND LONG-TERMS

Year	Number of hotel guests (in million)	Number of employees required (in million)		
		Skilled	Unskilled	Total
1982	0,798	0,030	0,019	0,049
1990	2,83	0,070	0,045	0,115
2000	4,03	0,099	0,063	0,162
2020	6,18	0,152	0,097	0,249

The relationship between the number of hotel guests as determinant and the number of skilled, unskilled and total employees thus required may be determined by plotting the values in Tables 47 as shown in Figure 7.1.

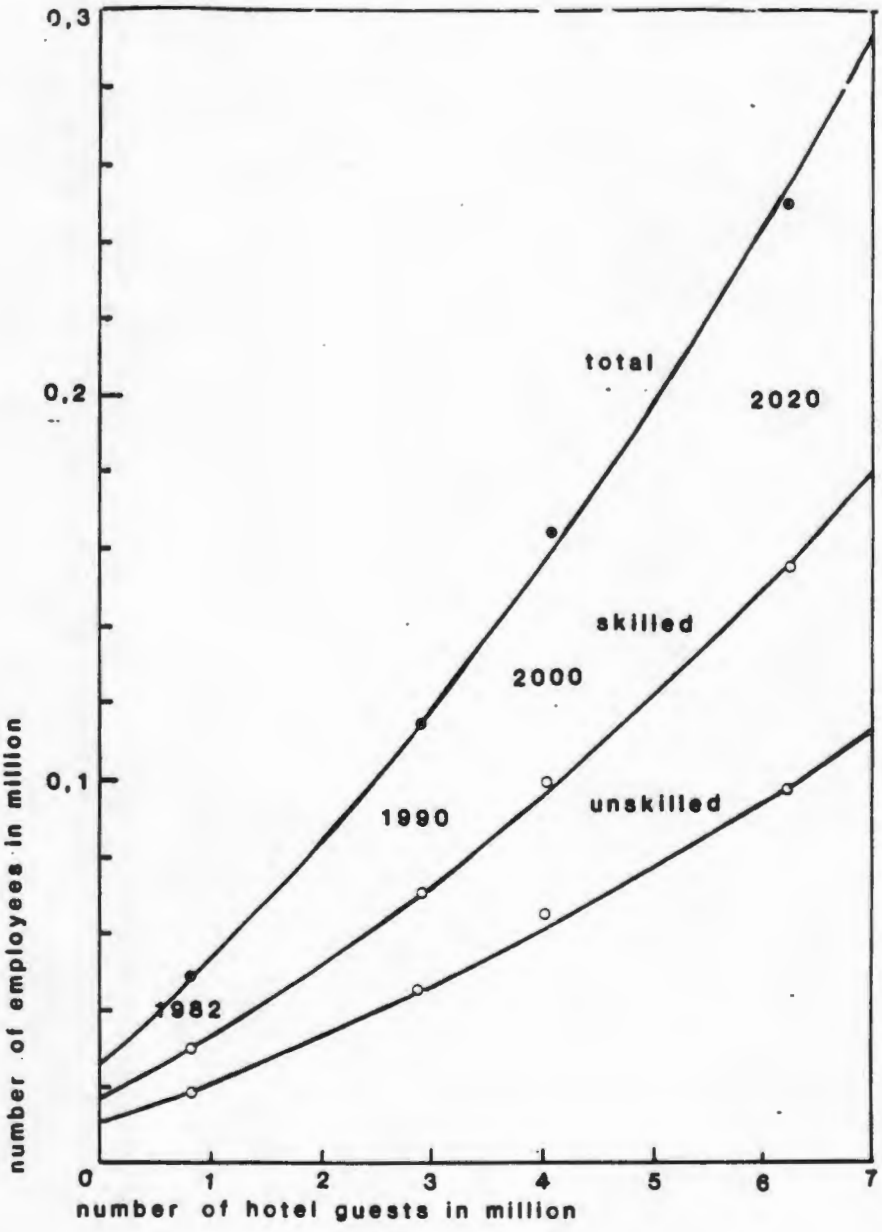

FIGURE 7.1 : NUMBER OF EMPLOYEES REQUIRED ACCORDING TO HOTEL GUESTS - LONG TERM

Three sets of near-linear curves are obtained that are, according to the Hewlett Packard STATP computer programme described by the following equations:

