



An exploratory investigation of visitor spending at an urban tourist attraction

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Abstract

The National Zoological Gardens is the largest and only nationally managed zoological garden (zoo) in South Africa. Situated in the Pretoria city centre, the zoo has considerable importance for the community and the region. In order to manage the sustainability of the National Zoological Gardens and ensure its future success, it is vital to understand the determinants of visitors' spending. Tourism has been characterised as an economic driver of the 21st century due to the multiplier effect of tourist spending and linkages to other industries. Therefore, the purpose of this research was to analyse visitor spending at the National Zoological Gardens. Quantitative research was conducted by means of a self-administrated questionnaire, and a total of 443 (n) questionnaires were obtained during the research period. Analysis of Variance comparisons were used with Tukey's multiple comparisons and t-tests to determine the relationships between demographic variables and spending patterns. Findings will assist the management of the National Zoological Gardens in planning and sustainability, creating additional means of increased spending within the zoo.

Keywords: Urban tourism; Visitor spending; Zoological gardens, visitor profiling, ANOVA.

Introduction

Tourism represents one of the largest and fastest-growing economic sectors in southern Africa. Although the majority of visitors to the region are considered nature-based tourists, there is a significant proportion of tourism that takes place in urban environments (Rogerson, 2012). With the economic downturn in the global economy, many countries, including South Africa, have focused on tourism as the potential driver for economic growth. For urban destinations to be successful, it is essential that these destinations manage their various tourist attractions appropriately. One aspect of this includes developing a greater understanding of the demand continuum in the tourism industry through profiling and assessment of visitor spending.

This study focussed on analysing the profiles and spending patterns of visitors to the National Zoological Gardens (NZG) of South Africa as an urban attraction. The reasoning behind the choice of location is that the NZG is the largest and only nationally managed zoological garden (zoo) in South Africa (NZG, 2016). The 85-hectare zoo is situated in the city centre of Pretoria, the administrative capital of the country. As the administrative capital, Pretoria



has significant appeal to diplomatic travellers due to the high number of embassies and government departments, and is also attractive to historical, educational, sport and shopping tourists (South African Tourism 2016). Urban attractions in cities are said to play a major role in the urban economic regeneration of many globally-recognised cities (Plaza & Silke, 2009). The NZG as a major attraction in Pretoria is pivotal in this regard.

This paper consists of four main parts: an analysis of the literature review, addressing issues related to the global economic crisis, the importance of tourism for urban regeneration and visitor-attraction management through profiling and assessing visitor spending behaviour; a description of the research methodology; the results of the research; and conclusions and recommendations.

Literature review

Since 2009, the world economy has lacked activity and progress due to the global economic recession. Although the global economy is set to grow slowly during the period 2016–2017 by an anticipated 3.2% (IMF, 2016), the global economic outlook is unable to free itself from global uncertainty. Tourism has not been immune to the global recession. Although the service-led tourism industry did not suffer as severely as many product-based industries, tourism may take some time to recover and reach previous sustainable levels, which may be due to increased unemployment and thus, spending-power of tourists employed in product-led industries (Smeral, 2010).

Although tourism may have been severely affected by the global economic downturn, it is possible to use tourism as a mechanism for local economic development. Tourist attractions have been seen as job-creation mechanisms and as a result, have been included as strategies for economic development in countries such as South Africa (Coetzee, Hermann & Geldenhuys 2010). Tourism has proved to provide a direct contribution to an economy such as South Africa's real gross domestic product (GDP) in both the short and long term (Akinboade & Braimoh, 2009).

Ashworth and Page (2010) provide an overview of the term 'urban tourism' but do not present a clear definition. Edwards, Griffin and Hayllar (2008), however, provide some clarity regarding a definition. They state that urban tourism is tourism that takes place in urban areas where a significant number of people reside. McIntyre, Knowles-Yáñez and Hope (2000) briefly describe urban tourism as the opposite of natural tourism, that is, tourism that takes place in areas created by man. These include core areas such as cities as well as peripheral areas such as open spaces (McIntyre et al., 2000). Urban tourism may also be associated with other forms of tourism related to conferences and events, culture, gastronomy, nightlife, shopping and sport (Ashworth & Page, 2010).

Cities around the world, including Africa, have become synonymous with tourism. These urban spaces provide a 'residential basis' for tourism companies, infrastructure and other factors associated with the supply and consumption of tourism products (Cornelissen, 2006). In recent years, local governments have placed an increasing emphasis on developing tourism within their cities. This increased emphasis may be associated with various cities striving to revive their urban spaces, usually in areas such as industrial areas where more traditional industries have seen a decline (Hall 2004). This urban regeneration is often associated with the benefits of job creation and economic upliftment (Law, 2000). Apart from these direct benefits, secondary benefits may include the improvement of the physical and environmental image of the city (Ionnides & Timothy, 2010), which in turn, provides a catalyst for inward investment due to an improved business environment and creativity (Richards, 2012).



