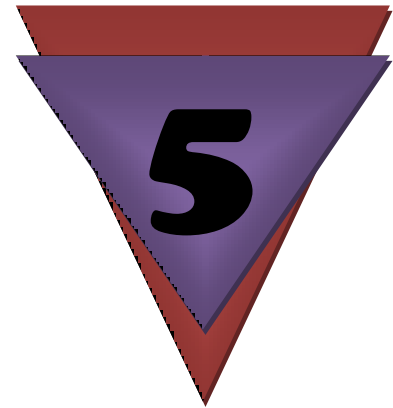# CHAPTER 5
EMPIRICAL RESULTS

5.1 INTRODUCTION

McCabe (2009:147) explains that market segmentation consists of a distinct group of tourists with similar needs and characteristics, enabling them to respond in a similar way towards a tourism product or destination. Therefore market segmentation plays an important role in the tourism industry. Segmentation also allows marketers to focus their product efforts on a particular type of tourist. The purpose of this chapter is to describe the results of the survey with specific focus on the segmentation of a group of tourists by means of cluster analysis.

In the case of this study a three-sectioned questionnaire was developed based on the segmentation and travel behaviour information of black tourists visiting Abrahamsrust Resort in the Vaal Region (See Appendix A). Section A of the questionnaire focused on the segmentation information of the respondents. The questions in Section B related to the respondents' media preferences and Section C to the travel motivations of respondents. This information is reflected upon in this chapter enabling market segmentation. Firstly, the descriptive results of the study will be discussed followed by the exploratory results.

5.2 DESCRIPTIVE RESULTS

In this section, the descriptive analysis is highlighted so as to provide an overview of the profile of only black visitors to the Abrahamsrust Resort before performing market segmentation.

5.2.1 DEMOGRAPHIC SEGMENTATION

5.2.1.1 Gender

It is clear from Figure 16 (on the following page) that 51% of the respondents were female and 49% male; therefore a fairly equal distribution regarding gender.
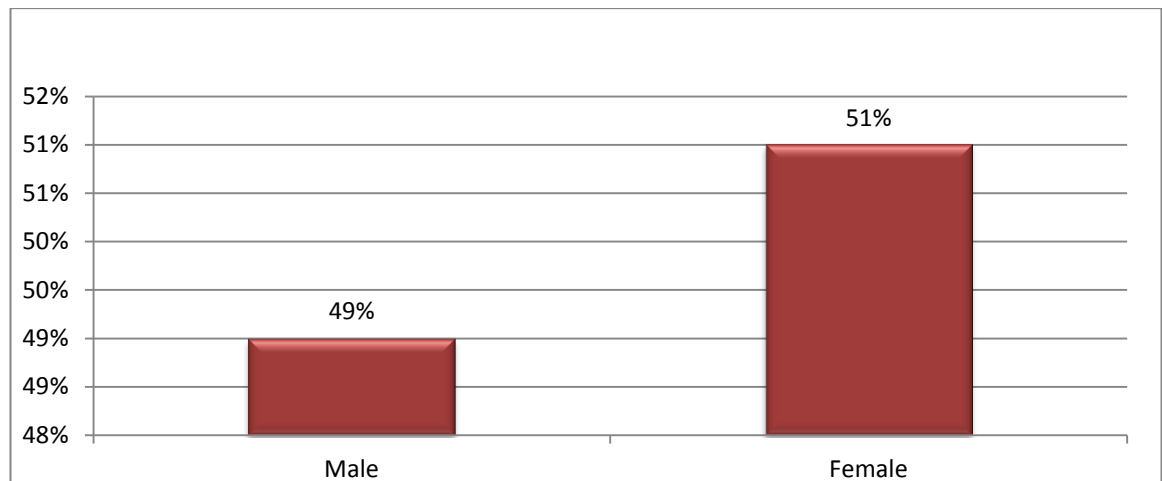
Figure 16: Gender

5.2.1.2 Age group

Table 9 indicates that the majority of respondents (54%) were between ages 21 and 30 years. This was followed by those between 31 and 40 years of age (32%) and 20 years and younger (9%). Only 5% of respondents were older than 40 years. The average age of respondents to the resort was 29 years, which is a very young market and this holds potential for the resort. This will however require additional research to make sure of the potential of this group as a possible future market.

Table 9: Age

| AGE CATEGORY	PERCENTAGE
≤20 Years of age	9%
21-30 years of age	**54%**
31-40 years of age	32%
> 40 years	5%

5.2.1.3 Home language

It is clear from Table 10 that most respondents were Sesotho speaking (31%), followed by isiZulu-speaking participants (20%) and other languages (16%). This correlates with the cultural groupings present in the Vaal Region.