For skilled staff, $y = 0{,}0012\ x^2 + 0{,}0147x + 0{,}0170$ Eq 26

Hence for unskilled staff, $y = 0{,}0007\ x^2 + 0{,}0097x + 0{,}010$ Eq 27

and thus for total staff, $y = 0{,}0018\ x^2 + 0{,}0244x + 0{,}0274$ Eq 28

From Figure 7.1 it is noticeable that in all three cases the first point ie. the value for 1982 would be on the high side if one assumed a linear relationship. This implies that during 1982 there were generally too many employees, relative to the number of hotel guests.

In Figure 7.2 a linear approximation is introduced to simplify the above equations. All lines pass through the origin,

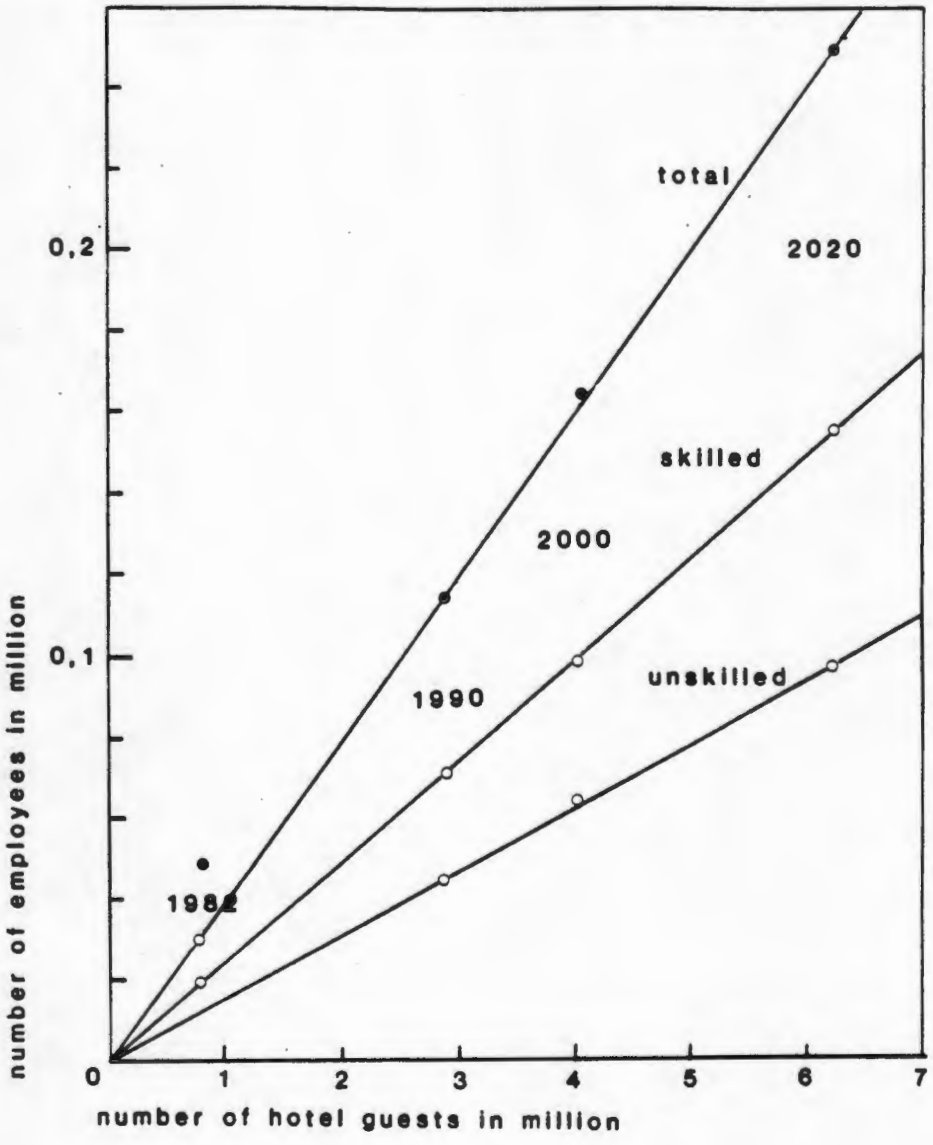

FIGURE 7.2 : NUMBER OF EMPLOYEES REQUIRED ACCORDING TO HOTEL GUESTS - LONG TERM

proving that theoretically, at least, there should be no hotel staff if there are no guests.

Based on the slopes of these simplified curves, the following values are obtained:

For skilled staff, $y = 0,024\ x$ Eq 29

For unskilled staff, $y = 0,015\ x$ Eq 30

and for total staff, $y = 0,040\ x$ Eq 31

These equations therefore imply that for every thousand hotel guests accommodated per annum, one requires

24,4 skilled employees,
15,5 unskilled employees, and therefore
40,0 staff members in total.

Assuming that the present racial mix[21] does not change significantly in future, then this implies a total staff complement for every thousand hotel guests accommodated per annum in South Africa, of

24,8	Blacks,
6,7	Whites,
5,8	Coloureds, and
2,7	Asians
40,0	

7.5 COMPARISON WITH OTHER RESULTS

As indicated in Section 1.3, other researchers relied on data from individual hotels. Neither the model by Diamond[37] nor that by Elkan[38] could be used with the data available in South Africa. The "global" approach used in this study however, succeeded in yielding some results that are comparable with those published in the literature in the following respect:

Fujii, et al, claim that: ".....staffing ratios in Hawaii are largely unrelated to establishment size, except in the cases of food service and professional, technical and managerial employment, where economies of scale exist."