

# **Determinants of Successful Outlets in the South African Quick Service Restaurant Industry**

**Michael Lindsay Shaw**

**A research report submitted to the Faculty of Commerce, Law and  
Management, University of the Witwatersrand, in partial fulfilment of the  
requirements for the degree of Master of Business Administration**

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## **ABSTRACT**

The South African Quick Service Restaurant Industry is a multi million Rand industry. Fast-food chains spend millions on branding, advertising, site location and other factors to obtain a competitive advantage and improve annual sales.

This research aims to determine the factors that contribute to increased turnover in the quick service restaurant industry. These factors are categorised into internal factors of customer service and external factors of store site location.

By sampling 71 stores in a national Quick Service Industry group, this research applied factor analysis and multiple regression techniques to determine the significant factors of both site location and customer satisfaction contributing to improved store turnover.

Site location data were collected using objective extrapolation techniques for 71 stores, which were then ratified through store surveys. Customer Satisfaction data were collected by interviewing 20 customers in 14 stores in the Gauteng region.

The findings of this research suggest that factors related to site location such as the presence of a bank in the centre; as well as the presence of a McDonalds or Wimpy store within a 3km radius have a positive correlation to store turnover. Within the factors of customer satisfaction, only staff and service correlate positively with store turnover.

The relevance of the findings speak to the importance of symbiotic business relationships in the quick service industry, the importance of business attractors such as banks; as well as the key differentiator of staff in improving turnover. In conclusion, this research suggests many further areas for more detailed research into some of the findings that allude to the importance of a more detailed understanding of relationships between factors.

## **DECLARATION**

I, Michael Lindsay Shaw, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

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Michael Lindsay Shaw

Signed at Johannesburg

On the 30<sup>th</sup> day of November 2009

## **DEDICATION**

This research report is dedicated to:-

My wife, Michelle, for standing by me through this challenging journey in our lives, and for giving me the time and space to discover new uncharted territories. I love you like the stars above.

My children, Clinton, Wade and Nicola, for giving up their Dad for long periods during this journey. I hope that I have motivated and inspired you not to accept any limitations in your lives. You are children of the universe, no less than the trees and the stars, you have a right to be here.

## **ACKNOWLEDGEMENTS**

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Dr. Anthony Stacey for his invaluable assistance in the quantitative analysis of the data collected and used in this report.

MapIt for allowing me to use their spatial information technology which allowed me to explore dimensions in market analysis based on geographic information and retail site location data.

My friend, author and senior research scientist at the University of the Witwatersrand Medical School, Braimoh Bello, for his assistance in the quantitative analysis of the data collected and used in this report.

My friend and former MBA colleague, Louise Hendey, for her inspiration and motivation, and for her invaluable assistance in editing my research report.

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# **CHAPTER 1: INTRODUCTION**

## **1.1 Purpose of the study**

The purpose of this study is to identify and measure variables that impact the financial performance of stores in the quick service restaurant (QSR) industry in South Africa.

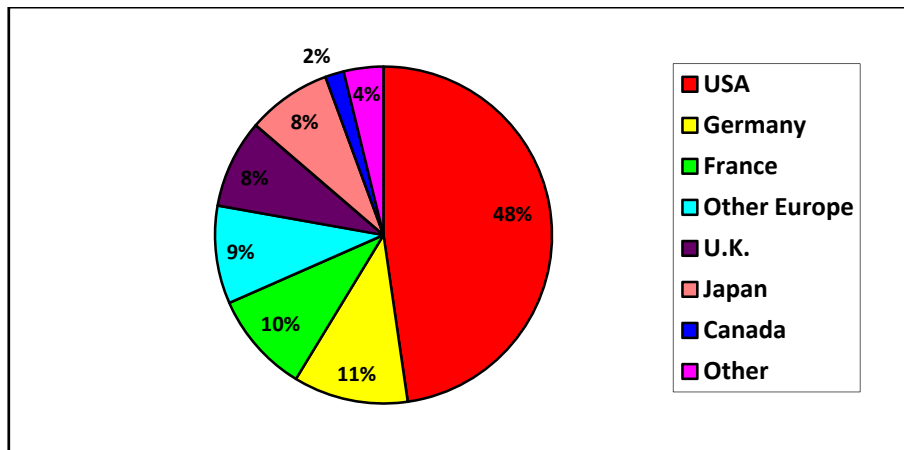
## **1.2 Context of the study**

### **1.2.1 *Introduction***

This section provides insights into contextual issues for this research. It describes issues pertaining to the world industry, the South African fast food industry; as well as some general issues relating to this commercial arena that have a contextual bearing on this research.

### **1.2.2 *World Trends in the Food Retail Industry***

The world retail industry is massive, with the United States alone contributing trillions of dollars in annual sales (Deloitte & Touche, 2005). Of these sales, the food industry occupies an approximate 20% of annual sales. Figure 1 provides a breakdown of food industry sales per world region.



**Figure 1: Breakdown of worldwide retail sales per region (Deloitte & Touche, 2005)**

According to Deloitte & Touche (2005), the food retailing business has experienced significant impacts worldwide. They suggest that factors such as mad cow disease, avian flu; as well as social issues such as a worldwide epidemic of obesity have impacted the retail food business. It is suggested that these factors contribute to key strategic decisions made within the retail industry to align their brands and product ranges with world sentiment. In particular, it is argued that issues of health will impact the food industry significantly more over time and in turn may impact customer choices, loyalty and therefore business profitability.

Expanding on these worldwide trends, Deloitte & Touche (2005) contend that factors of time significantly contribute to the retail industry. Consumers seek 24/7 service and in their time-starved state, they pursue instant gratification in their service delivery. This places increased demands on retailers, particularly in the fast food industry, to ensure that their service delivery is always fast, efficient and catering to high customer demands.

### **1.2.3 South African Fast Food Industry**

As demonstrated in

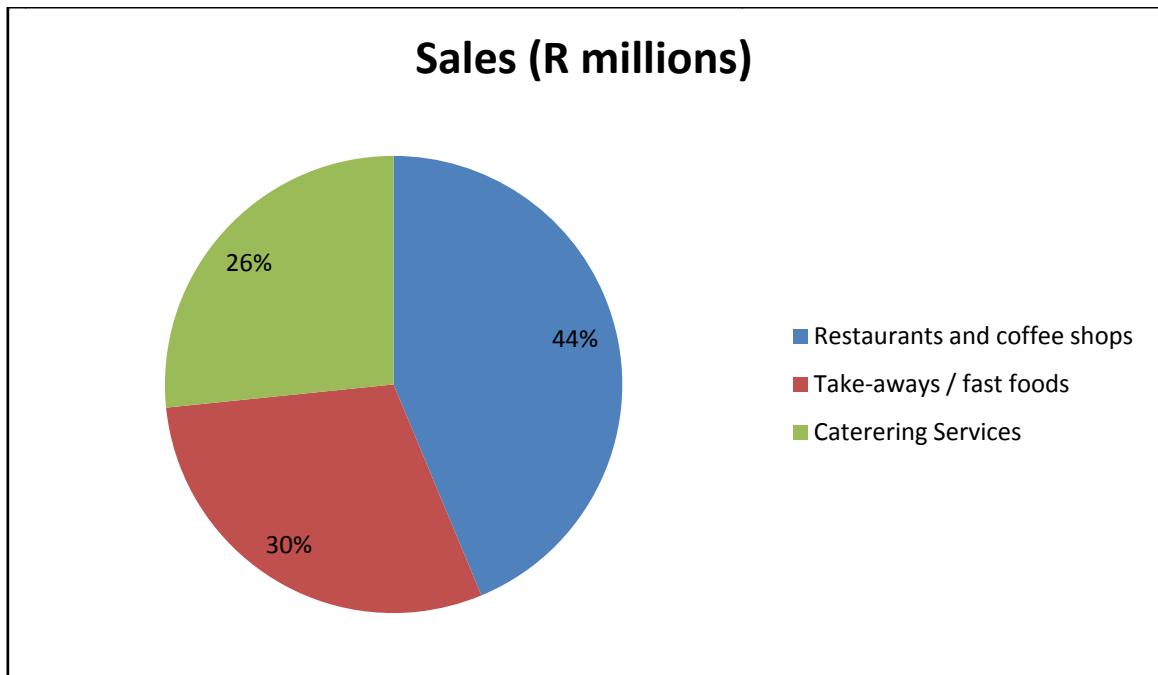
**Table 1**, the South African restaurant and food Industry constituted an approximate annual income of 8800 million in 2008 / 2009 (Statistics South Africa, 2009).

**Table 1: Summary of Food and Beverage Income in 2008/2009**

(Source: Derived from data from Statistics South Africa, 2009)

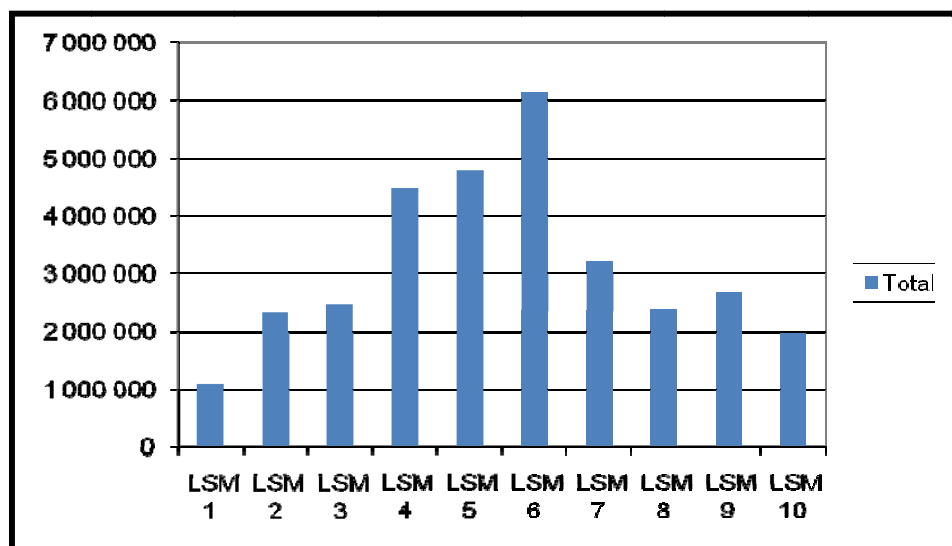
| Enterprise type              |                                     | Jul 2008 | Aug 2008 | Sep 2008 | Oct 2008 | Nov 2008 | Dec 2008 | Jan 2009 | Feb 2009 | Mar 2009 | Apr 2009 | May 2009 | Jun 2009 | Jul 2009 <sup>1/</sup> |
|------------------------------|-------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------------------|
| Restaurants and coffee shops | Income from food sales              | 1 321,0  | 1 357,8  | 1 468,0  | 1 445,8  | 1 602,7  | 1 794,4  | 1 372,7  | 1 277,1  | 1 518,8  | 1 303,5  | 1 309,5  | 1 287,6  | 1 330,8                |
|                              | Income from bar sales               | 200,0    | 200,6    | 184,3    | 209,8    | 288,9    | 262,2    | 200,6    | 189,4    | 203,9    | 209,5    | 201,8    | 194,0    | 184,7                  |
|                              | Other income                        | 11,0     | 9,9      | 12,0     | 12,7     | 12,1     | 14,1     | 10,7     | 13,0     | 14,2     | 11,7     | 11,4     | 11,6     | 11,8                   |
|                              | Total income                        | 1 532,1  | 1 568,4  | 1 664,4  | 1 668,3  | 1 903,8  | 2 070,7  | 1 584,0  | 1 479,5  | 1 737,0  | 1 524,7  | 1 522,7  | 1 493,2  | 1 527,3                |
| Takeaway/fast-food outlets   | Income from food sales              | 585,0    | 636,4    | 614,3    | 622,1    | 655,8    | 874,3    | 670,0    | 617,0    | 650,2    | 676,6    | 700,5    | 648,0    | 695,9                  |
|                              | Income from bar sales               | 9,3      | 9,7      | 10,0     | 11,0     | 11,0     | 13,3     | 9,1      | 10,7     | 9,4      | 6,4      | 8,2      | 6,6      | 7,4                    |
|                              | Other income                        | 4,0      | 5,0      | 2,3      | 4,0      | 7,3      | 3,1      | 4,1      | 3,6      | 5,1      | 4,3      | 5,2      | 4,3      | 4,6                    |
|                              | Total income                        | 598,4    | 651,2    | 626,7    | 637,1    | 674,1    | 890,7    | 683,2    | 631,2    | 664,8    | 687,3    | 713,9    | 658,9    | 707,9                  |
| Caterers                     | Income from food sales              | 409,1    | 422,6    | 417,2    | 445,0    | 443,0    | 356,6    | 281,7    | 356,9    | 317,6    | 391,4    | 444,9    | 451,6    | 364,1                  |
|                              | Income from bar sales               | 9,6      | 9,6      | 8,3      | 9,9      | 12,3     | 9,2      | 5,3      | 4,7      | 6,4      | 11,2     | 17,4     | 10,1     | 6,2                    |
|                              | Other income                        | 26,4     | 26,4     | 37,3     | 29,9     | 46,2     | 43,5     | 23,5     | 25,9     | 29,2     | 26,8     | 21,2     | 26,5     | 23,2                   |
|                              | Total income                        | 445,1    | 458,6    | 462,8    | 484,9    | 501,5    | 409,2    | 310,5    | 387,5    | 353,2    | 429,4    | 483,5    | 488,2    | 393,5                  |
| Other catering services      | Income from food sales              | 55,7     | 61,1     | 54,3     | 55,4     | 59,2     | 68,6     | 49,1     | 53,5     | 47,4     | 40,6     | 42,5     | 40,7     | 41,8                   |
|                              | Income from bar sales <sup>2/</sup> | 79,9     | 79,2     | 81,1     | 84,6     | 75,6     | 89,5     | 70,3     | 69,9     | 70,8     | 72,3     | 72,3     | 70,3     | 72,5                   |
|                              | Total income                        | 135,7    | 140,3    | 135,4    | 139,9    | 134,8    | 158,1    | 119,5    | 123,4    | 118,3    | 112,9    | 114,8    | 111,0    | 114,3                  |
| Total                        | Income from food sales              | 2 370,9  | 2 477,8  | 2 553,8  | 2 568,3  | 2 760,7  | 3 093,9  | 2 373,5  | 2 304,5  | 2 534,1  | 2 412,1  | 2 497,4  | 2 427,9  | 2 432,6                |
|                              | Income from bar sales               | 298,9    | 299,2    | 283,8    | 315,2    | 387,8    | 374,1    | 285,3    | 274,7    | 290,6    | 299,4    | 299,7    | 281,0    | 270,8                  |
|                              | Other income                        | 41,5     | 41,4     | 51,6     | 46,7     | 65,6     | 60,7     | 38,2     | 42,5     | 48,5     | 42,8     | 37,8     | 42,4     | 38,6                   |
|                              | Total income                        | 2 711,2  | 2 818,5  | 2 889,2  | 2 930,2  | 3 214,1  | 3 528,7  | 2 697,1  | 2 621,7  | 2 873,2  | 2 754,3  | 2 834,9  | 2 751,3  | 2 743,0                |