Rogerson (2012) indicates that for Africa's growing cities to attract the benefits associated with tourism, they need to maximise the value of their assets for tourism development. One of the primary assets associated with tourism development is tourist attractions because they are considered the drawcard that lure tourists to destinations (George 2007). Zoological gardens have been identified as central examples of tourism attractions for urban areas such as major cities (Davey, 2007). Research on zoos has primarily focussed attention on visitor profiling such as determining income levels, educational backgrounds and visitors' influence on zoo visitations. It has been indicated that demographics such as socio-economic status and education level may play a role in inducing attendance (Davey, 2006; Hermann & Du Plessis, 2014). However, these studies do not clearly address the link between visitor profiling and spending behaviour. An understanding of the latter is essential to the success of any tourist attraction (Downward & Lumsdon, 2004). Zoological gardens require sustainable visitor numbers since these visitors provide essential revenue for the continued existence of such attractions (Davey 2007). As a result of this, there is a strong marketing interest in the understanding of tourists' expenditure and activities during their visit to a particular destination. Ballantyne and Uzzell (2011) in their study of a city museum indicate that such attractions have always based their success on visitor numbers; however this is no longer considered a benchmark. The benchmark now also relies on enhancing the visitor expenditure at such an attraction in order to promote their sustainability; this may also be true for zoos. Travel expenditure patterns are vital to destination planners, marketers and business managers (Soteriades & Arvanitis, 2006).

Apart from zoos, there have been studies undertaken on visitor spending at other tourism attractions such as events (Kruger, Saayman & Ellis, 2012; Kruger, Saayman & Saayman, 2009; Shani, Rivera & Hura, 2009) and protected areas (Kruger, Saayman & Hermann, 2014; Saayman & Saayman, 2008). Soteriades and Arvanitis (2006) found that tourism expenditure at destinations and attractions may be analysed within the scope of tourist characteristics and tourism expenditure distribution. In terms of tourism characteristics and spending behaviour, this would entail an analysis of sets of socio-demographic characteristics and travel behaviours (Soteriades & Arvanitis, 2006). Regarding socio-demographic characteristics, there have been a number of findings related to visitor spending. It has been found that the greater the length of stay of a tourist, the number of activities undertaken by the tourist and the higher their level of education significantly influences higher participant spending at tourist attractions such as a marathon (Kruger *et al.*, 2012; Botha, Slabbert, Rossouw & Viviers 2012). In addition, a high-income occupation and paid accommodation is associated with higher levels of spectator expenditure (Kruger *et al.*, 2012). Kruger *et al.* (2009) analysed visitors' tendencies to spend at an arts festival and found that occupation, distance travelled, length of stay, reason for attending the festival and preferred type of shows/productions were significant determinants of spending. Gokovali, Bahar and Kozak (2007), indicate that to entice visitor spending from tourists it is important for destinations to provide sufficient amenities for tourists to spend their money on and to stay longer.

In terms of travel behaviour, findings suggest that there is a difference in the pattern of visitor spending among car-borne and public-transport visitors, with car-based visitors' expenditure being higher (Downward and Lumsdon 2004). It was determined that the level of expenditure differs according to group size and visit duration (Downward and Lumsdon 2004). Research has also proved that first-time visitors are more prone to lower spending per person when compared with repeat visitors (Kruger *et al.* 2014; Shani *et al.* 2009; Wang 2004). This, however, contradicts a finding by Petrick (2004) who states that first-time visitors are less price sensitive and spend more when compared with repeat visitors.

Tourism expenditure distribution relates to which items tourists spend their money on. Saayman and Saayman (2008) found that at national parks in South Africa, tourists spent most of their money on accommodation and transport in the park. The unique nature of each tourism product or destination plays a vital role in the type of visitors attracted to these



destinations (Kruger *et al.*, 2014) and thus, it is important that each destination understands its unique market. For this reason, this study focussed on expanding the knowledge base of visitor profiles and their relationship with visitor spending at urban tourism attractions in a developing country context, in this case, the NZG of South Africa. Understanding visitor spending may provide tools towards the urban economic regeneration required by major world cities such as Pretoria.

Methodology

This research used a quantitative approach utilising a survey research design. For the purpose of data collection, a questionnaire was utilised, which consisted of two sections. Section A captured information relating to the demographic profiles of respondents, while Section B measured various aspects related to visitor expenditure at the NZG. The questionnaire was designed by utilising literature from other similar studies such as Downward and Lumsdon (2004), Hermann and Du Plessis (2014), Jensen, Lindborg, English and Menard (2006) and Soteriades and Arvanitis (2006).