Table 10: Home language

HOME LANGUAGE	PERCENTAGE
English	2%
Sesotho	**31%**
Venda	4%
Xhosa	8%
Zulu	**20%**
Pedi	10%
Tswana	10%
Other	16%

5.2.1.4 Marital status

As depicted in Figure 17, most of the respondents (49%) to Abrahamsrust Resort were not married followed by 34% that were married, 10% living together, 5% divorced and 2% widow/ed. This correlates with the age categories in which most respondents of this study were fairly young.
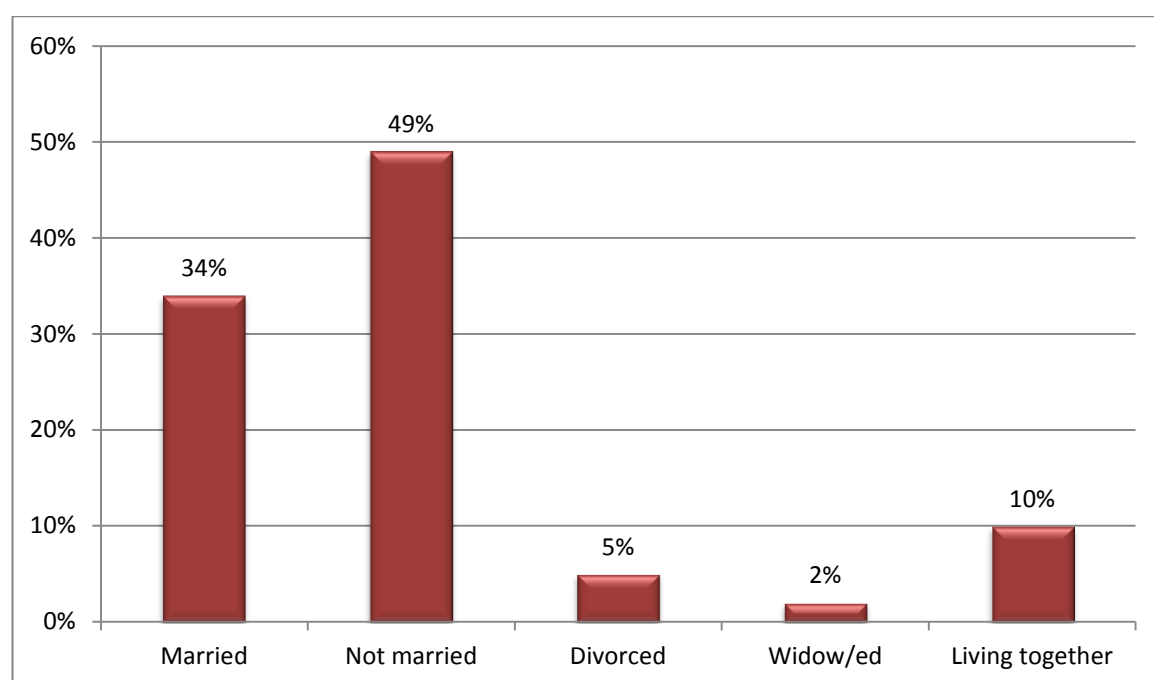
Figure 17: Marital status

5.2.1.5 Number of accompanying children

Most respondents were accompanied by between 1 and 2 children (40%), closely followed by those accompanied by no children (39%). Eighteen percent of the respondents were accompanied by 3 to 5 children (18%) (Table 11).

Table 11: Number of children

NUMBER OF ACCOMPANYING CHILDREN	PERCENTAGE
0	39%
1-2	**40%**
3-5	18%
6-7	3%

5.2.1.6 Education level

As can be seen in Figure 18, the majority of those that participated in the study have a diploma or a degree (52%) followed by 37% with a matric/grade 12 qualification. Five percent(5%) of the respondents held postgraduate qualifications, followed by 4% with professional qualifications, 1% with no schooling and 1% of them were still studying.
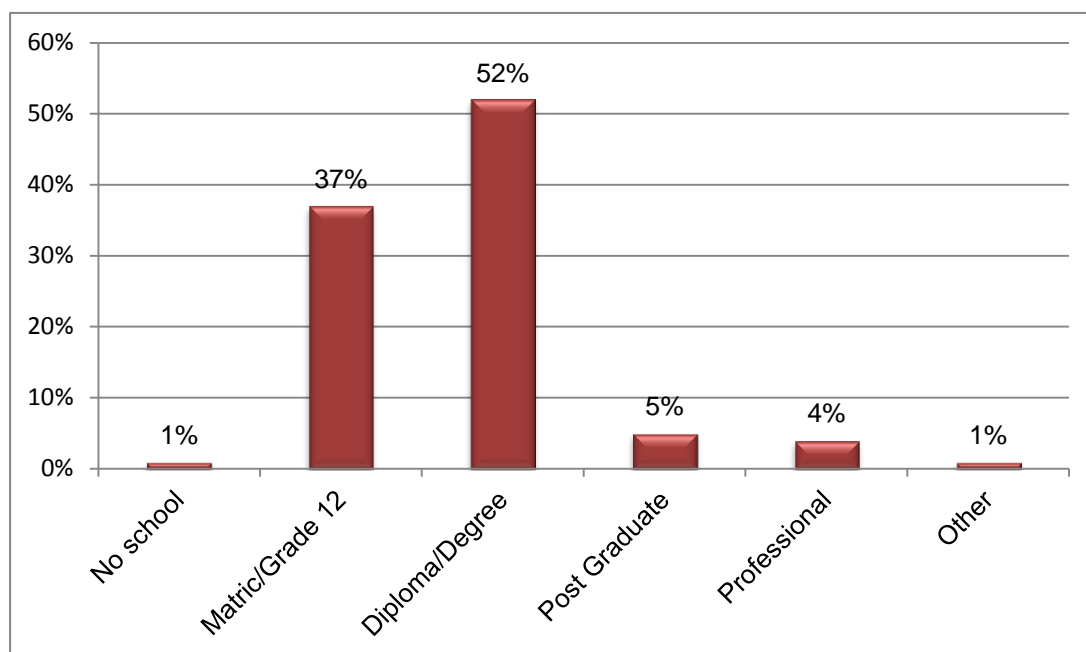
Figure 18: Education level