[7] In this study economies of scale were also found to exist, but only in the case of administrative staff (Figure 2), porters (Figure 4), and cooks, ignoring 1* hotels (Figure 8). Relative to revenue earned, accommodation staff as a whole (Figure 6) and catering staff as a whole (Figure 11) show economies of scale, accepting that higher-graded hotels are larger than lower-graded ones. This investigation could support the statement that "staffing ratios are largely unrelated to establishment size" only in the case of receptionists (Figure 3).

The claim that "staffing ratios initially fall with increasing hotel size, but eventually this ratio rises[7]", is supported here in the case of the U-shaped curves obtained for catering staff as a whole relative to occupied rooms (Figure 10) and barmen (Figure 12). In the case of managers and housekeepers the same U-shaped trend was noticeable on the computerised polynominal regression analysis. It was rejected, however, since the projected curve only started rising again well beyond the 5* hotel level.

7.6 CONCLUDING REMARKS

In this chapter the number of skilled and unskilled employees required in hotels were successfully related to the projected number of overseas and domestic tourists expected in South Africa in the short, medium and long-terms.

The approach of using the optimum existing staff ratio and then extrapolating it to the other hotel types is apparently a novel one and yields the results for skilled staff, summarized in Table 46. An approximation of total staff required ie., skilled and unskilled, by the years 1990,

2000 and 2020 is given in Figure 24. On this basis it was shown that 40 members of staff are required for every one thousand hotel guests accommodated per annum. This implies a racial mix on a national basis of approximately 25 Blacks to 7 Whites, 6 Coloureds and 3 Asians.

A comparison of the results obtained with those published in the literature suggests a reasonable correlation, although a very different approach was used in this investigation.

8. CONCLUSION

8. CONCLUSION

The objective of establishing optimal parameters of staff utilization in the South African hotel industry has been satisfied in this investigation. Although good, reliable statistics on tourism to and within South Africa are badly lacking, available data were used as a starting point to predict anticipated growth in the near, medium and long-terms as well as the corresponding hotel-staff requirements.