All visitors to the NZG during the survey period (28 March 2015–12 April 2015) formed the sample. In order to obtain a representative sample, the survey period consisted of both midweek and weekend days. Trained field workers consisting of B-Tech Tourism Management students of Tshwane University of Technology distributed questionnaires from 10:00 until closing time at 17:00 (the NZG opens at 08:00) so that the visitors had some time to explore the zoo before being invited to participate in the survey. Surveys were conducted within rest areas at the NZG such as open spaces, restaurants, children's play areas and entrance and exit points. One person per group/family was invited to participate in the survey, and fieldworkers distributed questionnaires in order to obtain a representative sample in terms of demographics. Purposive sampling was used in order to determine the number of visitors who should form part of the survey, which ultimately resulted in 443 completed questionnaires.

Data was captured utilising Microsoft Excel™, and SPSS (Statistical Package for the Social Sciences) version 20 was used for data analysis. The study consisted of three stages. The first stage involved generating a general profile of the respondents by utilising demographic information. Secondly, data was analysed to determine general spending on a number of spending items through means and standard deviations. Thirdly, data was analysed using analysis of variance (ANOVA) comparisons with Tukey's multiple comparisons and t-tests in order to determine if there were any significant relationships between the demographic variables and the spending patterns. The results of the statistical analysis is discussed in the subsequent section.

Results

The results are presented in three sections. Firstly, an overview of the demographic profiles of the respondents is presented. Secondly, results relating to visitor spending at the NZG are provided. Lastly, the results from the ANOVA together with Tukey's post-hoc comparisons and t-tests are provided.

Demographic profile

Table 1 summarises the results describing the demographic profiles of the respondents. Respondents of the study at the NZG were predominantly female and were within the age bracket of 26–35 years old. They were primarily English speaking, followed by Afrikaans and Tswana speaking. The average age in which respondents were first exposed to the NZG was 9.9 years old (9 years and 11 months).

Table 1: Demographic profile of respondents

Characteristic	Frequency		Characteristic	Frequency	
	%	N		%	N
Gender			Education		
Female	58	183	Diploma/degree	39.7	176
Male	42	252	Matric (completed high school)	26.2	116
			Postgraduate degree	16.3	72
Age			Certificate	13.3	59
1940–1949 (75-66 years)	0.7	3	No schooling	1.8	8
1950–1959 (65-56 years)	3.8	16	Other education	1.1	5
1960–1969 (55-46 years)	6.7	28			
1970–1979 (45-36 years)	25.9	108	Mode of Transport		
1980–1989 (35-26 years)	41.2	172	Personal car	64.6	286
1990–1999 (25-16 years)	21.6	90	Minibus taxi	15.3	68
			Bus	11.3	50
Language			Walked on foot	3.8	17
English	17.8	78	Metered taxi	2.5	11
Afrikaans	16.2	71	Gautrain/Gautrain bus	1.4	6
Tswana	12.3	54	Other mode of transport	0.2	1
Zulu	11	47			
Southern Sotho	9.4	41	Gross monthly income *		
Northern Sotho	9.4	41	<R5000	26	115
Ndebele	5.7	25	R5001–R10000	18.5	82
Xhosa	4.6	20	R10001–R20000	19.9	88
Tsonga/Shangaan	4.3	19	R20001–R30000	12.9	57
Swati	3.9	17	R30001–R40000	5.2	23
Venda	3.7	16	R40001–R50000	3.6	16
Other	1.7	6	>R50001	7.7	34
Marital status			Where did respondents last hear about the NZG?		
Single	47.4	208	Family and friends	49.4	219
Married	44.2	194	Previous visit	21.0	93
Living together/cohabitation	5.9	26	Zoo website	15.3	68
Divorced	1.4	4	Television, magazines, radio or newspaper	5.8	25
Widow/widower	1.1	5	Facebook and Twitter	2.8	12
Numbers of visitors per group			Other media	1.6	7
Number of children per group	3.53		Time to plan visit		
Number of adults per group	4		The same day	20.3	90
Place of residence			Less than 1 week	35.7	158
Pretoria (Tshwane Metropolitan Municipality)	44.5	197	1 to 2 weeks	15.1	67
Johannesburg	26.0	115	2 weeks to 1 month	14.0	62
Other location in Gauteng	12.6	56	1 to 3 months	9.3	41
Mpumalanga	4.7	21	Longer than 3 months	3.6	16
North-West Province	3.4	15			
Kwa-Zulu Natal	1.4	6			
Other province in South Africa	4.1	19			
International	1.0	5			

In terms of marital status, most respondents were single, and this was followed by married couples. Group sizes were an average of eight people, consisting of four adults and four (3.53) children. Most groups visited the NZG an average of 1.7 times per year, predominantly making their decision to visit in the week prior to the visit. This was followed by respondents who made their plans to visit the NZG on the same day as their visit. These visitors mainly used their private cars to travel to the NZG (64.9%).