Of this industry, the statistics suggest that fast foods represent approximately 30% of that market. Figure 2 demonstrates a breakdown of sales in South Africa based on sub-category in the industry.



**Figure 2: Breakdown of Food and Beverage Industry based on 2007 statistics (Source: Derived from data from Statistics South Africa, 2009)**

In South Africa, almost all market segments buy fast foods, however the predominant industry market is driven from the LSM (SAARF Universal Living Standards Measure) 4 to 6 segments, as illustrated in Figure 3.



**Figure 3: Breakdown of Fast Food Purchases in South Africa by LSM category (Source: [www.saarf.co.za](http://www.saarf.co.za))**

The industry attracts customers from a broad age range on a fairly frequent basis. Figure 4 represents the frequency of visits to fast food chains within each provincial area of South Africa. It demonstrates that Gauteng and Kwa-Zulu Natal draw the most frequent visits to this industry. Arguably, this is related to population size within those provincial areas.

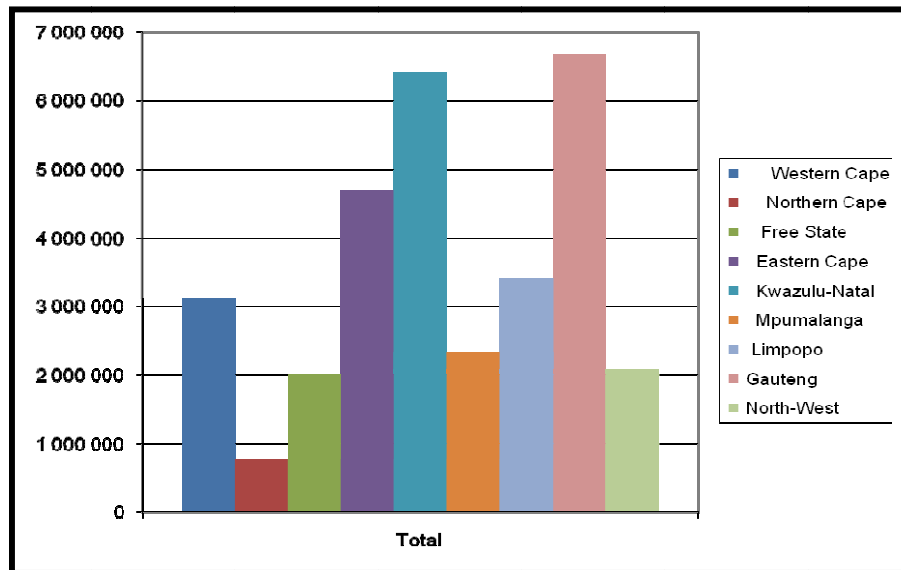


Figure 4: Frequency of Visits to Fast Food Outlets by Age (Source: [www.saarf.co.za](http://www.saarf.co.za))

#### 1.2.4 “Fast-Food” Franchises<sup>1</sup>

“Fast-Food” Franchised Outlets is a franchised fast food group within South Africa. The group has just over 500 stores nationwide. The brand of the business is associated with good quality largely meat based products such as burgers.

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<sup>1</sup> “Fast-Food Franchises is a pseudonym that has been created for this QSR chain in South Africa. The pseudonym has been created to protect the identity and confidential information of this chain.

### **1.2.5 *Business Issues as they Relate to this Research***

It is suggested that the two primary challenges in the quick service restaurant business are attracting customers into franchised outlets, and once they are there, ensuring that the customers are sufficiently satisfied with their experience to return.

In respect of the first aspect, – attracting customers into the store – it is acknowledged that there are numerous factors that play a vital role such as brand image, awareness, and efficacy of marketing and promotional activities. However, in retail there are three golden rules: location, location, location. Meyer (1988:25) asserts that one of the most important decisions a retailer can make is where to locate a retail outlet. It is further asserted that “because convenience is so important to consumers, a retail store can prosper or fail solely on the basis of its location. No matter how good the product or service, no matter how much advertising, trying to attract customers from too far away is like trying to push water uphill.”

Location decisions in the QSR industry are made without any scientific evaluation of proposed site locations, and this has led to a situation where individual store performance varies widely from store to store. In this study, the critical factors of “Fast-Food” outlets’ unique retail site location and the resultant influence on turnover and growth was examined.

The second aspect deals with variables that impact the customer on entering the store, which will either enhance or reduce customer satisfaction. According to Kotler (2003), customer satisfaction is the key to customer retention. In the context of the QSR industry in South Africa, customers have a large array of product and brand choices, prices and suppliers.

Therefore, whether or not customers choose “Fast-Food” will depend on how they perceive the value of the product and service offering. Whether or not the product and service offering lives up to expectation affects both satisfaction and the probability of repurchase. Measuring customer loyalty and retention in the QSR industry is problematic as technology is not in place to overcome the addressability constraints which would allow implementation

of sophisticated customer relationship management and loyalty programs. Store turnover and annual growth rate are often used as proxies for customer loyalty and retention. At the store level, variation in the levels of service, quality of product, image, and the customers' perception of value will differ from one store to the other, resulting in different levels of customer satisfaction. This study aims to show that the different levels of customer satisfaction influence store turnover and annual turnover growth rate.

An understanding of the underlying dimensions of customer satisfaction and how they impact on performance is critical to "Fast-Food" in order to identify opportunities for improvement and to develop core competencies in order to create a sustainable competitive advantage. Thus the study sets out to answer the problem statements as outlined in the section which follows.

## **1.3 Problem statement**

### **1.3.1 *Main problem***

The main research problem is to identify and measure variables that impact the financial performance of stores in the quick service restaurant (QSR) industry in South Africa.

### **1.3.2 *Sub-problems***

The first sub-problem is to identify and measure factors of store location that impact the financial performance of QSR stores in South Africa.

The second sub-problem is to identify and measure factors of customer satisfaction that impact the financial performance of QSR stores in South Africa.

## **1.4 Significance of the study**

This study aims to deepen understanding of the variables that influence store turnover as a result of site location. The results of this research would benefit a wide range of interested parties including but not limited to:

- The franchisor in developing outlets in retail site locations with the potential of higher turnover which would enhance the brand's image in the eyes of potential investors. Higher turnover outlets will obviously improve the financial performance of the brand.
- Franchisee in its ability to enable an evaluation of the acquisition of new stores so as to ensure a reasonable return on investment based on researched factors.

The study aims to assist franchise marketing by identifying the constructs of customer satisfaction. This will enable marketers to effectively tailor their marketing and promotional activities. Franchisor and franchisee will be able to formulate strategies to enhance customer satisfaction levels which will lead to higher levels of customer retention and loyalty. Franchisor and franchisee will also be able to develop core competencies around key customer satisfaction drivers in order to build a sustainable competitive advantage.

This study aims to provide a South African context into the factors affecting performance in the QSR industry. While it is probable that many of the factors are similar to international markets, there may be unique contributors in the South African market.

## **1.5 Delimitations of the study**

- The data gathering and analysis were conducted using "Fast-Food" franchised outlets only. This delimitation was for practical reasons only as access to these stores was possible. It is suggested, however, that the principles adopted should be applicable to other players in the industry.

- This study focuses on two extensive issues, namely site location and customer satisfaction. In particular, the body of literature on customer satisfaction is massive. Thus, while key literature is reviewed and discussed, the predominant focus is placed on issues of customer satisfaction in the Quick Service Restaurant Industry.
- For the purpose of this study, the two aspects of retail site location and customer satisfaction were treated as being mutually exclusive. The aim of the study was to identify the unique retail site location (external) factors and customer satisfaction factors (internal) that influence store performance.
- Arguably there could be several measures of financial performance. For the purpose of this report, financial performance is measured by store turnover only. How stores translate their turnover into profit is considered to be factors of operation and therefore outside of the scope of this research.
- This study did not explore extraneous factors not related to customer satisfaction and site location that may impact store turnover.

## **1.6 Limitations**

- As this research only samples from one specific QSR chain, the generalisability of the sample to the entire industry may be limited. It is argued, however, that factors that affect this major retail chain may well be similar for all players in the industry. However, this cannot be ratified in this research.
- This research does not seek to provide definitive solutions to business on the issue of site location and customer satisfaction. However, its findings should enable business to better make decisions that are likely to impact the business positively.

- As always with correlation studies, the findings demonstrate the nature of a relationship and not strictly a cause and effect relationship (Leedy and Ormrod, 2001).

## **1.7 Definition of terms**

*QSR:* Quick Service Restaurant

*Site Location:* Relating to the physical position of the store

## **1.8 Assumptions**

- The naming of this report as “determinants of success” defines itself as the factors contributing to increased turnover in the sample stores. It is not an exhaustive list of factors.
- It was assumed that store owners who ratified site location factors had sufficient knowledge of their stores and the area to answer such questions.
- Customer satisfaction and site location were assumed to be mutually exclusive factors.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1. Introduction**

This chapter outlines the literature used to derive the propositions against which this research is conducted. The first section of this chapter sets out with an introduction to the concept of site location. This is followed by an explanation of factors that influence the selection of a retail site according to previous literary theory.

The second section in this chapter sets out with an explanation of customer satisfaction and the link to customer loyalty and retention. Factors that influence customer satisfaction are identified. In addition, it includes a review of current methodologies to measure customer satisfaction.

Research hypotheses are integrated into this chapter for continuity, but are then consolidated and summarised in Chapter 3.

### **2.2. Site Location**

#### **2.2.1 *Introduction***

This section provides an in depth review of the literature relating to site location of QSR stores. It is structured to discuss the importance of site location for the success of the retailer. It then describes the factors that are researched to be significant in successful site location. Emanating from these success factors, research hypotheses are stated.

#### **2.2.2 *Importance of Site Location***

Meyer (1988) asserts that one of the most important decisions a retailer can make is where to locate a retail outlet. This seems to support the unwritten three golden rules of retail: location, location, location. As Meyer (1988:25) continues to argue, "Because convenience is so important to consumers, a

retail store can prosper or fail solely on the basis of its location. No matter how good the product or service, no matter how much advertising, trying to attract customers from too far away is like trying to push water uphill.”

Clarke and Rowley (1995) quote George Davies, head of the Next chain, in his autobiography (ch1, pg66-7), as saying, “You can be the best retailer in the world, but if you set up shop in the wrong place; you’ll never do much business. If you operate from the wrong properties, you start with your hands tied behind your back... you should always go where the customer [target market] is”. Thus, as Kotler (2003) suggests, this decision process for retailers starts with selecting the right region, then particular cities, and then specific sites in which to open outlets.

Thompson and Walker (2005) further support this theory by stating that market share can vary significantly from one local market to the next.

Thus the literature does seem to suggest that there is a positive relationship between good site location and store financial performance. The strength and nature of this relationship has not been quantified in research on the QSR industry in South Africa.