5.2.2 GEOGRAPHIC SEGMENTATION

5.2.2.1 Province of residence

Table 12 clearly indicates that most respondents reside in Gauteng Province (66%), which is followed by respondents from Free State (20%) and 5 percent of the respondents residing in Limpopo. A possible reason for the higher number from Gauteng and Free State is the closeness thereof to the Vaal Region.

Table 12: Province

PROVINCE	PERCENTAGE
Gauteng	**66%**
Eastern Cape	1%
Free State	**20%**
North West	4%
Mpumalanga	2%
KwaZulu-Natal	1%
Limpopo	**5%**
Outside South Africa	1%

5.2.2.2 Town/city of residence

The majority of respondents were from Vanderbijlpark (N=51), followed by Sebokeng (N=25), Sasolburg (N= 22), Soweto (N=13) and Sharpeville (N=13). This clearly indicates that most of the respondents were from the Vaal Region in Gauteng Province.

5.2.3 SOCIO-ECONOMIC SEGMENTATION

5.2.3.1 Occupation

Table 13 indicates that most respondents to Abrahamsrust Resort have other occupations than those listed, which mainly include students, police officers and nurses. This was followed by unemployed respondents (12%), self-employed respondents (12%), respondents in education positions (11%) and those in sales positions (10%).

Table 13: Occupation

OCCUPATION	PERCENTAGE	OCCUPATION	PERCENTAGE
Professional	5%	Administrative	6%
Management	9%	Civil Service	5%
Self-employment	**12%**	**Education**	**11%**
Technical	7%	House duties	1%
Sales	**10%**	**Unemployed**	**12%**
Farmer	1%	**Other**	**19%**
Mining	2%		

5.2.4 PSYCHOGRAPHIC AND BEHAVIOURAL SEGMENTATION

### 5.2.4.1 Number of visitors in the travelling group

The majority of respondents as indicated in Table 14 said they visit the resort in groups of 3 to 5 people (40%), while 24% visit the resort in groups of 1-2 and 20+ (10%). It should be noted that this resort is a popular day-visiting site for larger groups such as school and university groups.

Table 14: Number of visitors

| NUMBER OF VISITORS	PERCENTAGE
1-2	24%
3-5	**40%**
6-10	19%
11-20	7%
20+	10%

5.2.4.2 Recreation activities for children

Figure 19 illustrates that 87% of respondents to Abrahamsrust Resort were not accompanied by children which is an interesting finding since this is a family resort. The remaining thirteen percent preferred games (4%), parent and child activities (3%), educational activities (2%) and recreational activities (2%).
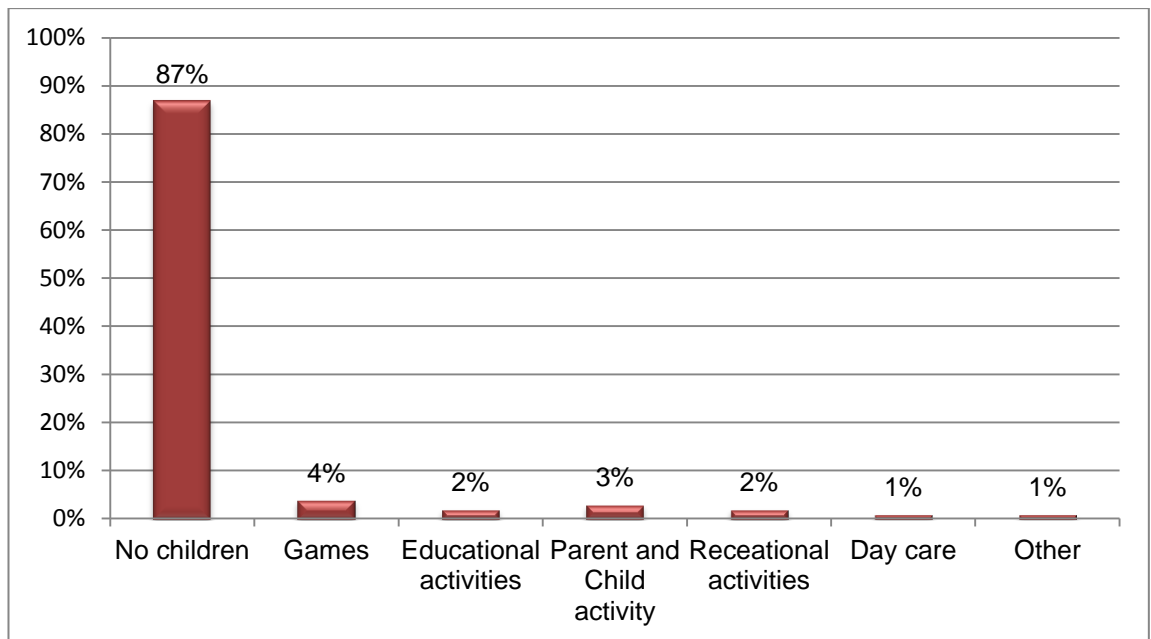
Figure 19: Preferences regarding recreation activities for children