Most respondents lived in Pretoria, with the smallest number of respondents having international origins. This demonstrated that the attraction appealed more to local residents than tourists. The majority of respondents were well educated, with 95.5% holding a high

school qualification and above. In terms of income, the majority (38.4%) of respondents earned between R5 000 and R20 000 per month. Family and friends were seen as the most influential form of communication regarding the NZG since almost half of the respondents indicated that this channel was how they had last heard about the zoo.

Spending

In Table 2, the descriptive results of visitor spending are presented. These results indicate the average (mean) spending per group on individual items as well as the standard deviation and tendency to purchase. The tendency to purchase indicates the number of groups as a percentage that spent money on these individual items. As can also be seen in Table 2, the standard deviation for various items of spending is relatively high, indicating that the spending patterns among respondents were very diverse.

Table 2: Visitor spending on individual items

Item	Mean spend per group	Standard deviation	Tendency to purchase (%)
Petrol purchased within Pretoria	R254	254.39	29.1
Petrol purchased outside Pretoria	R420	364.51	19.2
Public transport within Pretoria	R381	957.12	22.6
Public transport outside Pretoria	R480	1004.76	16.3
Accommodation within the NZG	R1300	1697.10	0.5
Accommodation within Pretoria	R3074	2505.02	2.5
Accommodation outside Pretoria	R3000	1322.88	0.7
Food and beverage within the NZG	R243	223.14	44.5
Food and beverage within Pretoria	R394	873.78	28.9
Food and beverage outside Pretoria	R313	291.94	17.2
Food and beverage within NZG for later consumption	R213	171.55	18.5
Food and beverage purchased in Pretoria before and after visiting the NZG	R344	441.296	16.3
Food and beverage purchased outside Pretoria before and after visiting the NZG	R507	735.90	11.1
Grocery items purchased within the NZG	R469	651.66	4.5
Grocery items purchased within Pretoria	R432	595.21	6.3
Grocery items purchased outside Pretoria	R929	971.81	5.6
Restaurants within the NZG	R235	206.51	20.1
Restaurants in Pretoria	R352	304.32	7.9
Restaurants outside Pretoria	R531	901.82	2.9
Souvenirs purchased within the NZG	R111	98.82	11.3
Souvenirs purchased in Pretoria	R324	239.18	1.8
Souvenirs purchased outside Pretoria	R467	288.68	0.7
Clothing purchased within the NZG	R108	212.47	2.7
Clothing purchased in Pretoria	R1025	815.50	0.03
Clothing purchased outside Pretoria	R455	699.98	0.91
Golf cart rental at the NZG	R160	102.09	27.0
Entrance fee to the NZG	R382	972.21	88.5*
Cable car	R98	57.34	29.3
Other items	R96	84.09	2.7

*Not all respondents indicated entrance fees were paid

From Table 2, the following results can be drawn. Respondents were most likely to spend their money on the following items during their trip:

- Entrance fees to the NZG
- Food and beverages purchased within the NZG
- Cable car rides
- Petrol purchased within Pretoria (R11.05/litre as at March 2015 (Automobile Association, 2015)).

Items on which respondents were least likely to spend their money were:

- Souvenirs purchased outside the NZG



- Groceries
- Clothing in general
- Restaurants outside Pretoria
- Accommodation

Although the amount spent on accommodation was the highest individual item, people were least likely to purchase it within the NZG, which is unlike a traditional tourist attraction where spending on accommodation and transport are the main spending items, as described by Kruger *et al.* (2009). The low tendency to purchase accommodation in the NZG may be attributed to the low number of respondents who originated from far and would have had to travel substantial distances. In Table 2, it was seen that most visitors to the NZG lived within Pretoria, and this may have had an influence on the high spending and higher tendency of visitors to spend money on petrol and public transport within the city. Although there was a high tendency of visitors to spend money on food and beverages within the NZG, the highest spending in this regard were respondents who purchased food and beverages outside the NZG for consumption within the NZG.