### **2.2.3 *Factors of Convenience in Site Location***

Tucker (1985) claims that in addition to demographic data obtained from market analysis, convenience, alternative opportunity (effectively means competition), and access facilities (available parking, easy entrance and exit) are important considerations in selecting a profitable site for a store. Simons (1992) examines the literature on food and retail site location and found that location factors that affect restaurant site location are access, visibility, traffic counts, centre size and the presence of complementary stores. One may deduce from these studies, that factors of convenience play an important role in the success of a retail store. However, the available research does not extend to elaborate on the extent of these relationships; or the significance of one factor of convenience over another. More importantly the literature does

not specifically address the relationship of some of these variables to store financial performance.

Thus, emanating from this literature, the following hypothesis is postulated:

*H1<sub>a</sub>: The accessibility of the shopping centre to consumers will influence the turnover of the QSR outlet.*

#### **2.2.4 Factors of Urbanisation on Site Location**

Simons (1992) establishes a positive relationship between traffic counts and retail profitability, suggesting the importance of urbanisation on retail location. Simons also identifies several market-area characteristics including population, number of households, household income and per capita income. Thompson and Walker (2005) suggest that other factors affecting the success of retail outlets are: population estimates and projections, geo-demographic classifications (classification of areas according to the salient features of their residents), lifestyle data, propensity data (a means of converting characteristics and size of the population into estimates of patronage levels or spending power), and contextual data – for example, the location of roads and urban areas.

Thus, the literature suggests that several factors of urbanisation and the surrounding market play an important role in site location; and potentially in turn, on store financial performance. Hence, the following hypotheses are put forward:

*H2<sub>a</sub>: The market area characteristics of the community surrounding the retail site location will influence the turnover of the QSR outlet.*

*H3<sub>a</sub>: The predominant Living Standards Measure level of the local community will influence the turnover of the QSR outlet.*

### **2.2.5 Neighbouring Business Characteristics and Site Location**

Brown (1987) suggests that the results of a survey of 1009 retail outlets in Belfast indicated that a retail outlet's success is dependent on the nature of neighboring businesses. The survey shows the critical importance of "magnet stores" and such secondary attractors such as banks and supermarkets. It can be argued that this retail clustering plays an important role in determining the success of retail outlets.

Thompson and Walker (2005) further support this research by stating that competitor outlets are important factors to consider in evaluating a retail site.

Emanating from this literature on the proposed importance of neighbouring businesses, the following hypotheses are postulated:

*H4<sub>a</sub>: Competitor activity in and around the retail site location will influence the turnover of the QSR outlet.*

*H5<sub>a</sub>: The presence of a major national brand as an anchor tenant in the shopping centre will influence the turnover of the QSR outlet.*

*H6<sub>a</sub>: The presence of secondary attractors in the shopping centre will influence the turnover of the QSR outlet.*

### **2.2.6 Cannibalisation Characteristics and Site Location**

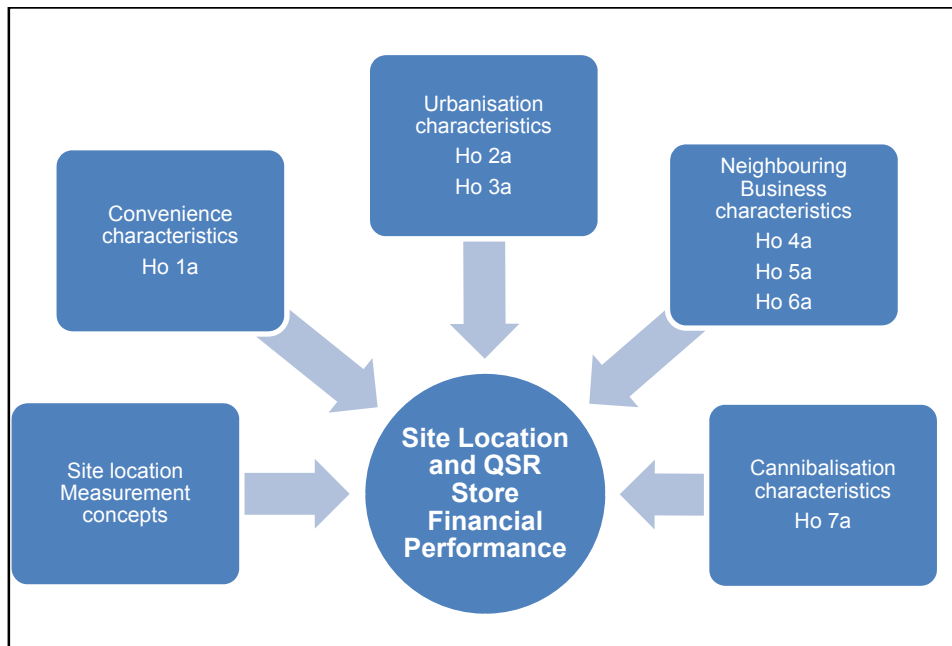
A further factor to consider is what Bibb (2001) refers to as "cannibalization of sales" of existing outlets. In this scenario, Bibb (2001) alludes to situations when stores within the same business effectively steal business from each other as a result of being too closely located to one another. It is suggested that this is of particular relevance in the "Fast-Food" context where there are no pre-determined trading areas allocated to outlets, and often outlets effectively compete for the same local target market.

Emanating from this literature on cannibalisation of sales, the following hypothesis is put forward:

*H7<sub>a</sub>: The cannibalisation of turnover by other outlets in the vicinity will influence the turnover of the QSR outlet.*

### 2.2.7 Conclusion

According to the literature, there are several underpinning variables of site location that may then have a potential relationship with the performance of QSR outlets. These factors along with the proposed hypotheses are summarised graphically in Figure 5.



**Figure 5: Summary of Site Location Variables as established in the Literature and Derived Hypotheses**

## **2.3 Customer Satisfaction**

### **2.3.1 Introduction**

The second key aspect of this research deals with variables that impact the customer on entering the store, which will either enhance or reduce customer satisfaction. According to Kotler (2003), customer satisfaction is the key to customer retention. This section discusses the key literary themes on customer satisfaction and how those issues possibly could relate to QSR store performance. This literature review focuses very specifically on the QSR industry and the factors that influence customer satisfaction once the customer has already made the purchase decision. Sureshchandar et al (2002) refer to this as “encounter-specific” customer satisfaction.

### **2.3.2 Definitions of Customer Satisfaction**

According to Kotler (2003), customer satisfaction is a feeling of pleasure or disappointment arising from comparing a product's perceived performance in relation to the customer's expectation. If the performance does not match the expectation the customer is dissatisfied. If the performance meets the expectation the customer is satisfied, and if performance exceeds expectation, the customer is highly satisfied or delighted.

### **2.3.3 Relationship Between Customer Satisfaction and Loyalty**

There is a direct link between customer satisfaction and customer loyalty or retention (Kotler, 2003). Kotler (2003) continues to argue that at a low level of customer satisfaction, customer retention is unlikely. At a high level of customer satisfaction, customers develop an emotional bond with the company and are six times more likely to remain loyal than customers that are less satisfied.

Gilbert et al. (2004) have a similar view and claim that high consumer satisfaction leads to greater loyalty, which in turn leads to future revenue. An example is cited of Xerox who found that totally satisfied customers were six

times more likely to repurchase Xerox products than were its “merely satisfied” customers. It is further postulated that increased customer satisfaction leads to decreased customer complaints and increased customer loyalty.

So then what are the variables of customer satisfaction? These are evident in the literature and are discussed below.

#### **2.3.4 Factors of Perceived Value in Customer Satisfaction**

Kara et al (1995) state that customer perceptions of fast food outlets are formed by word-of-mouth communication, exposure to promotion from fast food restaurants, past personal experience, and other sources. According to Cronin et al (2000), the first determinant of customer satisfaction is perceived quality, and is followed by perceived value. Customer satisfaction is recognised as being highly associated with value, and is based on the amalgamation of service quality attributes with such attributes as price. In Swaddling and Miller (2002), it is asserted that customers make a choice each time they purchase. The choice is based on the customer’s perceived value of the offering defined as an evaluation of the costs of an offering compared to that customer’s perceived alternatives. Customers will buy from the firm that offers the highest perceived value (Kotler, 2003).

Thus, the literature suggests that perceived customer value is a factor of customer satisfaction that potentially influences QSR store financial performance. Hence, the following hypothesis is proposed:

*H8<sub>a</sub>: Customer satisfaction with the value of the product offering will influence turnover of the QSR outlet.*

#### **2.3.5 Factors of Differentiation**

In Kara et al (1995), the importance of increased customer service or differentiation is highlighted. For instance, McDonald’s is making service its primary focus, Domino’s Pizza is testing a customer satisfaction guarantee

as a replacement for its 30-minute delivery guarantee, and Burger King has added modified table service and advertises a toll-free number for consumer complaints and suggestions. In Kara's research (1995), eleven attributes are put forward as criteria on which consumers differentiate fast food: *price, friendliness of personnel, variety of menu, service speed, calorie content, cleanliness, convenience, business hours, delivery service, novelties for children, and seating facilities.*

Overall, this research places an emphasis on the QSR retailer's ability to differentiate the offering to the customer. These are suggested to have a relationship with QSR store performance. Hence, the following hypothesis is postulated:

*H9<sub>a</sub>: Customer satisfaction with the product innovation and differentiation will influence turnover of the QSR outlet.*

### **2.3.6 Factors of Service Quality in Customer Satisfaction**

Meyer (1988) suggests numerous factors that play a role in the first aspect of attracting customers into the store. These include issues of brand image, awareness, and efficacy of marketing and promotional activities.

The literature identifies numerous models by different researchers across the world for measuring service quality. The SERVQUAL instrument (Parasuraman et al, 1988) incorporates a 22-item scale that measures service quality along five factors, namely reliability, responsiveness, assurance, empathy and tangibles. This model forms the foundation upon which most other works have been built. A careful scrutiny of the 22 items reveal that many of the items deal with the element of human interaction and the tangible facets of service delivery such as the effect of atmosphere, design and décor, appearance of equipment and employee appearance.

Sureshchandar et al, (2002), further support this concept by stating that customer satisfaction and service quality are conceptually distinct but closely related constructs. They suggest that the underlying constructs of customer

satisfaction are the same as the ones by which service quality is measured, and therefore customer satisfaction should be operationalised along the same dimensions as service quality. Sureshchandar et al (2002) suggest that the SERVQUAL items of Parasuraman et al (1988) may also be good predictors of overall customer satisfaction. They postulate five factors of customer satisfaction that synthesise the relationship between the constructs of service quality and customer satisfaction. These are: *core service or product, human element of service delivery, systematisation of service delivery (non-human element), tangibles of service (servicescapes) and social responsibility.*

Law et al (2004) claim that service quality is viewed as an antecedent to satisfaction, and that satisfaction is based on all of the customer's encounters and experiences with the organisation. They also contend that people who visit fast food outlets mainly do so because they are in a hurry for their meals; therefore waiting time significantly influences customer satisfaction. Waiting for a service is a pervasive and often unavoidable experience for customers and appears to be a strong determinant of customer satisfaction and customer loyalty. Other factors identified by Law et al (2004) are restaurant cleanliness and service attitude.

Thus, while service quality seems to have numerous characteristics, there are key themes that emerge from the literature. These components of service quality seem to impact customer satisfaction and in turn potentially QSR store financial performance. Hence, the following hypotheses emanate:

*H10<sub>a</sub>: Customer satisfaction with the quality of the service offering will influence turnover of the QSR outlet.*

*H11<sub>a</sub>: Customer satisfaction with the quality of the product offering will influence turnover of the "Fast-Food" outlet.*

*H12<sub>a</sub>: Customer satisfaction with the image and atmosphere will influence turnover of the QSR outlet.*

### **2.3.7 Factors of Employee Satisfaction in Customer Satisfaction**

Mayer et al (2003) identify process as a determinant of customer satisfaction. The result of process is a customer outcome; that is, a customer is either satisfied or dissatisfied with the service delivery experience. They identify a number of situational elements that are variable in nature due to the fact that service delivery is dependent to some extent on the employee who provides the service. These elements are: *work area appearance, employee appearance, empathy, assurance, employee effort, reliability and customer participation.*

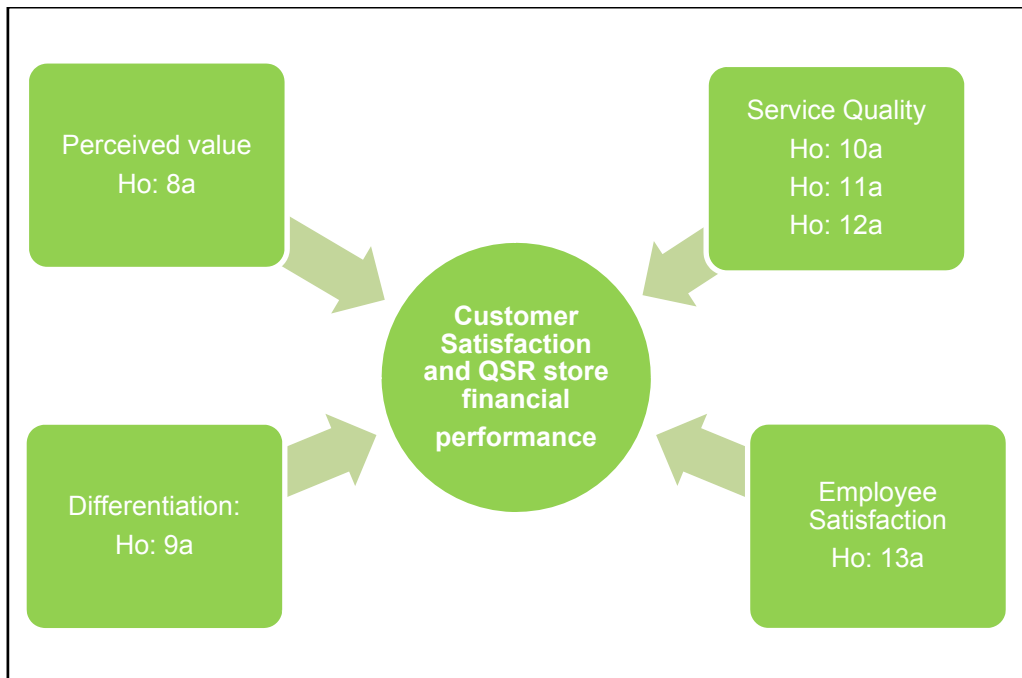
Cannon (2005) expands on the importance of the employee role by postulating a “service-profit chain model” which links employee satisfaction to customer loyalty and profitability. Increased job satisfaction reduces the employee turnover rate; employees stay longer with the company and become better at their jobs; the better they are at their jobs, the better the customer service becomes. As a result, customer satisfaction and loyalty increases.