Employment multiplier

No suitable model of an employment multiplier could be found to fit the South African situation, as was explained in Section 1.3. An empirical approach therefore led to acceptable relationships between optimum staff loads of chosen skilled-job categories and the performance of various types of hotels. Deviations from these norms were identified and the possibility of rationalising certain employment patters, such as the introduction of female "manager-cum-housekeeper" in 1* hotels as suggested in section 4.1.

Present employment patterns

Virtually one half of all skilled workers are Blacks (Table 11). Forty-five per cent of all skilled workers are under 30 years of age and about one third are above the age of 40 years (Table 10). Very little use is being made of part-time staff.

From calculations for the skilled-staff requirements, it appears that an economy of scale exists as is suggested in the literaure,[7] although 1* hotels, as a group, do not fit this tendency (Table 12). Particularly the number of administrative staff (Figure 2) and accommodation staff (Figure 5), seem to increase with the staff grading, or size of an hotel. Tables 13 and 15 could serve as useful guides to work seekers, since they indicate the skilled-job requirements by the various hotel types and their regions in which they occur. Far more meaningful staff ratios were obtained in terms of star-grading than on a geographical-area basis. Greater Cape Town, however, appears to generally display very high skilled staff to room ratios (Tables 14 and 17). According to Figure 10, 5* hotels also employ a high number of catering staff relative to the revenue they earn.

Performance

In terms of revenue earned, bars remain fairly independent operations, irrespective of the hotel type, its size or its performance as an accommodation establishment. The Reef and the Natal coastal regions appear to have relatively impressive returns from accommodation. It would seem that on a regional basis, skilled accommodation staff is employed in accordance with the amount invested in an hotel, rather than on its performance.

Development of tourism

An attempt was made to estimate the expected development of the South African tourist industry, both for overseas (Table 38) and domestic tourists. In order to be able to estimate the latter, the future composition of the South African population was used (Table 39) and the anticipated future income ratios of these various population groups had to be estimated (Table 41).

Ensuing employment

Based on the estimated growth of the tourism industry in South Africa, the ensuing demand on local hotels was estimated as shown in Table 43. By using the optimal staff employment ratio and then extrapolating it to other hotel types in the short, medium and long-terms, future staff requirements are obtained as quoted in Table 46.

In summary, suffice it to add that on this basis, 40 members of staff are required for every one thousand hotel guests accommodated per annum. This implies a balance of about 3 skilled to every 2 unskilled employees in future.

9. REFERENCES

REFERENCES

1. HOUGH D.J. *New tourist board get to work.* The Citizen, Johannesburg, 19 October 1983.

2. ZEVENBERGEN A.P. Monthly Press Releases by the Bureau of Financial Analysis, University of Pretoria.

3. BODLENDER J. *Hotel and tourism development.* IHA/AH & MA Convention, New York, 10 to 16 November 1983.

4. ARCHER B.H. *Tourism multipliers: The State of the art.* University of Wales Press, 1977, p. 1-85.

5. HORWATH & HORWATH (UK) LIMITED. *Tourism multipliers explained.* Working paper presented to the World Tourism Organisation, London, 1982, 8 pp.

6. FERRARIO F.F. *Report on Symposium on Tourism in Southern Africa.* Tourism Association of Southern Africa, 18 February 1984, p. 4.

7. FUJII E.T. and MAK J. *The impact of hotel size on staffing levels in Hawaii.* International Journal of Tourism Management, March 1981 p. 30-35.

8. CENTRAL STATISTICAL SERVICES. *Tourism and migration: December 1982.* Statistical News Release P.7, June 1983, 15 pp.

9. DEPARTMENT OF INDUSTRIES, COMMERCE AND TOURISM. *Survey among foreign visitors to South Africa, August - November 1982.* 1983, 33 pp.