Results from ANOVA, Tukey's post-hoc comparisons and t-tests

Analysis of variance was utilised to determine if there were any differences in spending between the demographic and spending variables. The test revealed that there were significant differences ($p < 0.05$) among some of these variables. All significant differences are displayed in Table 3. If there were no significant differences, the findings were omitted. This may be attributed to certain spending items, including souvenirs purchased outside the NZG, groceries, clothing, restaurants outside Pretoria and accommodation, having very low response rates (tendency to purchase). In Table 3, the means (M) of spending on various items are provided as well as their associated standard deviation (SD). In addition, the F score with significance and effect sizes (r) are indicated.

Table 3: ANOVA, Tukey's post-hoc comparisons and t-test results (follows next page...)



Table 3: ANOVA, Tukey's post-hoc comparisons and t-test results

Variables		Food and beverage within NZG		Food and beverage purchased before visiting NZG		Restaurants within NZG		Souvenirs within NZG		Golf cart		Entrance fee		Cable car		Total spending/group		Total spending/person	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Marital status	Single	244	278	202	193	204	186	71	70	140	121	373	879	86	57	621	962	167	157
	Married	247	173	227	158	248	212	136	110	173 ^a	89	421	896	109	57	809	976	173	145
F- / Sig (p) / r		.005 /.995/ .01		.302 /.740/ .13		3.858 /.025/ .21		3.883 /.028/ .59		1.416 /.247/ .27		.179 /.836/ .05		3.309 /.040/ .41		1.895/.152/.19		.085/.921/ .04	
First time	Yes	269	219	287	304	280	110	96	72	152	61	311	307	89	47	646	600	184	191
	No	240	225	204	150	232	215	112	102	158	102	406	929	99	59	721	1004	167	148
F- / Sig (p) / r		.045 /.833 / .13		5.69 /.019 / .27		.817 /.369 / .22		.096 /.759 / .16		1.226 /.271 / .06		1.368 /.243/ .10		.209 /.648 / .17		.280 /.597 / .07		1.178 /.278 / .09	
Gender	Male	215	166	194	163	211	125	115	79	167	98	345	684	103	58	668	774	167	122
	Female	265	258	226	177	255	253	108	112	156	106	429	981	95	57	748	1071	171	172
F- / Sig (p) / r		1.963 /.163 / .19		.001 /.977/.19		1.938 /.167/ .17		.004 /.950/ .06		.093 /.761/ .10		2.622 /.106/ .09		.317 /.574/ .14		2.084 /.150/ .07		1.872 /.172/ .02	
Place of residence	Pretoria	215 ^a	210	183 ^a	136	239 ^a	252	99 ^a	15	178 ^a	133	321 ^a	650	89 ^a	54	614 ^a	788	165 ^a	168
	JNB	282 ^a	296	234 ^a	187	238 ^a	215	109 ^a	22	136 ^a	61	425 ^a	646	90 ^a	41	717 ^a	725	147 ^a	86
	Other GP	259 ^a	151	268 ^a	232	153 ^a	75	151 ^a	78	143 ^a	55	492 ^a	1176	102 ^a	47	803 ^a	1150	169 ^a	134
	Other Province	269 ^a	151	182 ^a	119	267 ^a	152	93 ^a	19	153 ^a	52	508 ^a	1443	111 ^a	65	944 ^a	1523	225 ^a	208
	Other country	283 ^a	308	258 ^a	343	275 ^a	35	200 ^a	0	150 ^a	0	253 ^a	108	240 ^a	156	868 ^a	932	204 ^a	160
F- / Sig (p) / r		.882 /.476/ .22		.830 /.510/ .22		.471 /.757/ .14		.610 /.658/ .49		.988 /.417/ .21		.754 /.555/ .05		4.257 /.003/ .97		1.449 /.217/ .22		2.433 /.047/ .23	
Transport	Personal car	240 ^b	190	219 ^{ab}	158	264 ^a	224	120 ^a	107	162 ^a	102	304 ^a	195	107 ^a	60	684 ^a	531	182 ^a	165
	Minibus taxi	234 ^{ab}	293	128 ^{ab}	94	132 ^a	95	66 ^a	74	98 ^a	40	299 ^a	345	75 ^a	46	487 ^a	469	136 ^a	77
	Bus	349 ^{ab}	324	381 ^b	297	216 ^a	164	115 ^a	75	150 ^a	62	968 ^b	2216	79 ^a	46	1254 ^b	2237	149 ^a	143
	Walked	89 ^a	50	109 ^a	76	120 ^a	29	0 ^a	0	0 ^a	0	351 ^a	502	97 ^a	91	462 ^a	506	175 ^a	240
F- / Sig (p) / r		2.254 /.083/ .46		4.216 /.008/ .37		1.912 /.134/ .64		.971 /.386/ .05		1.272 /.284/ .11		9.332 /.001/ .02		2.519 /.061/ .11		7.769 /.001/ .11		2.028 /.109/ .26	

^a Group differs significantly from other group where ^b is indicated.