The literature on the role and satisfaction levels of the employee suggests that the employee plays a pivotal role in affecting customer satisfaction. Hence, the following research hypothesis is put forward:

*H13<sub>a</sub>: Customer satisfaction with the human interaction aspect will influence the turnover of the QSR outlet.*

### **2.3.8 Conclusion**

According to the literature, it is evident that there are several underpinning variables of customer satisfaction which have a potential relationship with the performance of QSR outlets. These variables along with the proposed hypotheses are depicted graphically in Figure 6.



**Figure 6: Summary of Customer Satisfaction Variables as Established in the Literature and Derived Hypotheses**

## 2.4 Conclusion

The literature on determinants of QSR store financial performance suggests that there are two predominant contributors, namely site location and customer satisfaction. Within these broad factors several variables are discussed as predominant sub-components. It is evident in the literature that there are suggested relationships between these sub-components and the possible financial performance of retailers. However, none of the literature specifically measures the relationship between these elements and financial performance of QSR stores. Hence, the hypotheses of this research are proposed in order to qualify and quantify these more specific relationships. The proposed relationships and hypotheses for this research are summarised in Chapter 3.

## CHAPTER 3: RESEARCH METHODOLOGY

### 3.1 Introduction

This chapter provides an overview of the research hypotheses and methodology. It discusses the research paradigm, as well as the detailed methodologies employed to obtain the results.

### 3.2 Hypotheses Summarised

The research hypotheses as they emanate from the literature review are summarised as follows:

*H1<sub>a</sub>: The accessibility of the shopping centre to consumers will influence the turnover of the QSR outlet.*

*H2<sub>a</sub>: The market area characteristics of the community surrounding the retail site location will influence the turnover of the QSR outlet.*

*H3<sub>a</sub>: The predominant Living Standards Measure level of the local community will influence the turnover of the QSR outlet.*

*H4<sub>a</sub>: Competitor activity in and around the retail site location will influence the turnover of the QSR outlet.*

*H5<sub>a</sub>: The presence of a major national brand as an anchor tenant in the shopping centre will influence the turnover of the QSR outlet.*

*H6<sub>a</sub>: The presence of secondary attractors in the shopping centre will influence the turnover of the QSR outlet.*

*H7<sub>a</sub>: The cannibalisation of turnover by other outlets in the vicinity will influence the turnover of the QSR outlet.*

*H8<sub>a</sub>: Customer satisfaction with the product innovation and differentiation will influence turnover of the QSR outlet.*

*H9<sub>a</sub>: Customer satisfaction with the value of the product offering will influence turnover of the QSR outlet.*

*H10<sub>a</sub>: Customer satisfaction with the quality of the service offering will influence turnover of the QSR outlet.*

*H11<sub>a</sub>: Customer satisfaction with the quality of the product offering will influence turnover of the “Fast-Food” outlet.*

*H12<sub>a</sub>: Customer satisfaction with the image and atmosphere will influence turnover of the QSR outlet.*

*H13<sub>a</sub>: Customer satisfaction with the human interaction aspect will influence the turnover of the QSR outlet.*

### **3.3 Research methodology /paradigm**

#### **3.3.1 Introduction**

This section provides a contextual overview of the methodological considerations for the paradigm of this research. Furthermore, this chapter explores measurement techniques applied to this research into site location and customer satisfaction in business. The ways in which these factors are measured in business and in other research, plays a critical role in determining the methodology for this research.

#### **3.3.2 Qualitative Versus Quantitative**

Stainback and Stainback (1988) provide useful information on the difference between quantitative and qualitative research. According to these researchers, the quantitative paradigm allows for greater prediction and control. Importantly, they suggest that the viewpoint of quantitative research is an outside perspective largely free from a subjective perceived reality. Babbie (1998) advocates that qualitative research is more exploratory in

nature and often used to deepen understanding on a more complex subject or a topic on which little research previously has been conducted.

In the circumstance of this research, it is suggested that there has been significant amounts of previous research producing many variables. The previous research seems to have produced a breadth of knowledge; however, it could be argued that perhaps this knowledge has not specifically contributed to a more concrete understanding of the relationships to business financial performance. It is asserted therefore, that a quantitative assessment is more useful in fulfilling the purpose of this research to provide business with a more quantifiable means of determining store financial performance.

Thus, for this research, a quantitative approach was selected; the purpose of which are:

- to provide more concrete evidence of the nature of the relationships between variables;
- to measure more precisely the factors influencing financial performance; and
- verify previous research conducted in this arena applied specifically to the South African QSR industry.

As stated, this study intends to identify the retail site location factors and customer satisfaction factors that impact on the financial performance of franchised outlets in the QSR industry. Both aspects of this study are quantitative in nature. The objective of using a quantitative method is to determine whether the predictive generalisation of a hypothesis holds true. The selection of this research approach is influenced by the questions asked and the ultimate goal of the research. The quantitative approach was proposed for the following reasons:

1. The purpose of the research is to seek explanations and predictions that are generalisable to other “Fast-Food” franchised outlets in the QSR industry. The intent is to find causal relationships between identified factors and annual turnover as a performance measure, and

to develop generalisations that contribute to theory (Leedy and Ormrod, 2001).

2. The variables could be identified and relationships could be measured (Leedy and Ormrod, 2001), based on previous research conducted.
3. Previous research methods could be applied to this context.

### **3.3.3 *Site Location Evaluation Methods in the QSR Industry***

Meyer (1998) suggests that site evaluation is an assessment of the strengths and weaknesses of a specific location using an array of techniques from simple hit and miss options to more scientific selections. The following sections provide a literary overview of the kinds of site location that are possible and employed by business. They also provide business information on how practically this is done. As a subject matter expert in the industry, the author of this research offers insights, which are reflected as such.

Moutinho et al. (1993) assert that computer-based techniques can be an invaluable aid in the site location decision making process. A number of approaches are applied by retail organisations depending on the specific situations and types of retail chains. Rule of thumb procedures cost very little and permit rapid decisions; however, it is contended that this approach can be over-simplified and subjective. Complex relationships between factors that affect store performance cannot be evaluated, and there is much reliance on the analyst's experience. Moutinho et al. (1993) continues to describe other measurement approaches. Firstly, the descriptive inventory approach starts with identifying a list of key factors which are then used as a framework to evaluate and select potential retail locations. Precise relationships between the factors cannot be established. Site ranking instruments provide a means to quantify the merits of retail locations. Over time, ranking systems are modified to include a weighting of each factor. The site ranking approach allows a comparison of alternative locations; however Moutinho (1993) suggests that the weakness of this approach is the lack of demonstrable

associations between key factors and the measure of store performance. The ratio methods approach requires the development of a variety of indicators to describe outlet performance. Ratio methods are usually applied to trade areas rather than specific sites, and are based on aggregate data. In applying this method to individual sites, common measurements would be sales per employee, sales per square meter and sales per customer. Regression modelling allows explicit evaluation of key factors and their influence on performance at existing stores, which can then be used to predict performance at any new site if the characteristics of the new site are known (Moutinho, 1993).

Meyer (1998) suggests three sophisticated site evaluation methods:

1. The analogue method involves a systematic assessment of pertinent factors. Successful stores are examined and the location-related factors that account for the store's success are isolated and analysed. These factors may include the level of competition, trade area demographics, available parking and ease of access. A list is compiled of factors that are thought to contribute to the success of existing stores, and new sites are evaluated against this list.
2. The regression is a formal evaluation version of the analogue approach. Instead of using subjective judgment to determine the factors that are associated with successful sites, statistical analysis is used to determine the factors that are important and to assign a weight to each factor.
3. The gravity model is a method of evaluating people's behavior, and is based on the likelihood that customers will gravitate to a store depending on the distance they must travel in comparison to other alternatives and the inherent drawing power of each location.

According to Rogers (2005), location research methods can be used to analyse and improve the performance of existing retail facilities. The results can be used to aid decisions on how to reposition, re-brand or refurbish stores in order to improve performance. Furthermore, the type of retail

operation will dictate the methodology to be used. For example, pub and restaurant chains and clothing retailers target highly segmented markets and appeal to different demographic groups, and typically employ analogue and multivariate statistical techniques.

In spite of the apparent importance of location of a store, it is suggested that often such decisions in the QSR industry are made without any scientific evaluation of proposed site locations. This is in spite of many possible theoretical models to evaluate the location more scientifically. It is proposed that this has led to a situation where financial performance varies widely from store to store. Hence, there is a need for a study that specifically addresses the relationship between location and performance, using a more accurate scientific methodology.

The literature and business models offer various methods for evaluating site location in the QSR industry.

The methodologies are summarised in Table 2, along with the strengths and weaknesses proposed for each methodology.

**Table 2: Summary of Site Location Evaluation Methods**

| <b>Evaluation Method</b>                 | <b>Summary</b>                                                   | <b>Strengths</b>                           | <b>Weaknesses</b>                                           |
|------------------------------------------|------------------------------------------------------------------|--------------------------------------------|-------------------------------------------------------------|
| Rule of thumb decisions (Moutinho, 1993) | Quick decisions based on key information                         | Rapid decisions<br>Low cost                | Inaccurate<br>Subjective                                    |
| Descriptive inventory (Moutinho, 1993)   | Key factors isolated                                             | Ease to implement                          | Precise relationships difficult to measure                  |
| Site ranking (Moutinho, 1993)            | Sites compared, ranked and weighted against each other           | Allows comparisons                         | Lack of associations<br>No measurement of store performance |
| Ratio methods (Moutinho, 1993)           | Based on aggregate data                                          | Operational information can be used        | Not for QSR industry                                        |
| Regression modeling (Moutinho, 1993)     | Evaluates relationships between key factors                      | Uses existing stores to predict new stores |                                                             |
| Analogue Method (Meyer, 1998)            | Systematic analysis of existing stores and applied to new        | Practical                                  | Lack of precision                                           |
| Regression (Meyer, 1998)                 | Formal measurement of analogue                                   | More precise statistical analysis          | Complexity                                                  |
| The gravity model (Meyer, 1998)          | Likelihood that people will gravitate to a store                 | More in depth analysis                     | Lacks scientific measurement<br>Subjective                  |
| Location Methods (Rogers, 2005)          | Use existing stores to fine-tune, rework and apply to new stores | Flexible                                   | Expensive<br>Lacking scientific validity potentially        |

It is evident that there are many ways in which site location can be measured and evaluated, specifically in terms of how the location relates to QSR store performance. However, it is suggested that for the purposes of this research, certain of these methodologies that perhaps would not stand up to academic rigor. Thus, it is the purpose of this research to employ a methodology that is rigorous, tested and appropriate to the industry.

### **3.3.4 Customer Satisfaction Evaluation Methods in the QSR Industry**

The following section provides a contextual overview of the customer satisfaction measurements that have been employed historically, both within the business and academic arenas. This section concludes with a summary of these methodologies and their associated strengths and weaknesses.

According to Fojt (1995), the London Underground Ltd measures customer satisfaction in three ways. Firstly, a customer satisfaction index was devised in 1992 to achieve a consistent representative sample of Underground users. It surveys users at stations regarding the journey just made. Secondly, mystery shopper surveys provide an independent audit of the actual level of service, and are undertaken by trained mystery shoppers who check pre-defined standards. Thirdly, telephone calls and complaints are categorised to establish customer priorities. "Fast-Food" currently utilises mystery shoppers for similar reasons to the London Underground, and categorises complaints received at their national call centre in order to address issues that influence customer satisfaction.