5.2.4.3 Number of days at the resort

This resort is clearly attracting excursionists (97%) and only 3% visited the resort for two and more days. Respondents thus mainly attended the indicated events. The ideal situation is to persuade the market to visit the resort again and maybe for a longer period.
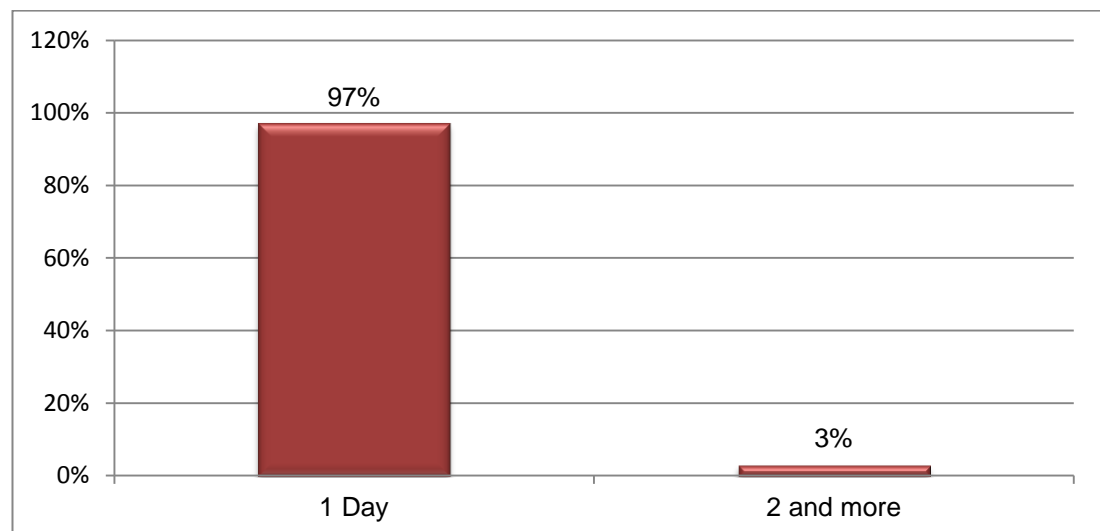
Figure 20: Number of days at the resort

5.2.4.5 Spending patterns

Table 15 indicates that respondents spend R752.00 on average during their day visit to the resort, with the highest amount being spent on alcoholic drinks (R331.00) and food (R192.00).

Table 15: Spending patterns

SPENDING CATEGORY	AVERAGE SPEND PER DAY
Food	R192.00
Alcoholic drinks	R331.00
Non-alcoholic drinks	R55.00
Entrance fees	R156.00
Other (Specify):	R18.00
TOTAL SPEND PER DAY	**R752.00**

5.2.4.6 Number of visits to the resort in 2010

Based on the information indicated in Table 16 it is evident that 62% had visited the resort between 1 and 2 times in 2010, followed by 22% that had not visited the resort. Thirteen percent of the respondents had visited the resort between 3 and 5 times and only 3% more than 6 times. Respondents visited the resort on average only once during 2010. This is an aspect that demands attention since the infrastructure already exists.

Table 16: Number of visits to the resort in 2010

NUMBER OF VISITS	PERCENTAGE
0	22%
1-2	**62%**
3-5	13%
6+	3%

5.2.5 MEDIA PREFERENCES

The following analyses reflect the results concerning the media preferences of respondents. This information is important for determining the most appropriate media to inform potential visitors about the resort. Attention is given to magazines, television programmes, newspapers and radio stations.

5.2.5.1 Media preferences

Table 17 reveals that the majority of respondents read *Drum*, watch *Generations*, read the *Daily Sun* and listen to *Lesedi FM*. The other media were also included in the table and this provides guidelines as to which medium to use in order to attract the current market.

Table 17: Media preferences

MAGAZINES	NR OF RESPONSES	TV PROGRAMMES	NUMBER OF RESPONSES
Drum	62	Generations	76
Move	58	News	40
True love	58	Rhythm City	23
Bona	33	Top Billing	21
Kick-Off	29	Scandal	20
People	21	Soccer Zone	15
NEWSPAPERS	**NUMBER OF RESPONSES**	**RADIO STATIONS**	**NUMBER OF RESPONSES**
Daily Sun	121	Lesedi Fm	103
Sowetan	107	Metro Fm	83
City Press	75	Y Fm	69
Sunday Times	57	VUT Fm	51
The Star	49	Khaya Fm	33
Sunday Sun	27	5 Fm	23