Table 3 presents the ANOVA results with their associated post hoc tests. Where only two variables are compared t-tests are also used. The following major findings can be drawn in terms of the relationship between visitor demographics and spending:

- **Small effect ($r=0.001-0.29$)**

In terms of marital status, the ANOVA and t-test determined that there were significant ($p<0.05$) relationships between this variable and money spent at restaurants within the NZG ($p=0.025$, with a small to medium effect size [$r=0.25$]).

There was a small to medium effect size ($r=0.27$) between visitor spending on food and beverages within the NZG for consumption later and their tendency to visit. First-time respondents visiting the NZG were more inclined to spend money on food and beverages within the NZG, which they would take with them after the visit. No further significant relations were found between first-time and repeat visitors in terms of spending.

An analysis of place of residence revealed that there was a small to medium relationship ($r=0.23$) between this variable and the total spending per person. Generally, the further away the respondent lived from the NZG, the more they were willing to pay per person. Kruger *et al.* (2009) and Kruger *et al.* (2012) also found a decrease in spending per person for local visitors compared to visitors from further afield. The post hoc test however revealed that these groups were not statistically different from one another so the level of spending could not directly be attributed to place of residence.

It therefore appears more as a recreational attraction than a visitor attraction and as Botha *et al.* (2012) found, it is tourists who visit a destination where they overnight that spend more per person.

There was a very small relationship between visitor spending and mode of transport ($r=0.02$). Except for respondents travelling by bus (see post hoc test), respondents generally spent approximately the same amount of money, regardless of transport. Groups of respondents that travelled by bus spent the most amount of money; however, the effect size was very small. This may be attributed to the fact that people travelling by bus generally spend less money per person ($r=0.26$) than people travelling by personal car, who spend the most per person.

- **Medium effect ($r=0.30-0.49$)**

There was a medium to large effect size in the relationship between marital status and visitor spending on cable car rides ($r = 0.41$). With an effect size of $r=0.37$, a medium relationship could be drawn between visitor spending on food and beverages purchased prior to visiting the NZG for consumption within the zoo and transport. The post hoc tests reveal that respondents utilising their own personal cars were significantly different from people walking to the zoo on foot in terms of spending on food and beverage prior to the visit. Respondents travelling by personal car were most likely to spend twice as much on food and beverage prior to their visit.

- **Large effect ($r>0.50$)**

There was a significant relationship between marital status and souvenirs purchased in the NZG ($p=0.028$), with a large effect size [$r=0.59$]. In addition, the calculation of the effect size revealed that there was an extremely high relationship ($r=0.97$) between place of residence and visitor spending on cable car rides. Post hoc tests revealed that, the further away the respondent lived from Pretoria, the more they were inclined to spend in this regard. This mirrors the recommendation of Gokovali *et al.* (2007) who promote initiatives to stimulate tourist expenditure through the provision of amenities at attractions.



Conclusion and Implications

The NZG is one of the primary tourist attractions in Pretoria, the capital of South Africa. The city is striving to develop tourism in its core area in order to promote its urban regeneration. As a result it is imperative to understand the profile of tourists currently visiting these attractions. The NZG as a flagship attraction is envisioned to represent the visitor profile of the inner city. An analysis of this profile, especially the spending patterns of visitors may provide foundational research which will provide not only a basis to promote urban regeneration in Pretoria but also in other developing urban areas.

Based on the findings of this research regarding the demographic profiles of the respondents, it can be concluded that the NZG is more attractive to single people. This is followed by married couples. There is also evidence that the NZG is a good attraction for families and groups since they visit the zoo almost twice a year with most of the visits utilising personal transport. The results of this study indicate that visitors to the NZG are very diverse, in terms of demographics however very limited findings are provided to link spending patterns to socio-demographic characteristics. The NZG is seen mostly as an attraction for local people because there were not too many visitors from outside Pretoria. The findings also confirm that the majority of the respondents are educated and represent the current South African middle class, which is good for the country considering its past. Most of the respondents were influenced by friends and family to visit the zoo.

Regarding spending, respondents were most likely to spend their money on entrance fees to the NZG, food and beverages within the NZG, cable car rides and the purchase of petrol within Pretoria. However, the study found that items on which respondents were least likely to spend money included souvenirs purchased outside the NZG, groceries, clothing in general, restaurants outside Pretoria and accommodation. This indicates that the visitors to the NZG do not generally spend their money such as at more 'traditional' tourist attractions, this spending is more representative of recreational or excursionist spending. It is therefore important that not only the NZG, but the city as a whole try to encourage visitors to stay longer.