Dispensa (1997) advocates the use of logistic regression techniques. In his view, customer satisfaction research is aimed at finding out which factors impact the most on satisfaction. By determining which variables drive satisfaction, an organisation can adapt the way it operates in order to improve satisfaction. He suggests that the backbone of this kind of research is data collection and analysis, with the traditional approach being quantification of customers' opinions using rating scales. Usually overall satisfaction is measured and additional ratings for other areas that directly affect overall satisfaction are measured. In this research, most commonly, multiple regression is conducted to determine the drivers of customer satisfaction, where the overall rating is used as the dependent variable and the other ratings are used as independent variables in the model. Dispensa (1997) does postulate a problem with this technique in that the overall satisfaction rating is treated as continuous data and there is an assumption that the ratings are normally distributed. He contends that previous research has shown that customer satisfaction ratings obtained using rating scales are not normally distributed, but are skewed towards higher scale values. Organisations tend not to view overall customer satisfaction ratings on a continuous basis, and set criteria for determining whether a customer is satisfied or not. On a 10-point rating scale, customers who rate overall customer satisfaction as 8 or more may be considered satisfied, whilst the rest are not satisfied. This invalidates the use of multiple regression because

the dependent variable is not continuous, but binary. A binary overall customer satisfaction variable follows a logistic distribution and logistic regression techniques can be used.

Gilbert et al. (2004) report that because of the important linkage between customer service quality, customer satisfaction and long-term business success, much effort has been made to develop measures of them and their relationships. The American Customer Satisfaction Index (ACSI) and the European Customer Satisfaction Index (ECSI) are two customer satisfaction indices (CSI's) that function as intangible economic indicators of the financial viability of companies. Gilbert et al. (2004) continue to point out that the predictive models of the ACSI and ECSI comprise prior customer expectations, perceived quality based on customers' post service assessments, and the customers' perceived value which lead to the creation of a CSI score ranging between 0-100. Post service assessments are conducted by telephone and are based on the customers' rating of three criteria: overall quality, reliability, and meeting the customers' needs.

The Customer Satisfaction Survey (Gilbert et al 1997; Nicholls et al, 1998) is an instrument that measures customer satisfaction immediately following a service episode. This survey employs a five point Likert-type rating scale (1=strongly disagree; 5=strongly agree) and consists of 18 statements. Seventeen of these statements address service and product attributes, and the eighteenth statement measures overall service quality. The sampling method used in this survey is based on a selection of fast food establishments in urban areas (Gilbert, 2004). Gilbert (2004) continues to explain that the sampling procedure is based on a systematic probability sampling approach and employs a skip interval approach when selecting customers to be included in the sample. Factor analysis is then used to identify which variables could be combined to form common constructs and which could be eliminated from further analysis. Two factors emerge that are focused on personal reaction to the service delivery and the environment in which it is delivered. It is suggested that these two measures are well suited

as a starting point for the development of measures of customer satisfaction specifically tailored for the fast food industry.

Fontenot et al (2005) suggest satisfaction-only models are derived from customer ratings of a series of attributes using a five- or seven-point Likert scale. The mean scores for each attribute are computed, with those attributes that have the lowest score being deemed to be the ones that need improvement. These authors argue, however, that this method does not take into account the relative importance of the attributes being measured, nor are they correlated with any performance measure. The model does not provide any data that can be used for prioritising action or for evaluating the impact on performance.

Fontenot et al (2005) suggest a second model is the Gap Analysis model, which is used for computing the discrepancy between each respondent's importance score and satisfaction score. The importance score is also measured on a Likert scale. The gap between satisfaction and importance ratings is an indicator of which attributes require attention. It is suggested that whilst this model does indicate the relative importance of each attribute, there is no link to a performance measure such as sales. It is thus problematic.

Fontenot et al (2005) propose the third type of approach to measuring customer satisfaction. This third model adopts a multiplicative approach, where importance ratings are used as a weighting variable. The difference between the highest possible satisfaction rating on the Likert scale and the customers' perception of the company's performance (satisfaction rating) are computed to obtain a dissatisfaction score. The dissatisfaction score is then weighted according to the importance score and the resultant weighted dissatisfaction score is used to prioritise attributes that require improvement.

There are a noteworthy number of methodologies employed to measure customer satisfaction in both the business and academic arenas. These methodologies are summarised in

Table 3 below.

**Table 3: Summary of Customer Satisfaction Evaluation Methods**

| <b>Evaluation Method</b>                                 | <b>Summary</b>                                                                                       | <b>Strengths</b>                                                                                      | <b>Weaknesses</b>                                                                        |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Business Techniques (London Underground et al.)          | Customer Satisfaction Surveys<br>Mystery Shopping<br>Customer complaint prioritization               | Practical for business purposes                                                                       | Lacking in scientific rigour                                                             |
| Logistic Regressions Techniques (Dispensa, 1997)         | Factor analysis to isolate customer satisfaction<br>Multiple regression to isolate variables         | Systematic<br>Theoretically scientific basis for measurement                                          | Assumes satisfaction to be a continuous measure when it is actually a binary measure     |
| Economic Models of Customer Satisfaction (Gilbert, 2004) | ACSI and ECSI measuring customer satisfaction.                                                       | Well utilised methodologies<br>Act as foundation for Gilbert customer satisfaction survey methodology | Results may vary depending on interpretation of customer satisfaction                    |
| Customer Satisfaction Survey (Gilbert, 2004)             | Post service assessment using Likert Scale<br>Used in QSR industry<br>Factor analysis then conducted | Sampling is probabilistic<br>Appropriate to industry<br>Stands up to scientific rigour                | Limited applicability                                                                    |
| Gap Analysis Methods (Fojt, 2005)                        | Establishes score between customer satisfaction and importance.                                      | Practical and easy to use in a business context                                                       | Can't establish any relationship to performance                                          |
| Multiplicative Methods (Fontenot et al., 2005)           | Computes difference between highest possible satisfaction and actual based on customer input         | Relatively easy to implement                                                                          | As with gap analysis methods, it can't establish a relationship to business performance. |

In conclusion, it is suggested that while many of these methodologies could be utilised in this research, it would seem that the approach of Gilbert et al. (2004) is perhaps the most thorough and practical in its ability to measure satisfaction on a Likert scale.

### **3.3.5 Conclusion**

This section has provided an overview of key considerations into the choice of a research paradigm of quantitative analysis. In addition, it has covered the key methods of evaluation for site location and customer satisfaction used in business and for academic purposes. Using previously employed

research methods as a foundation, detailed research methodologies can be selected to suit the proposed purpose of this research within the QSR industry.

### **3.4 Research Design**

#### **3.4.1 *Introduction***

This section provides detail on the actual methodology employed in this research. It describes the methods used for both the site location and customer satisfaction components; as well as the methods applied overall.

#### **3.4.2 *Overview of Research Design***

The research is objective in nature. Ontologically it is based on realism; epistemologically it has a positivist paradigm, and methodologically is nomothetic allowing time- and context-free generalisations (Leedy and Ormrod, 2001).

The research design for this study is cross-sectional with both descriptive and analytical components. It involves identifying site location characteristics of existing retail outlets and surveying customer satisfaction measures immediately after service encounters. Both site location characteristics and customer satisfaction measures (independent variables) are related to reported annual turnover (dependent variable).

#### **3.4.3 *Methodological Approach to Site Location***

##### **a. Site Location Characteristics**

The review of the literature focused on identifying factors that influence performance within the context of a retail site location. Emanating from the literature review in Chapter 2, site location characteristics were narrowed down as follows:

1. Competition (Thompson and Walker, 2005; Tucker, 1985; Meyer, 1998),
2. Anchor tenants (Brown, 1987),
3. Secondary attractors (Brown, 1987),
4. Market area characteristics (Thompson and Walker, 2005; Tucker, 1985; Simons, 1992; Meyer, 1998),
5. Accessibility (Thompson and Walker, 2005; Tucker, 1985; Simons, 1992; Meyer, 1998)
6. Cannibalisation (Bibb 2001)
7. Living Standards Measure (LSM) data (Thompson and Walker, 2005; Tucker, 1985; Simons, 1992)

b. Site Location Methodology

Various site evaluation methodologies are documented in the literature, however, for the purpose of this study, the regression modelling approach discussed by Meyer (1998) and Moutinho et al. (1993) will be used.

c. Nature of Site Location Source Data

The site location data was obtained through verification of location characteristics undertaken by the researcher. The survey also relied on secondary data pertaining to demographic factors and LSM data which were obtained from reputable marketing research houses. Table 4 illustrates the source of data for each variable included in the survey checklist:

**Table 4: The Source of Data for Retail Location Site**

| Factor                  | Data source/type |
|-------------------------|------------------|
| 1. Competition          | Primary          |
| 2. Anchor tenants       | Primary          |
| 3. Secondary attractors | Primary          |
| 4. Demographic          | Secondary        |
| 5. LSM data             | Secondary        |

|                       |           |
|-----------------------|-----------|
| 6. Site-specific data | Primary   |
| 7. Cannibalisation    | Secondary |

Further information is provided on the site location data in the next section on Methodology Procedures.

#### **3.4.4 Customer Satisfaction Methodology**

##### **a. Customer Satisfaction Characteristics**

The literature review focused very specifically on the QSR industry and the factors that influence customer satisfaction once the customer has already made the purchase decision. Sureshchandar et al (2002) refer to this as “encounter-specific” customer satisfaction. Seven dimensions of customer satisfaction have been derived from the literature for use in this study:

1. Differentiation (Kara et al, 1995)
2. Image (Kara et al, 1995; Law et al, 2004; Mayer et al, 2003; Sureshchandar et al, 2002)
3. Innovation (Kara et al, 1995),
4. Quality (Cronin et al, 2000; Sureshchandar, 2002)
5. Service (Kara et al, 1995; Cronin et al, 2000; Law et al, 2004; Sureshchandar, 2002)
6. Staff (Sureshchandar, 2002; Cannon, 2005)
7. Value (Cronin et al, 2000; Kara et al, 1995)

##### **b. Customer Satisfaction Methodology**

The approach of Gilbert et al (2004) in measuring customer satisfaction using a 5 point Likert scale and then conducting a factor analysis to identify common constructs were used in this study. Attention is drawn to the fact that the measurement of customer satisfaction varies, depending on the assumptions made as to what customer satisfaction means. In general,

Gilbert et al. (2004) conclude that there is agreement that customer satisfaction measurement is a post-consumption assessment by the customer about the product or service gained. It is also alleged that there is agreement that the closer the assessment is to the actual service encounter, the more accurate the assessment of the service quality itself. What may also be important is previous research by Mittal et al (1999) stating that the closer the final evaluation to the actual experience the more pertinent those experiences are than those measured after a longer gap in time. This was noted and for this research, as discussed in section 3.5.3, respondents were all customers who had just had an experience with “Fast-Food”.

A slight variation in the regression modeling technique suggested by Dispensa (1997) was used. Dispensa (1997) recommends logistic regression due to the fact that the dependant variable used in his model is not continuous data and is not normally distributed. In the regression model to be formulated in this study, performance measures used as dependent variables are numerical data and a standard multiple regression methodology is adopted.

c. Nature of Customer Satisfaction Source Data

All customer satisfaction source data was obtained from the surveys. As respondents were all customers who had just had a direct experience with the “Fast-Food” store, the data is considered to be primary data.

**3.4.5 Factor Analysis**

Two types of factor analysis were initially conducted on the data: common and principal. The defining characteristic that distinguishes between the two factor analytic models is that in principal components analysis it is assumed that all variability in an item should be used in the analysis, while in common factors analysis only the variability in an item that it has in common with the other items is used. In most cases, these two methods usually yield very similar results. However, principal components analysis is often preferred as a method for data reduction, while principal factors analysis is often preferred

when the goal of the analysis is to detect structure. For the purposes of this research, Principal Components factor analysis was adopted for use in further modelling.

This analysis confirmed the factors identified from the literature. A varimax (orthogonal) rotation is carried out on the original factor loadings and is used in multiple regression modelling.

#### **3.4.6 *Multiple Regression***

Hernandez and Bennison (2000) contend that multivariate statistical techniques like multiple-regression produce results that are interpreted with less subjectivity, as they can be presented in terms of levels of statistical confidence. Thus, multiple regression analysis was carried out using turnover as a continuous variable (generalised linear model) and as a binary outcome (logistic regression).

#### **3.4.7 *Pearson's Co-efficient***

A Pearson's correlation on the dataset (including turnover) was conducted with a result of a Cronbach Alpha of 0.959. Technically speaking, Cronbach's alpha is not a statistical test - it is a coefficient of reliability (or consistency). Cronbach's alpha can be written as a function of the number of test items and the average inter-correlation among the items.

#### **3.4.8 *Pilot Study***

The statements developed in the questionnaire were clear and concise. However, to ensure that there were no ambiguous or misleading questions, a pilot study was conducted by using a convenience sample of customers at one of the researcher's own restaurants.