5.2.5.2 Heard of the resort

Most of the respondents heard about the resort through friends and family (40%) followed by radio announcements and advertisements (25%). Several of the respondents also indicated that their visit was encouraged by previous visits (16%), which is very good, meaning that respondents return to this resort.
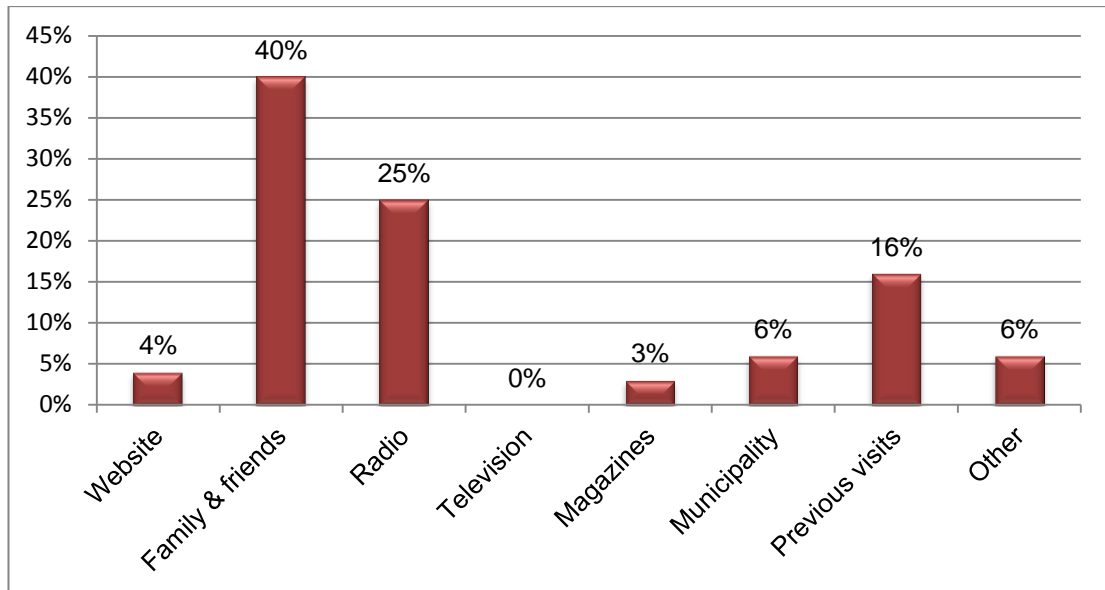
Figure 21: Heard of the resort

5.2.6 TRAVEL MOTIVATION

This section focuses on the respondents' reasons and motivation for visiting the Resort. Results are discussed based on the 5-point Lickert-scale responses as well as the mean values associated with the travel motivations.

Table 18: Travel motivation

	Not at all important	Less important	Important	Very important	Extremely important	Mean Value
To get away from routine	9%	18%	**34%**	18%	21%	3.24
To relax	1%	7%	30%	26%	**36%**	**3.90**
To spend time with family	12%	15%	**27%**	21%	26%	3.35
To spend time with friends	5%	14%	**32%**	26%	23%	3.47
To meet new people	8%	19%	**29%**	24%	21%	3.31
The resort adheres to needs	13%	20%	**38%**	15%	14%	3.04
Variety of activities offered	11%	28%	**29%**	19%	14%	2.96
Quality service delivered	8%	25%	**34%**	22%	12%	3.05

Sociable resort	5%	21%	**42%**	20%	13%	3.14
Closest resort	15%	21%	**28%**	20%	17%	3.03
Benefit of children	**34%**	24%	20%	15%	7%	2.38
Visit is a regular activity	20%	24%	**30%**	17%	8%	2.69
Explore the environment	9%	19%	**40%**	21%	10%	3.02
Provides a unique experience	5%	18%	**38%**	24%	14%	3.23
Reasonably priced	7%	15%	**36%**	24%	18%	3.29
Value for money	9%	18%	**34%**	23%	17%	3.21
Excellent facilities offered	9%	19%	**35%**	20%	16%	3.16
Easily accessible	6%	12%	**42%**	22%	19%	3.36
To be at leisure	3%	8%	**37%**	28%	23%	3.60
It is a safe resort	4%	8%	**35%**	26%	27%	3.62

Respondents indicated the following as an *extremely important* reason for their visit to the resort:

- To relax   (36%)

Respondents indicated the following as *important* reasons for their visit to the resort:

- It is a sociable resort   (42%)
- It is easily accessible   (42%)
- To explore the environment   (40%)

Respondents indicated the following *reason as not at all important* for their visit to the resort:

- For the benefit of the children (34%)

Based on the *mean value* of the results it was clear that respondents visit the resort:

- To relax
- Because it is a safe resort
- To be at leisure

5.3   EXPLORATORY RESULTS: CLUSTERING

Cluster analysis attempts to group individuals based on their common features with the intention of producing homogeneity within clusters and heterogeneity between clusters. Thus, for purposes of this study, cluster analysis was conducted based on travel motivations. In order to maximise within-cluster homogeneity, the Ward's clustering method (developed in 1963) was applied to classify visitors to Abrahamsrust Resort into mutually exclusive and unique groups. In addition, this method considered a common hierarchical clustering approach in marketing research and was found to produce the best cluster solution in this study, compared to other solution algorithms. 'Best' in this case relates to the classification of the most distinguishable, significant and interpretable segments, tested by alternative solution methods. The Ward's method commences with each element (or respondent) individually, then systematically joins together elements that are most similar so as to form clusters, and then continues joining clusters until all the elements eventually form one single cluster.