Although the amount spent on accommodation was the highest per item, people were least likely to purchase it and spent their money on petrol and public transport. It was also very surprising to note that a large number of first-time visitors spent most of their money on food outside the zoo for consumption within the NZG. This compromised an income generating opportunity for the zoo. Opportunities should be investigated to limit the number and type of food and beverage items brought into the zoo by visitors. Additionally the zoo should explore means of enticing visitors to spend more on food items within the zoo. Whilst the NZG has seen visitors spending money at the zoo, many local visitors seem to come to the attraction having already bought their food from outside the venue. It is recommended that management provide different ticket pricing packages that are inclusive of a meal or food packages and an activity (cable car) in order to improve the spending by visitors within the attraction. Respondents utilising bus transport purchased food and beverages prior to their visit to the NZG for consumption at the zoo. Thus their general spending inside the zoo is reduced. Additionally, the further away the respondent lived from Pretoria, the more they were inclined to spend in this regard.

Overall, the study confirmed that those from far spent more within and outside the zoo, thus creating an opportunity for impact on adjacent accommodation establishment within the city. It is strongly recommended that local tour operators should utilise the NZG as one of the major attractions within the city in order to increase travel activities. As a result, visitors might spend a night within the city. Although results showed that the further away the respondent lived from the NZG, the more they were willing to pay per person (apart from Johannesburg), there is no statistically major difference in this regard. Literature however indicates that



tourists tend to spend more on individual spending items when compared to local visitors. Therefore opportunities to attract greater numbers of tourists should be investigated and loyal local visitor numbers should be maintained. Loyal local visitors although they may spend less per person may provide a consistent form of revenue for the zoo.

In relation to the previous recommendations, the marketing of the zoo requires improvement in order to welcome those who come from far (outside of Pretoria and international visitors). In addition to the most popular method through which respondents learnt about the zoo, management needs to make more effort regarding other forms of marketing to attract visitors. Recommended methods could be monthly advertising on the national broadcaster and local television depending on cost, collaborating with radio stations in the province to attract visitors from outside Pretoria and employing interns at the NZG to distribute brochures at city centre intersections.

Although a large number of visitors are local or from within the vicinity of Pretoria, this can be improved in the long term with an adequate public transport system within the local municipality. Currently, the city is upgrading the transport infrastructure, and this should have a significant impact on the locals accessing the NZG from adjacent areas. This may improve spending within the zoo because locals would not have to rely on their private cars that require expensive fuel and thus, this would create a chance for more spending.

The results of this research should contribute towards assisting responsible stakeholders to understand visitors to the NZG better and towards improving the major aspects revealed and recommended in the report.

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References

- Akinboade, O.A. & Braimoh, L.A. (2009). International tourism and economic development in South Africa: a Granger causality test. *International Journal of Tourism Research*, 12(2):149-163.
- Ashworth, G. & Page, S.J. (2010). Urban tourism research: Recent progress and current paradoxes. *Tourism Management*, 32(1): 1-15.
- Automobile Association of South Africa. (2015). Fuel Pricing 2015. Accessed at <https://www.aa.co.za/on-the-road/calculator-tools/fuel-pricing/?petrol-year=2015#petrol> (01 July 2016).
- Ballantyne, R. & Uzzell, D. (2011). Looking back and looking forward: The rise of the visitor-centered museum. *Curator: The Museum Journal*, 54(1): 85-92.
- Botha, K., Slabbert, E., Rossouw, R. & Viviers, P. (2012). Expenditure-based segmentation of visitors to Aardklop National Arts Festival. *South African Theatre Journal*, 25(2): 142-166.
- Coetzee, W.J.L., Hermann, U.P. & Geldenhuys, S. (2010). Cape Town Jazz Festival blows recession blues away. *Global Events Congress, Leeds, UK*. 14-16 July 2010.