As the pilot study did not introduce any potential problems, only minor changes were made before the actual research commenced.

### 3.4.9 Conclusion

This section has provided an overview of the research methodology employed. This methodology is summarised in Figure 7 below.

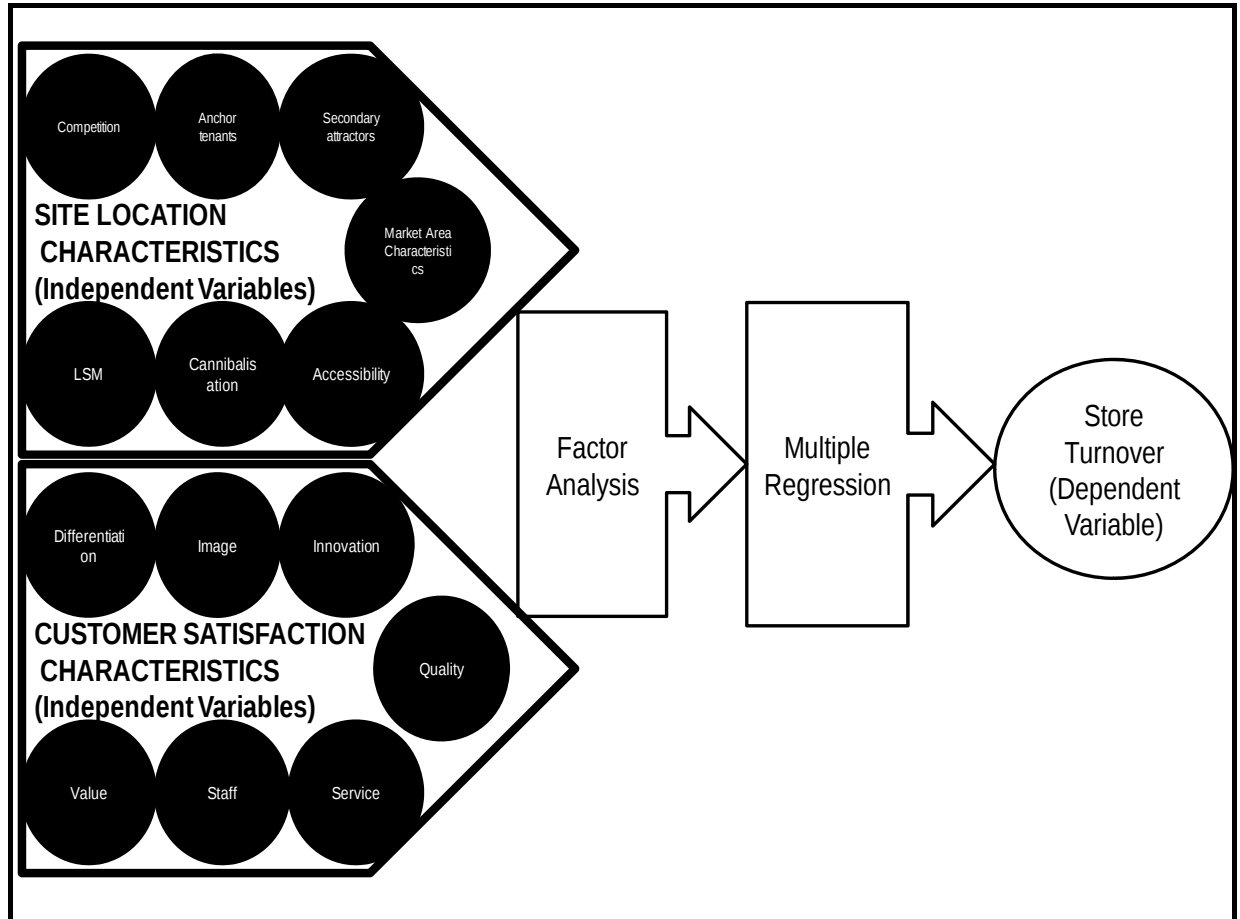


Figure 7: Summary of Methodological Approach

## 3.5 Population and sample

### 3.5.1 Population

The population group of this research is the QSR industry in South Africa. The sub-population group is the “Fast-Food” Franchised outlets in South Africa, out of which the sample was drawn.

### **3.5.2 Sample and sampling method**

For the purpose of this research, the sampling method was purposive. Hagan (2006) refers to purposive sampling as judgmental sampling in which the researcher elects a group that he knows will fulfil the sampling criteria. Seventy-one “Fast-Food” outlets in the Gauteng region (as defined by the grouping of the business outlets) were selected for the site location component and 14 stores were selected for the customer satisfaction component of this research. Stores were selected based on the following selection criteria:

1. LSM sampling: an equal number of above average and below average stores were included in a stratified sampling technique. The researcher used judgment in this case to try and eliminate the possibility of factors such as market segments in the region of the outlets having an impact on store turnover. To some extent this sampling technique was stratified, with strata being selected from the relevant income groups. For research of this nature, the Neyman Optimal Allocation Formula could have been used to ensure that the stratum population size and variance were more precise (Statistics South Africa; 2009). However this level of accuracy was not deemed necessary for the scope of this research.
2. Convenience: stores were selected on the basis that the stores could be accessed. Thus only QSR stores within the “Fast-Food” group, within the Gauteng region and which the researcher had access to, were included.

### **3.5.3 Sample Size**

For quantitative analyses, Leedy and Ormrod (2001) state that a sample of 30 is required to be statistically significant. The researcher aimed to achieve a higher sample number, with the intent of potentially eliminating any concerns around the convenience sampling technique, as well as general

sampling error. Furthermore, by increasing the sample size, the researcher intended to ameliorate validity and reliability concerns.

Thus, a sample of 71 “Fast-Food” stores in the Gauteng geographic region was used for the site location aspect of the study; while 14 “Fast-Food” outlets in the Gauteng region were selected for the customer satisfaction survey. Seven of these 14 stores have above-average monthly turnover, and 7 have below-average monthly turnover, as indicated in Appendix B. For consistency and convenience objectives, the sample included only standard stores located in residential shopping centres. Stores located in regional centres, drive-thru outlets and outlets located in service stations were not included in the sample.

The names of the selected outlets have been disguised as reflected in the various Retail Site Location appendices.

For the Customer Satisfaction surveys, 20 customers were interviewed in each selected store, giving a total of 280 observations. The process to select customers was as systematic and random as possible. A coin was flipped to determine the customer to start the surveys: heads the next customer got surveyed; tails the one thereafter. Once the first customer was interviewed, a skip interval approach (Gilbert et al, 2004) was adopted. Thus every second customer was surveyed until 20 surveys were completed. If a customer did not want to participate, the researcher started with the coin tossing again. All 20 customers from each store were interviewed on the same day. The sample of 14 stores selected is coded and included in Appendix I.

#### **3.5.4 Sampling Issues**

The selection of the sample is non-probabilistic and is therefore biased in that not all outlets had an equal probability of being selected; however, the selected stores are typical of the 146 stores in the Gauteng region that conform to the selection criteria. The sample represents 50% of the total population and so to a very large extent represents its base population.

Data presented in this research are based on information obtained from a sample and are, therefore, subject to sampling variability; that is, they may differ from the figures that would have been produced if the data had been obtained from all enterprises in the food and beverages industry in South Africa. One measure of the likely difference is given by the standard error (SE), which indicates the extent to which an estimate might have varied by chance because only a sample of enterprises was used. The relative standard error (RSE) provides an immediate indication of the percentage errors likely to have occurred due to sampling (Statistics South Africa, 2009) and are discussed further in Chapter 5.

## **3.6 Research Procedures**

### **3.6.1 Introduction**

This section provides a detailed description of the procedures used to collect the data for both the site location and the customer satisfaction variables.

### **3.6.2 Dependent Variable Data Collection**

Performance measure data (average monthly turnover) for each store was obtained from the holding company of “Fast-Foods” Limited and was based on declarations of turnover submitted to the Franchisor by franchisees in terms of their contractual agreements. This data is included in Appendix B.

### **3.6.3 Site Location Procedures**

#### **a. General Procedures**

The researcher was provided access to an intelligent spatial information platform (MapIt and their software MarketScope)<sup>2</sup>. This software allows

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<sup>2</sup> Mapit is a commercial company in South Africa providing demographic and related data for market intelligence purposes.

the calculation of virtually any demographic scenario within a given marketplace, taking into account a variety of factors, including customer profiles, census information, competitor analysis data, and any other set of business-related statistics that require evaluation.

The software, however, did not have data captured for Quick Service Restaurants in the Gauteng area. As a result, all 71 “Fast-Food” outlets selected for this research were manually plotted on the system. Competitor details of store outlets were obtained from the Franchisors concerned, and the competitor outlets within a 3km radius of each “Fast-Food” outlet were also plotted on the system.

A 3km radius from each “Fast-Food” outlet was then calculated and plotted on the spatial maps for each outlet, and a manual verification of competitor activity within each 3km radius area was undertaken and captured on the Retail Site Location Surveys. An examples of one of these output maps is provided in the section on Instruments, which follows.

Thereafter, a 5km radius from each “Fast-Food” outlet was plotted, and census and demographic reports were drawn for each 5km radius area for each “Fast-Food” outlet. This provided LSM data, number of households, total household income for the area and income per household data for each area. This data was then manually recorded on the Retail Site Location Surveys. The Retail Site Location Survey checklist can be viewed in the next section on instruments; as well as in Appendix C. Examples of LSM survey data and census survey data for selected stores are available in Appendix E and Appendix F respectively. An example of a spatial map indicating the 3km radius and plotted competitor activity around the “Fast-Food” outlet, is included in Appendix A.

#### b. Procedures to Collect Primary Data

Primary data (competitor outlets, anchor tenants, secondary attractors, site-specific data, and cannibalisation) as indicated in Table 3 were

collected through verification of factors with franchise managers. Where there was uncertainty regarding any aspect of the checklist with regards to a particular outlet, physical verification was carried out. For example, where a franchise manager stated that he was not sure if there was a competitor store within a 3km radius, this was physically verified by the researcher.

#### c. Data Verification

Retail site location surveys were conducted in 71 stores using a checklist of factors that were hypothesised to influence retail store performance, as identified in the literature. The proposed checklist is provided in the next section on Instruments and in Appendix C. The data collected through primary and secondary sources as reflected on the checklists for all 71 stores, was summarised and collated in a common dataset for ease of use in the subsequent regression modeling. This dataset is included in Appendix D.

### **3.6.4 Customer Satisfaction Procedures**

#### a. Survey Preparation

Store visits were planned in advance with the aid of research assistants. Questionnaires were prepared, including 37 different questions based on the 7 factors identified for customer satisfaction. The study questionnaire contained a standard set of statements using a five-point Likert scale in order to quantify customer responses. Rating scales are useful when behaviour, attitude or other phenomenon of interest need to be evaluated on a continuum (Leedy and Ormrod, 2001). In the study questionnaire, the rating scale ranging from very good to very poor was used. The mid-point of the scale effectively allowed respondents to remain neutral about a question. The 37

statements in the questionnaire were constructed around 7 a-priori constructs (dimensions) that have been reported to influence customer satisfaction. The questionnaire used is provided in the next section on Instruments, and can also be viewed in Appendix K.

b. Conducting the Surveys

The survey obtained customer satisfaction data through face-to-face interviews with customers. The interviews were conducted immediately following a service encounter at selected stores, as suggested by Gilbert et al (2004). The researcher surveyed 20 customers at each store within a one-day time frame per store. Questionnaires were completed by the researcher who read out each question, obtained a verbal response from the customer, and manually recorded the response on the questionnaire sheet. Customers were provided with a rating show-card to ensure more accurate responses. The rating show-card used in included in Appendix J. The 280 surveys from 14 outlets were summarised and consolidated into a common dataset for use in subsequent factor analysis. This dataset is included in Appendix L.

### **3.6.5 Conclusion**

This section has provided a detailed description of the procedures used to collect the data in this research. Performance data (dependent variable) was obtained from commercial management information. Site location data was collected using commercial software and was then verified using surveys. Customer satisfaction data was collected employing a 5-point Likert scale survey across 71 “Fast-Food” branches in Gauteng. The data was collected using multiple instruments, which are provided and discussed in the next section.