The focus is therefore to reduce the sum across clusters of the total squared distances from the centroid in each cluster to the objects in the cluster (Lehmann, Gupta, Steckel 1998:576). Since the variables used to cluster the sample were measured on a nominal scale, dummy variables (or binary variables) were used to code the presence (or absence) of certain properties for each element or individual. This enabled the calculation of the required distance matrix, using a distance measure called the Jaccard distance. As a result, cluster analysis was considered the most appropriate technique for this study and three clusters were identified (See Figure 22).
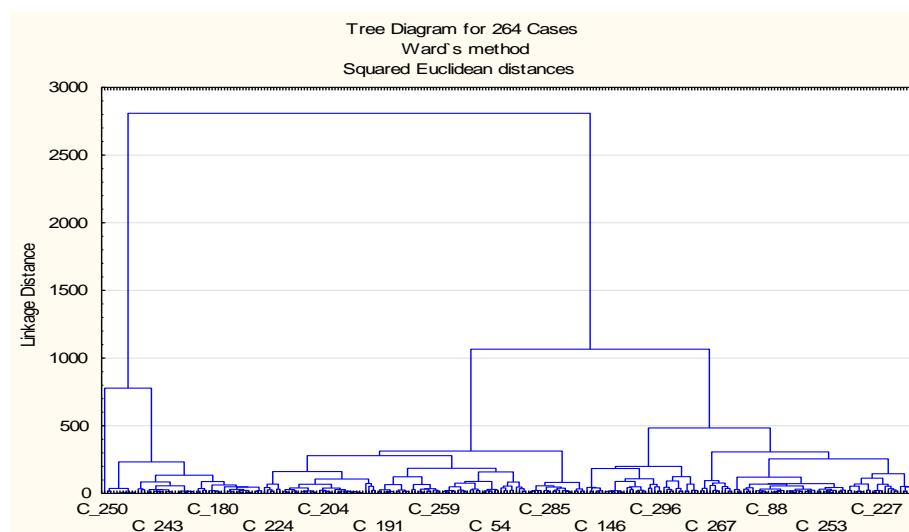

Figure 22: TREE-diagram or Icicle Plot

Clusters must be formed with a low degree of intra-group and high degree of inter-group variation. The clustering was based on travel motivation, and nominal names were based on the three categories. *Cluster 1 refers to Social Relaxers, Cluster 2 refers to the Quality Seekers and Cluster 3 to the Loyal Relaxers (*See Table 19).

Table 19: Summary of base (dependent) variable constituting the three-cluster solution for Abrahamsrust Resort

VARIABLES	CLUSTERS			F	SIG
	Social Relaxers N = 141	Quality Seekers N = 71	Loyal Relaxers N = 51		
Travel motivations:	Mean & Std Dev	Mean & Std Dev	Mean & Std Dev		
To get away from routine	3.12	2.87	**4.20**	22.27	.000
To relax	**3.89**	**3.58**	**4.45**	12.80	.000
To spend time with family	3.55	2.54	**4.27**	35.95	.000
To spend time with friends	3.41	2.97	**4.25**	22.35	.000
To meet new people	**3.38**	2.61	**4.24**	32.72	.000
The resort adhere to needs	2.89	2.20	**4.33**	82.28	.000
Variety of activities offered	3.08	1.99	**4.25**	87.58	.000
Quality service delivered	3.16	2.21	**4.06**	61.79	.000
Sociable resort	3.18	2.48	**3.88**	36.37	.000
Closest resort	2.97	2.52	**4.20**	34.65	.000
Benefits of children	2.30	1.59	**3.78**	68.26	.000
Visit is a regular activity	2.60	2.03	**4.16**	76.96	.000
Explore the environment	3.01	2.32	**3.96**	41.78	.000
Provides a unique experience	3.21	2.49	**4.33**	66.54	.000
Reasonably priced	3.27	2.48	**4.43**	65.11	.000
Value for money	2.35	**4.53**	3.30	87.31	.000
Excellent facilities offered	2.37	**4.37**	3.22	64.98	.000
Easily accessible	3.34	2.82	**4.39**	41.85	.000
To be at leisure	3.23	**4.35**	3.61	22.03	.000
It is a safe resort	2.90	**4.39**	3.64	39.54	.000

Cluster 1: Social Relaxers

As displayed in Table 20, the first cluster, among three clusters, appears to visit the resort to relax and meet new people to a higher degree than the other clusters. This group is definitely visiting the resort to have a good time and spend time with other

people. The activities offered at the resort should address these needs of the Social Relaxers.

Clusters 2: Quality Seekers

This cluster visits the resort because of value for money, consideration of excellent facilities, it being a safe resort and for them to be at leisure. This group has very specific needs when deciding where to travel. They are more aware of what is offered and base their decisions on this information. For this group it is also about looking at the quality of the facilities and what is on offer. Communication to this group should clearly state the facilities and infrastructure of the resort.