10. DEPARTMENT OF TOURISM. *Final Report on Domestic Tourism.* January 1980, 158 pp.

11. HORWATH & HORWATH INTERNATIONAL, NY. *Worldwide lodging industry.* 1983, p.9.

12. ZEVENBERGEN A.P. *Average monthly hotel ratios for the year ended December 1983.* Bureau of Financial Analysis, University of Pretoria, February 1984, 11 pp.

13. CENTRAL STATISTICAL SERVICES. *Statistics of registered hotels: December 1983.* Statistical News Release P.13.4, April 1984, 2 pp.

14. UKEN E-A. *Hotels want to attract the holidaying families.* Sunday Express, 6 June 1982.

15. UKEN E-A. *Hotel Prices.* Flying Springbok, November 1982, p. 69-70.

16. SA CENTRAL STATISTICAL SERVICES - continuous population survey.

17. QUARTERLY REVIES, SA RESERVE BANK.

18. SANLAM ECONOMIC REVIEW, December 1983, 12 pp.

19. BUREAU OF FINANCIAL ANALYSIS. *Manpower survey of South African hotel and catering industries, 1982.* University of Pretoria, 1983, 166 pp.

20. BUREAU OF FINANCIAL ANALYSIS. *Occupancy, income and general statistics of South African hotels for 1982.* University of Pretoria, 1983, 137 pp.

21. CENTRAL STATISTICAL SERVICES. *Labour Statistics: employment and earnings - wholesale, retail and motor trade, control boards and hotels, December 1981 to 1982.* Statistical News Release, P.8.4, 25 April 1983, 2 pp.

22. SMITH G.M. *A simplified guide to statistics.* JJ Little & Ives Co., New York, 1947, 109 pp.

23. MEDLIK S. *Trends in world tourism.* International Hotel Association, Paris, March 1983, 14 pp.

24. DEPARTMENT OF TOURISM. *Annual Report for the period 1 January 1979 to 31 December 1979.* Pretoria, 34 pp.

25. SOUTH AFRICAN TOURISM BOARD. *First Annual Report for the year ending 31 December 1983.* Pretoria, 5 September 1984, 22 pp.

26. AFRIKAANSE HANDELSINSTITUUT. Pretoria, AHI, *Economic Review*, November 1983, 23 pp.

27. RAND DAILY MAIL. *8 per cent Rise in S A Tourism likely.* Johannesburg, 5 June 1984.

28. ROSSOUW J. *Suid-Afrikaanse Bevolkingsgroei binne wêreld-perspektief.* Volkshandel, May 1984, p.23-6.

29. MOSTERT W.P. and VAN TONDER J.L. *Moontlike bevolkingsgroei in Suid-Afrika tot die middel van die 22e Eeue.* Pretoria, HSRC Report S/83, 1980, 312 pp.

30. CENTRAL STATISTICAL SERVICES. Pretoria: Private communication, 1985.

31. SPIES P.H. *Business futures 1984.* vol. II (Economic environment). Institute for Futures Research, University of Stellenbosch, October 1984, p. 6-7.

32. THE STAR. *New tourist strategy is imperative says Hough.* Johannesburg, 22 May 1984.

33. HORWOOD O. *Hotel industry warned.* The Star, Johannesburg 9 June 1984.

34. BEHRENS T. *Calls for more national parks, airports in South Africa.* Cape Argus, 3 October 1983.

35. RAPPORT. *Wielc rol om hotelkoste in toom te hou.* Johannesburg, 26 August 1984.

36. P E CONSULTING SERVICES. Private correspondence, 1983.

37. DIAMOND J. *Tourism's role in scenario development: the case re-examined.* Economic Development and Cultural change, vol. 3, no. 25, 1977, p. 123-130.

38. ELKAN W. *The relation between tourism and employment in Kenya and Tanzania.* Journal of Development Studies, vol. 2, no. 11, 1975, p. 60.