## **3.7 Research Instruments**

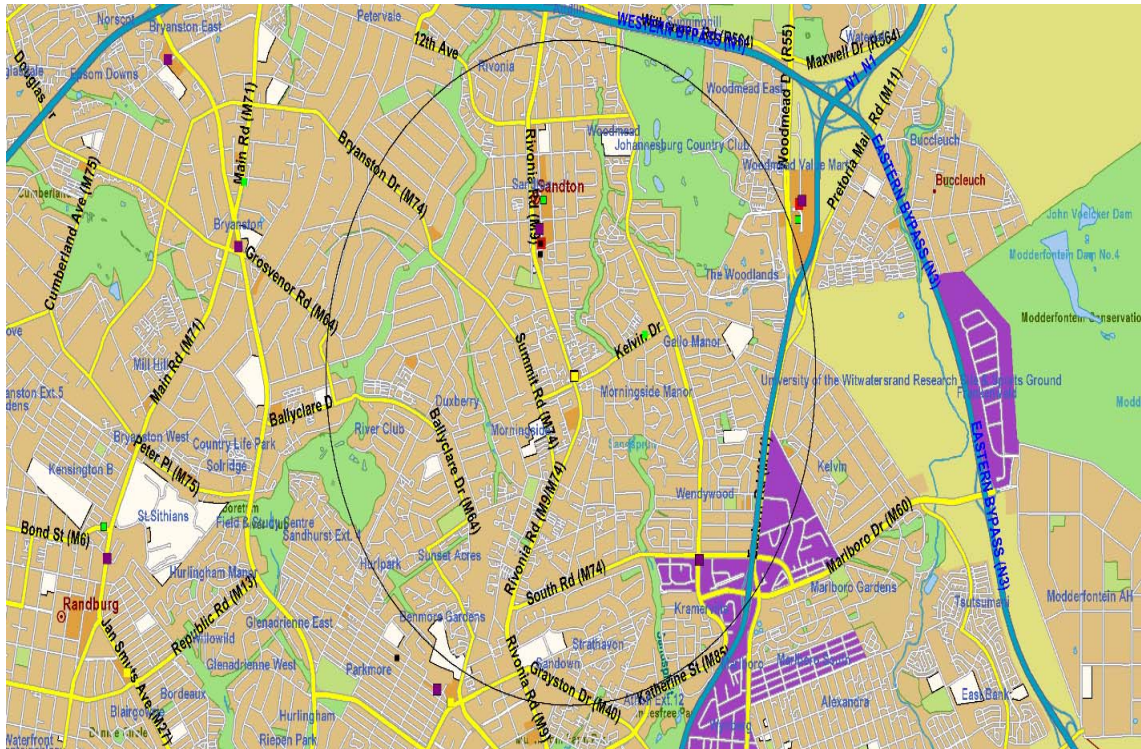
### **3.7.1 *Introduction***

This section provides the primary instruments that were employed in this research. Additional instruments that were utilised to support anonymity and other less critical issues to this research are included as appendices. Most of the context to creating and employing these instruments has already been discussed in the previous section. As a result, the instruments or examples thereof have been included with a summary of their purposes.

### **3.7.2 *Site Location Instruments***

#### **a. Mapping Instrument**

As discussed in the section above on procedures, this instrument was used to record both primary and secondary data for site location variables. Figure 8 is an example of such a spatial map.



**Figure 8: Example of Map Output Created on MarketScope Software to Determine Competitor Activity for a “Fast-Food” Franchise Store**

**b. Retail Site Location Survey Instrument**

As discussed in the section above on procedures, this instrument was used to verify site location variables. This survey is presented in Figure 9, and is also available in Appendix C.

### RETAIL SITE LOCATION CHECKLIST

STORE NAME: \_\_\_\_\_  
STORE CONTROL NUMBER: \_\_\_\_\_

| Factor Number | Factors Identified in the Literature | Question Number                                                          | Question                                                                            | YES = 1              | NO = 0               |
|---------------|--------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------|----------------------|
| F.1           | Location of Competitor outlets       | F.1.1                                                                    | Is there a McDonalds or Wimpy outlet in the same shopping centre?                   | <input type="text"/> | <input type="text"/> |
|               |                                      | F.1.2                                                                    | Is there a McDonalds or Wimpy outlet within a 3km radius?                           | <input type="text"/> | <input type="text"/> |
|               |                                      | F.1.3                                                                    | Are there other major competitors (KFC, Nando's, Debonairs) in the same             | <input type="text"/> | <input type="text"/> |
|               |                                      | F.1.4                                                                    | Are there other major competitors (KFC, Nando's, Debonairs) within a 3km radius?    | <input type="text"/> | <input type="text"/> |
| F.2           | Anchor Tenants                       | F.2.1                                                                    | Is the centre anchored by PicknPay, Checkers, Spar or Woolworths?                   | <input type="text"/> | <input type="text"/> |
| F.3           | Secondary Attractors                 | F.3.1                                                                    | Is there a bank in the centre?                                                      | <input type="text"/> | <input type="text"/> |
|               |                                      | F.3.2                                                                    | Is there an ATM in the centre?                                                      | <input type="text"/> | <input type="text"/> |
| F.4           | Market-area characteristics          | F.4.1                                                                    | How many households are there within a 5km radius?                                  | <input type="text"/> | <input type="text"/> |
|               |                                      | F.4.2                                                                    | What is the average disposable income level within a 5km radius?                    | <input type="text"/> | <input type="text"/> |
| F.5           | Accessibility                        | F.5.1                                                                    | Is there direct access to the centre from a main road?                              | <input type="text"/> | <input type="text"/> |
|               |                                      | F.5.2                                                                    | Is there controlled access to the centre?                                           | <input type="text"/> | <input type="text"/> |
|               |                                      | F.5.3                                                                    | Is there direct access to the store from parking immediately in front of the store? | <input type="text"/> | <input type="text"/> |
|               |                                      | F.5.4                                                                    | Does the centre employ professional security contractors?                           | <input type="text"/> | <input type="text"/> |
|               |                                      | F.5.5                                                                    | Is the store signage visible from the main road?                                    | <input type="text"/> | <input type="text"/> |
| F.6           | Cannibalisation                      | F.6.1                                                                    | Is there 0 Steers outlets within a 3km radius?                                      | <input type="text"/> | <input type="text"/> |
|               |                                      | F.6.2                                                                    | Is there 1 Steers outlet within a 3km radius?                                       | <input type="text"/> | <input type="text"/> |
|               |                                      | F.6.3                                                                    | Is there 2 Steers outlets within a 3km radius?                                      | <input type="text"/> | <input type="text"/> |
|               |                                      | F.6.4                                                                    | Is there 3 Steers outlets within a 3km radius?                                      | <input type="text"/> | <input type="text"/> |
|               |                                      | F.6.5                                                                    | Is there 4 Steers outlets within a 3km radius?                                      | <input type="text"/> | <input type="text"/> |
|               |                                      | F.6.6                                                                    | Is there 5 Steers outlets within a 3km radius?                                      | <input type="text"/> | <input type="text"/> |
| F.7           | LSM Data                             | What is the predominant LSM level within the 5km radius? (%age of total) |                                                                                     | <input type="text"/> | <input type="text"/> |
|               |                                      | F.7.1                                                                    | -LSM 1                                                                              | <input type="text"/> | <input type="text"/> |
|               |                                      | F.7.2                                                                    | -LSM 2                                                                              | <input type="text"/> | <input type="text"/> |
|               |                                      | F.7.3                                                                    | -LSM 3                                                                              | <input type="text"/> | <input type="text"/> |
|               |                                      | F.7.4                                                                    | -LSM 4                                                                              | <input type="text"/> | <input type="text"/> |
|               |                                      | F.7.5                                                                    | -LSM 5                                                                              | <input type="text"/> | <input type="text"/> |
|               |                                      | F.7.6                                                                    | -LSM 6                                                                              | <input type="text"/> | <input type="text"/> |
|               |                                      | F.7.7                                                                    | -LSM 7                                                                              | <input type="text"/> | <input type="text"/> |
|               |                                      | F.7.8                                                                    | -LSM 8                                                                              | <input type="text"/> | <input type="text"/> |
|               |                                      | F.7.9                                                                    | -LSM 9                                                                              | <input type="text"/> | <input type="text"/> |
|               |                                      | F.7.10                                                                   | -LSM 10                                                                             | <input type="text"/> | <input type="text"/> |

**Figure 9: Site Location Verification Survey - Customer Satisfaction Instruments**

### **3.7.3 Customer Satisfaction Instruments**

As discussed in the section above on procedures, this instrument was used to conduct the customer satisfaction interviews within the 71 sample stores. Figure 10 presents this customer survey instrument, and is also available in Appendix K.

### **CUSTOMER SATISFACTION SURVEY**

|                     |  |
|---------------------|--|
| <b>STORE NAME:</b>  |  |
| <b>DATE:</b>        |  |
| <b>TIME:</b>        |  |
| <b>INTERVIEWER:</b> |  |

**INTRODUCTION:** Hello, my name is ..... and I am conducting a survey on specific aspects of customer satisfaction relative to this Steers outlet, and would like to ask you a few questions. It will take approximately 10 minutes of your time and I will greatly appreciate your views. Are you willing to participate?

| Question | A-priori Dimension Identified in Literature | Statement                                                                | Very Good | Quite Good | Neither Good Nor Poor | Quite Poor | Very Poor |
|----------|---------------------------------------------|--------------------------------------------------------------------------|-----------|------------|-----------------------|------------|-----------|
| 1        | Differentiation                             | Has a unique taste                                                       |           |            |                       |            |           |
| 2        | Differentiation                             | Has a different/distinctive store layout & environment                   |           |            |                       |            |           |
| 3        | Differentiation                             | Has a distinct preparation method                                        |           |            |                       |            |           |
| 4        | Image                                       | Is a nice place to sit down and eat                                      |           |            |                       |            |           |
| 5        | Image                                       | Has an inviting atmosphere                                               |           |            |                       |            |           |
| 6        | Image                                       | My type of place                                                         |           |            |                       |            |           |
| 7        | Image                                       | Is a place/environment that I know well                                  |           |            |                       |            |           |
| 8        | Image                                       | Is clean                                                                 |           |            |                       |            |           |
| 9        | Innovation                                  | Has creative packaging                                                   |           |            |                       |            |           |
| 10       | Innovation                                  | Has exciting menu options                                                |           |            |                       |            |           |
| 11       | Innovation                                  | Has a wide menu range                                                    |           |            |                       |            |           |
| 12       | Innovation                                  | Always has new items on the menu                                         |           |            |                       |            |           |
| 13       | Innovation                                  | Is an innovative, creative or inventive fast food or takeaway restaurant |           |            |                       |            |           |
| 14       | Innovation                                  | Is always coming up with new offerings                                   |           |            |                       |            |           |
| 15       | Quality                                     | Offers consistent quality (always the same)                              |           |            |                       |            |           |
| 16       | Quality                                     | Uses fresh ingredients                                                   |           |            |                       |            |           |
| 17       | Quality                                     | Has the best flame grilled burgers                                       |           |            |                       |            |           |
| 18       | Quality                                     | Has the best taste                                                       |           |            |                       |            |           |
| 19       | Quality                                     | Is seen to be a specialist in what they do                               |           |            |                       |            |           |
| 20       | Service                                     | Friendly service                                                         |           |            |                       |            |           |
| 21       | Service                                     | Fast service                                                             |           |            |                       |            |           |
| 22       | Service                                     | Service leaves you feeling good                                          |           |            |                       |            |           |
| 23       | Service                                     | Has well presented staff                                                 |           |            |                       |            |           |
| 24       | Service                                     | You have full view of the food preparation                               |           |            |                       |            |           |
| 25       | Staff                                       | Staff are willing to go the extra mile for you                           |           |            |                       |            |           |
| 26       | Staff                                       | Staff are knowledgeable and inspire you with confidence                  |           |            |                       |            |           |
| 27       | Staff                                       | Staff seem happy and enjoy their job                                     |           |            |                       |            |           |
| 28       | Value                                       | Has regular specials & promotions                                        |           |            |                       |            |           |
| 29       | Value                                       | Is affordable on a regular basis                                         |           |            |                       |            |           |
| 30       | Value                                       | Has prices that are lower than other fast food/takeaway restaurants      |           |            |                       |            |           |
| 31       | Value                                       | The portions are worth paying more for                                   |           |            |                       |            |           |
| 32       | Value                                       | Is good value for money                                                  |           |            |                       |            |           |
| 33       | Value                                       | Has generous portion sizes                                               |           |            |                       |            |           |
| 34       | Value                                       | The taste experience is worth paying more for                            |           |            |                       |            |           |
| 35       | Value                                       | Satisfies your hunger                                                    |           |            |                       |            |           |
| 36       | Value                                       | The one I like best                                                      |           |            |                       |            |           |
| 37       |                                             | Please rate your overall level of satisfaction                           |           |            |                       |            |           |

|                           |  |
|---------------------------|--|
| <b>RESPONDENTS NAME:</b>  |  |
| <b>ADDRESS:</b>           |  |
| <b>HOME TELEPHONE:</b>    |  |
| <b>CELL PHONE NUMBER:</b> |  |
| <b>EMAIL ADDRESS:</b>     |  |

**Figure 10: Customer Satisfaction Survey employed at 71 “Fast-Food” Stores**

### **3.7.4 Conclusion**

This section has provided the actual instruments utilised in this research, along with a summary of their purpose. Issues of instrument validity and reliability are discussed as part of this overall them at the end of this chapter.

## **3.8 Data analysis and interpretation**

### **3.8.1 *Introduction***

This section provides information on how the data was analysed in order to derive the interpretations and conclusions following in chapter 5 and 6 respectively. It discusses the general principles of analysis employed; as well as specifics relating to each set of variables.