Cluster 3: Loyal Relaxers

Cluster 3 comprises the loyal visitors to the resort and their motivation on almost all the variables is the highest. They have been to the resort and know what to expect. This cluster indicates motivation in terms of getting away from routine, to relax, to spend time with family and friends, the variety of activities offered, it being close, the quality of the service delivered, it offering excellent facilities and being an easily accessible resort. They stay fairly close to the resort, which can be a prominent factor in their decision making, but they also seek a place in which to relax and enjoy themselves.

With regard to travel motivations identified it was found that there are significant differences between these three clusters. However, they all consider visiting for relaxation as important which can then be considered as the main motivation for various markets to visit this resort. Besides only identifying the three clusters it is important to also describe the clusters according to the other variables measured in the questionnaire. This will be dealt with in the subsequent section.

5.3.1 Analysing the clusters

The clusters are analysed next in terms of their demographic and behavioural characteristics.

5.3.1.1 Demographic segmentation

Besides gender, no significant differences were found between the three clusters.

Table 20: Demographic characteristics: Chi-square tests

VARIABLES	Social Relaxers	Qualify Seekers	Loyal Relaxers	Chi-square P-value
Gender:				.038
Male	44%	**62%**	**55%**	
Female	**56%**	38%	45%	
Language:				.936
English	2%	1%	2%	
Other	**98%**	**99%**	**98%**	
Marital status:				.092
Married	39%	33%	**44%**	
Not Married	**41%**	**56%**	**32%**	
Divorced	9%	3%	4%	
Widow/er	2%	0%	6%	
Living together	9%	9%	**14%**	
Education:				.313
No school	0%	1%	0%	
Matric/Grade12	35%	30%	**43%**	
Diploma, Degree	**51%**	**54%**	**51%**	
Postgraduate	10%	7%	4%	
Professional	21%	7%	2%	
Other	1%	0%	0%	
Occupation:				.173
Professional	7%	10%	-	
Management	12%	8%	-	
Self-employed	**17%**	9%	10%	
Technical	7%	8%	10%	
Sales	11%	**13%**	8%	
Farmer	4%	0%	0%	
Mining	2%	3%	4%	
Administrative	4%	2%	10%	
Civil service	6%	9%	2%	
Education	7%	**12%**	8%	
House duties	1%	3%	0%	
Unemployed	8%	8%	**20%**	
Other	**17%**	**16%**	**22%**	

Province:				.246
Gauteng	**66%**	**66%**	**84%**	
Eastern Cape	1%	1%	0%	
Free State	**23%**	**21%**	**10%**	
North West	1%	6%	2%	
Mpumalanga	2%	0%	2%	
KwaZulu-Natal	1%	3%	0%	
Limpopo	4%	1%	0%	
Outside RSA borders	1%	1%	2%	

P<0.05 – Significant differences

Table 21: Demographic characteristics: ANOVA

Variables	Social Relaxers	Qualify Seekers	Loyal Relaxers	F	Sig
Age	29	29	30	.168	.845

Cluster 1: Social Relaxers

When analysing Cluster 1 as indicated in Tables 20 and 21, it is clear that most of the respondents were mainly female (highest percentage of the three clusters), mostly not married and/or married, hold a diploma or a degree but also a matric qualification. These respondents mainly are self-employed or hold other positions, currently as students. They reside in Gauteng and Free State Provinces.

Cluster 2: Quality Seekers

When analysing Cluster 2, it is fairly clear that most of the respondents were male and not married. The higher percentage of this group of respondents hold a diploma or a degree and a smaller percentage of them hold a matric/grade 12 qualification. These respondents mainly hold other types of occupations as, for instance police officers and nurses. This cluster resides in Gauteng Province but also in Free State Province.

Cluster 3: Loyal Relaxers

Cluster 3 consists of a more equal distribution between males and females, who are married. These visitors mainly have a diploma/degree and matric/grade qualification. However, they mostly have other occupations and reside in Gauteng (highest percentage of the three clusters) and also (less) in Free State.

It is fairly clear that based on the demographic characteristics, very few differences occur between the clusters. Thus even though the travel motivations differ between the clusters, the demographic characteristics are basically the same. In summary it can be concluded that most respondents hold a diploma or a degree and reside in the Gauteng and Free State Provinces. Clusters 1 and 2 formed a group of unmarried respondents. Similarities between clusters 2 and 3 are that most respondents are male. Cluster 3 has the highest percentage of married respondents, and cluster 1 the highest percentage of female respondents.