- Cornelissen, S. (2006). *Tourism development and policy in Cape Town: Patterns, issues and lessons for other African cities*. Seminar paper presented at the University of Stellenbosch, 25 August 2006.
- Davey, G. (2006). Visitor behaviour in zoos: a review. *Anthrozoos*, 19(2): 143–157.
- Davey, G. (2007). An analysis of country, socio-economic and time factors on worldwide zoo attendance during a 40 year period. *International Zoo Yearbook* 41 (1): 217-225.
- Downward, P. & Lumsdon, L. (2004). Tourism Transport and Visitor Spending: A Study in The North York Moors National Park, UK. *Journal of Travel Research*, 42(4): 415-420.
- Edwards, D., Griffin, T. & Hayllar, D. (2008). Urban tourism research: Developing an agenda. *Annals of Tourism Research*, 35(4): 1032-1052.
- George, R. (2007). *Managing tourism in South Africa*. 59 pp. Cape Town: Oxford Southern Africa.
- Gokovali, U., Bahar, O. & Kozak, M. (2007). Determinants of length of stay: A practical use of survival analysis. *Tourism Management*, 28(3): 736-746.
- Hall, C.M. (2004). Sport tourism and urban regeneration. In *Aspects of tourism: Sport tourism: interrelationships, impacts and issues*. B.W Ritchie. and D, Adair. eds., 192 pp. Clevedon: Channel View Publications.
- Hermann, U.P. & Du Plessis, L. (2014). Travel motives of visitors to the National Zoological Gardens of South Africa. *African Journal for Physical, Health Education, Recreation and Dance*, 20(3:2): 1162-1172.
- International Monetary Fund (IMF). (2016). *World Economic Outlook Reports*. Accessed at <http://www.imf.org/external/ns/cs.aspx?id=29>. (01 July 2016).
- Ionnides, D. & Timothy, D.J. (2010). *Tourism in the USA: A spatial and social synthesis*. London; Routledge.
- Jensen, K., Lindborg, C, English, B. & Menard, J. (2006). *Visitors to Tennessee Agri-Tourism Attractions: Demographics, preferences, expenditures and projected impacts*. Unpublished report: University of Tennessee. Accessed at http://www.google.co.za/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0ahUKEwjP8LSu9P7NAhUkJMAKHwamCngQFggpMAI&url=http%3A%2F%2Faimag.ag.utk.edu%2Fpubs%2Fresearchreportvisitorssurveys3.pdf&usq=AFQjCNGo2kNYb_vyINAZJdW0rb5Dt2XUrw&sig2=5RDaNZYqAOMWgVymKqIF3g (01 March 2015).
- Kruger, M., Saayman, M. & Saayman, A. (2009). Sociodemographic and behavioural determinants of visitor spending at the Klein Karoo National Arts Festival. *Event Management*, 13(1):53–68.
- Kruger, M., Saayman, M. & Ellis, S. (2012). Determinants of visitor spending: an evaluation of participants and spectators at the Two Oceans Marathon. *Tourism Economics*, 18(6): 1203–1227.
- Kruger, M., Saayman, M. & Hermann, U.P. (2014). First-time versus repeat visitors at the Kruger National Park. *Acta Commercii*, 14(1):1-9.
- Law, C.M. (2000). Regenerating the city centre through leisure and tourism. *Built Environment*, 26(2): 117-129.



McIntyre, N.K., Knowles-Yáñez, & Hope, D. (2000). Urban ecology as an interdisciplinary field: Differences in the use of 'urban' between social and natural sciences. *Urban Ecosystems*, 4(1): 5-24.

National Zoological Gardens of South Africa (NZG). (2016). *About us*. Accessed at <http://www.nzg.ac.za/aboutus/index.php>. (01 July 2016).

Petrick, J.F. (2004). Are loyal visitors desired visitors? *Tourism Management*, 25(4): 463-470.

Plaza, B. & Silke, H. (2009). Museums for urban regeneration? Exploring conditions for their effectiveness. *Journal of Urban Regeneration and Renewal*, 2(3):259-271.

Richards, G. (2012). Creativity and tourism: The state of the art. *Annals of Tourism Research*, 38(4): 1228-1253.

Rogerson, C.M. (2012). Urban tourism, economic regeneration and inclusion: Evidence from South Africa. *Local Economy*, 0 (0): 1-15.

Saayman, M. & Saayman, A. (2008). Estimating the Economic Contribution of Visitor Spending in the Kruger National Park to the Regional Economy. *Journal of Sustainable Tourism*, 14(1): 67-81.

Shani, A., Rivera, M.A. & Hura, T. (2009). Assessing the viability of repeat visitors to cultural events: Evidence from the Zora! Festival. *Journal of Convention and Event Tourism*, 10(1): 89-104.

Smeral, E. (2010). Impacts of the world recession and economic crisis on tourism: forecasts and potential risks. *Journal of Travel Research*, 49(1): 31-38.

Soteriades, M.D. & Arvanitis, S.E. (2006). Expenditure Patterns by Travel Party Size: British and German Tourists on Crete, Greece. *Anatolia*, 17(2):169-187.

South African Tourism. 2016. Pretoria, Gauteng. Accessed at <http://www.southafrica.net/za/en/articles/entry/article-southafrica.net-pretoria>. (01 July 2016).

Wang, D. (2004). Tourist behaviour and repeat visitation to Hong Kong. *Tourism Geography*, 6(1): 99-118.