5.3.1.2 Behaviour segmentation
The following tables relate to the behavioural segmentation variables.

Table 22: Behavioural resort characteristics: ANOVA

Variables	Clusters			F	Sig
	Social Relaxers N = 141	Quality Seekers N = 71	Loyal Relaxers N = 51		
	Mean & Std Dev	Mean & Std Dev	Mean & Std Dev		
Number of visits to the resort in 2010	1.35	1.59	1.54	.873	.419
Number of people visiting the resort	18	22	36	.704	.495
Number of children accompanying their parents	1.45	1.46	1.90	1.45	.228
Number of days at the resort	1.01	1.00	1.06	2.92	.056

Table 23: Behavioural resort characteristics: Chi-square tests

	Social Relaxers N = 141	Quality Seekers N = 71	Loyal Relaxers N = 51	Chi-square
Number of People in a group				.919
1=<2	**24%**	**25%**	**32%**	
2=>2<5	**43%**	**35%**	**32%**	
3=>5<10	18%	23%	22%	
4=>10<20	7%	6%	6%	
5=>20	8%	10%	9%	

	Social Relaxers N = 141	Quality Seekers N = 71	Loyal Relaxers N = 51	Chi-square
Number of accompanying children				.654
0=0	**35%**	**39%**	**26%**	
1=1	**25%**	**23%**	22%	
2=2	20%	14%	20%	
3=>3	19%	20%	**28%**	
4=>6	1%	4%	4%	
Recreation activities				.014
No accompanying children	**87%**	**94%**	**76%**	
Games (activity book)	7%	2%	0%	
Education talk	0%	0%	8%	
Parent-and-child activities	3%	2%	3%	
Recreation Programmes	2%	2%	3%	
Day care	1%	0%	3%	
Other	0%	0%	5%	
Number of 2010 Visits				.627
0	**22%**	**21%**	**22%**	
1	**48%**	**41%**	**34%**	
2	14%	**21%**	**22%**	
>3	16%	17%	**22%**	

P<0.05 – Significant differences

It can be seen in Tables 22 and 23 that clusters differed in terms of number of days spent at the resort as well as the recreation activities preferred for children.

Cluster 1: Social Relaxers

It is clear that most of the respondents in cluster 1 travelled in smaller groups and have fewer children accompanying them on the trip. Therefore they travel in a group of two and less than five, have one child or were not accompanied by children. This group visited Abrahamsrust Resort once but with a small percentage of those who had never visited it in 2010.

Cluster 2: Quality Seekers

Cluster two is the second group with respondents travelling in a group of two and five that have one child or were not accompanied by children. They visited the resort

once in 2010 and only for one day. The quality seekers are travelling in groups of between two and five.

Cluster 3: Loyal Relaxers

In this cluster most respondents were travelling in a group of between two and five, have three children but were not necessarily accompanied by them. They spend more time at the resort than the other two clusters and can be seen as more loyal to the resort.

When comparing the three clusters, it was found that the results illustrate that most respondents were travelling in a group of between two and five, were not accompanied by children and had visited the resort once in 2010. Clusters 1 and 2 are quite similar whereas cluster 3 differs regarding children.

Recent studies on segmentation studies of resort visitors are scarce, especially in the South African context. A study done by Inbakaran and Jackson (2005) on resort visitors also revealed four clusters: *Romantics, Immersers, Tasters and Veterans*. The clusters differed in terms of gender ratio, age, level of education, stage of life cycle, duration of patronage and the main reason for choosing the destination. Comparisons between the clusters were based on satisfaction. Liang and Chen (2006) segmented visitors to top-notch hot-spring resorts by means of benefit segmentation. They revealed three clusters, namely *Business and luxury type, Family and friendship type and Recuperation and health protection type.* These groups were then compared regarding their demographic and trip-related characteristics. These clusters were totally different from the clusters identified above. It was also difficult to compare international studies of this nature in the absence of similar national studies. It is clear that due to the different variables that can be used in clustering it is difficult to compare the results of the current study with that of others. However, it provides valuable information to the resort under study and contributing to the expansion and focus of their marketing efforts.

5.4   CONCLUSIONS

The purpose of this chapter was to focus on describing the results of the survey with specific focus on the segmentation of a group of tourists by means of a cluster analysis. Firstly it was clear that there was a fairly even distribution between male and female respondents with an average age of 29 years. These respondents

mostly speak Sesotho, are not married, and have either no or between 1 and 2 children.

The respondents are highly educated, holding either a degree or a diploma, are either not employed or self-employed and reside in Gauteng, more specifically Vanderbijlpark, Sebokeng and Sasolburg. They enjoy visiting the Abrahamsrust Resort in groups of between three and five people and spend only one day at the resort during which they spend most money on alcoholic drinks. These respondents enjoy reading Move and Daily Sun, listen to Lesedi FM and watch Generations on television. They had also learnt about the resort through family and friends, radio and previous visits. Their visit to the resort is motivated by relaxation needs, leisure needs and the fact that it is considered to be a safe resort.

The clustering revealed three significant clusters based on travel motivations, namely Social Relaxers, Quality Seekers and Loyal Relaxers. Cluster one is motivated by social and relaxing needs, cluster two focuses on quality and value for money aspects and cluster three seems to be the loyal visitors to the resort travelling for relaxation purposes. In terms of describing the three clusters it was found that the demographic segmentation variables did not differ significantly between the clusters, with only a small difference in terms of gender. In terms of describing the behavioural segmentation variables it was also found that the clusters did not differ significantly but differences were found on the number of days at the resort and the recreation activities preferred for children. Besides the differences in travel motivations it was thus found that the current market is very homogenous. This holds certain implications for the marketing strategy of the Abrahamsrust Resort.