### **3.8.2 *General Principles***

#### **a. Analysis Tools**

Data was reduced to numbers which was presented in a formal, scientific style. All data were coded and captured in Microsoft Excel, and all statistical analyses were carried out in STATA statistical package (StataCorp, 2005). Statistical analyses were carried out to meet the research objectives.

#### **b. Analysis of Variables**

Categorical variables in the checklists were coded as yes or no, while continuous variables were reported as numbers to provide numerical data for use in subsequent multiple regression analysis. The Living Standards Measure (LSM) variable was quantified using the weighted scores for each LSM category as provided by the South African Advertising Research Foundation.

The primary objective of the regression analyses in this research was to determine how the independent variables impacted store turnover, and thus test the hypotheses postulated. Thus, all analyses were carried out at an alpha level of 5% (95% confidence) and so any p-value less than 0.05 was interpreted as reflecting a statistically significant difference.

### **3.8.3 Site Location Specific Analysis**

#### **a. Descriptive Statistics**

Simple descriptive statistics were done to summarise the distribution of site location variables. Proportions (%) were reported for categorical variables while means, standard deviations and ranges were reported for continuous variables. Appendix D provides a data table of all the variables obtained through the store surveys on site location, whilst the summary statistics for these variables is provided in Appendix G.

#### **b. Bivariate and Multiple Regression Analyses**

Bivariate analyses were then employed to understand the relationship between reported turnover and site location items. Multiple regression analyses were then used to assess the effects of all variables on reported annual turnover.

For these analyses, turnover was treated as an outcome variable while site location items were treated as predictor (independent) variables. The dependent variable was first assessed for normality before being used in the regression models.

### **3.8.4 Customer Satisfaction Specific Analysis**

#### **a. Descriptive Statistics**

Simple descriptive statistics were done to report customer satisfaction level for all items in the questionnaire. For this analysis responses (Likert rating scores) were treated as numbers, while means, standard deviations and ranges were reported. The summary statistics are included in Appendix N.

#### b. Factor Analysis

A common factor analysis was conducted on the Likert rating scores to delineate distinctive factor ratings. The common factor analysis was carried out because it is a confirmatory factor analysis of hypothesised dimensions. The dimensions of customer service to be evaluated in his study were established a-priori in order to establish facets of an operational definition, each of which is measured by a number of statements. This analysis confirmed whether there is a close correspondence between a-priori dimensions and the statement items to which they were assigned (Bryman, 1995).

In developing the factor solution, the criteria of Eigen value greater than 1, Cattell's scree test, the proportion of variance explained by each factor and parsimony were employed. In naming the factors, the factor loadings of the original items on the extracted factors were studied. Where factor loadings were not immediately interpretable, a factor loading rotation using varimax rotation was carried out. A factor loading of greater than 0.5 was considered high and indicative of a factor name.

Factor scores were derived for each respondent, and were in turn used as independent variables in subsequent multiple regression analysis. Appendix M contains the output data for this factor analysis. By using the factor scores in the multiple regression analysis, the possibility of multi-collinearity (several inter-correlated independent variables) was reduced.

#### c. Multiple Regression

Multiple regression modeling was employed to assess the relationship between extracted customer satisfaction factors and reported annual turnover. For the multivariate analyses, turnover was treated as an outcome variable while the extracted factors were treated as predictor

(independent) variables. The dependent variable was first assessed for normality before use in the regression models.

### **3.8.5 Conclusion**

This section has provided information on how the data was analysed in order to derive the interpretations and conclusions following in chapter 5 and 6 respectively. The analysis has included descriptive statistical techniques, bivariate analyses and multiple regression analyses for the site location variables. In conjunction with these analysis methods, a factor analysis for verification of customer satisfaction factors has been included in the customer satisfaction component.

## **3.9 Validity and reliability**

Validity of the research method entails having sufficient controls to ensure that the conclusions are warranted by the data (internal validity), and that these conclusions can be generalised beyond the research sample (external validity) (Leedy and Ormrod, 2001).

The internal validity of a research study is determined by the extent to which the design and the data it yields enable the researcher to draw accurate conclusions about the cause and effect relationships within the data. Precautions need to be taken to ensure that the results obtained cannot be explained by other unidentified factors (Leedy and Ormrod, 2001).

### **3.9.1 Retail Site Location Validity**

#### **a. Internal Validity of Retail Site Location Surveys**

It is accepted that there may be many other factors related to an outlet's unique retail site location that influence performance which have not been included in this research. It is contended that this does not invalidate this study as the identified factors included in the research have been shown to have a strong relationship with the performance measure as measured by

the regression coefficient. Furthermore, primary data collected for some of the factors was checked using MapIt's spatial mapping software which provides a dataset used for geo-demographic analysis at a suburb level. Together, triangulation of data is provided which will converge to support the hypothesis being tested.

b. External Validity of Retail Site Location Surveys

This study was conducted in a real-life setting (Leedy and Ormrod, 2001) and the results should therefore have broader applicability to other real-world contexts. The sample used in the research can be considered representative sample of the outlets in the Gauteng region, and the results could be generalised beyond the research sample to outlets in other geographic areas and to other franchised operations in the QSR industry in the Province. This assertion is based on the premise that there do not seem to be any key differentiators that may prevent the results from being generalised to other regions and QSR brands. Ultimately it is suggested that the variables in question are not geographically bound or relevant to only one QSR business.

c. Internal Validity of Customer Satisfaction Surveys

There are obviously many more variables that impact customer satisfaction than those measured in this study, however, this study has focused only on those variables that come into play once the customer has already decided to purchase from the "Fast-Food" outlet, and is physically present at the outlet. Sureshchandar et al (2002) refer to this as "encounter-specific" customer satisfaction, and is a similar to the London Underground survey approach discussed in the literature review. As stated in the Delimitations and Limitations section, parity is assumed for all other variables. The factors included in the research were shown to have a strong relationship with the performance measure as measured by the regression coefficient in the multiple regression analysis. Furthermore, primary data collected in this

survey was compared to data from a broad customer survey currently being undertaken by the Franchisor. In that survey, known as Project Angus, one section of the measuring instrument used is similar to the measuring instrument used in this survey. Finally, the factors identified in this study have been reported in the literature as having an influence on customer satisfaction. Together, triangulation of data is provided which will converge to support the hypothesis being tested.

#### d. External Validity of Customer Satisfaction Surveys

This study was conducted in a real-life setting (Leedy and Ormrod, 2001) and the results should therefore have broader applicability to other real-world contexts. The sample of stores used in the research is purposive and were selected for a specific reason: to compare customer satisfaction in stores with above-average turnover with stores that have below-average turnover. As such, limited generalisations can be made. The objective of the study is to demonstrate that customer satisfaction has an influence on performance as measured by turnover and annual turnover growth rate, and to determine how much each construct of customer satisfaction in the context of the study influences performance. The constructs identified in this study may be applicable to organisations in the QSR industry. However, what may differ are the factor scores obtained from different surveys in different contexts, and this may indicate a difference in the relative importance of the underlying constructs. The hypotheses that the underlying constructs of customer satisfaction each influence performance to varying degrees will be the same across all organisations in the QSR industry.

### **3.10 Conclusion**

This chapter has provided detailed information on the research methodology employed for this research. It has described the quantitative research

paradigm; the methodological approaches to both the customer satisfaction and site location components. It further detailed procedures employed to gather and analyse data, the research instruments utilised; as well as issues of validity and reliability prior to conducting the research. All of these discussions provide crucial input into the interpretation of the results which follows in chapter 5.

## CHAPTER 4: PRESENTATION OF RESULTS

### 4.1 Introduction

This chapter presents the findings of this study, which aimed to determine the internal and external factors that influence performance of “Fast-Food” outlet stores in South Africa. The chapter is divided into several parts as follows:

1. Description of annual turnover for sample stores.
2. *Site Location*:
  - a. Description of annual turnover and site location variables (external factors) for sample stores.
  - b. Regression analyses to determine which site location variables (external factors) significantly affected annual turnover.
3. *Customer Satisfaction*
  - a. Findings of factor variables for sample stores.
  - b. Regression analyses to determine which customer satisfaction variables significantly affected annual turnover.

### 4.2 Summary of Appendices

For detailed referral purposes, all data for the site location analysis has been included in appendices as follows:

| Description of Appendix                            | Appendix Number |
|----------------------------------------------------|-----------------|
| Examples of Spatial Maps for Selected Stores       | Appendix A      |
| Retail Site Location Data – Store Turnover         | Appendix B      |
| Retail Site Location Survey Checklist              | Appendix C      |
| Retail Site Location Data for 71 Stores            | Appendix D      |
| Retail Site Location Data – LSM Survey             | Appendix E      |
| Retail Site Location Data – Census Survey          | Appendix F      |
| Retail Site Location Data – Summary Statistics     | Appendix G      |
| Retail Site Location Data – Regression Diagnostics | Appendix H      |

Where appropriate, certain of the data have been included in the body of this section on site location interpretation and discussion.

### 4.3 Results Pertaining to Site Location (Hypotheses 1 to 7)

#### 4.3.1 Site Location Summary Statistics

A total of 71 stores were included in the data for external factor analysis. The variables were analysed and their summary statistics presented for the categorical and continuous variables presented in Table 5 and Table 6 respectively. Means, standard deviations and ranges are reported for continuous variables while proportions (%) are reported for categorical variables.

**Table 5: Summary of Categorical Variables**

| ANALYSIS OF CATEGORICAL VARIABLES<br>(Alpha = 0.05) |       |                                                                                          |       |     |       |    |       |  |  |  |  |
|-----------------------------------------------------|-------|------------------------------------------------------------------------------------------|-------|-----|-------|----|-------|--|--|--|--|
| Ref                                                 | actor | Variable                                                                                 | Count | Yes | Yes % | No | No %  |  |  |  |  |
| c4                                                  | F.1.1 | Is there a McDonalds or Wimpy outlet in the same shopping centre?                        | 71    | 19  | 26.8% | 52 | 73.2% |  |  |  |  |
| c5                                                  | F.1.2 | Is there a McDonalds or Wimpy outlet within a 3km radius?                                | 71    | 54  | 76.1% | 17 | 23.9% |  |  |  |  |
| c6                                                  | F.1.3 | Are there other major competitors (KFC, Nando's, Debonairs) in the same shopping centre? | 71    | 22  | 31.0% | 49 | 69.0% |  |  |  |  |
| c7                                                  | F.1.4 | Are there other major competitors (KFC, Nando's, Debonairs) within a 3km radius?         | 71    | 54  | 76.1% | 17 | 23.9% |  |  |  |  |
| c8                                                  | F.2.1 | Is the centre anchored by PicknPay, Checkers, Spar or Woolworths?                        | 71    | 49  | 69.0% | 22 | 31.0% |  |  |  |  |
| c9                                                  | F.3.1 | Is there a bank in the centre?                                                           | 71    | 25  | 35.2% | 46 | 64.8% |  |  |  |  |
| c10                                                 | F.3.2 | Is there an ATM in the centre?                                                           | 71    | 61  | 85.9% | 10 | 14.1% |  |  |  |  |
| c13                                                 | F.5.1 | Is there direct access to the centre from a main road?                                   | 71    | 62  | 87.3% | 9  | 12.7% |  |  |  |  |
| c14                                                 | F.5.2 | Is there controlled access to the centre?                                                | 71    | 11  | 15.5% | 60 | 84.5% |  |  |  |  |
| c15                                                 | F.5.3 | Is there direct access to the store from parking immediately in front of the store?      | 71    | 65  | 91.5% | 6  | 8.5%  |  |  |  |  |
| c16                                                 | F.5.4 | Does the centre employ professional security contractors?                                | 71    | 60  | 84.5% | 11 | 15.5% |  |  |  |  |
| c17                                                 | F.5.5 | Is the store signage visible from the main road?                                         | 71    | 63  | 88.7% | 8  | 11.3% |  |  |  |  |
| c18                                                 | F.6   | Is there a Steers outlet within a 3km radius?                                            | 71    | 53  | 74.6% | 18 | 25.4% |  |  |  |  |

**Table 6: Summary of Continuous Variables**

| ANALYSIS OF CONTINUOUS QUANTITATIVE VARIABLES<br>(Alpha = 0.05) |        |                                          |         |         |         |         |           |  |  |  |  |
|-----------------------------------------------------------------|--------|------------------------------------------|---------|---------|---------|---------|-----------|--|--|--|--|
| Ref                                                             | Factor | Variable                                 | Mean    | Minimum | Maximum | Range   | Std. Dev. |  |  |  |  |
| c11                                                             | F.4.1  | Households within 5km radius             | 61,208  | 9,668   | 191,804 | 182,136 | 36,387    |  |  |  |  |
| c12                                                             | F.4.2  | Household income within 5km radius       | 126,766 | 34,980  | 226,582 | 191,602 | 53,523    |  |  |  |  |
| c34                                                             |        | Monthly turnover for store               | 206,472 | 115,034 | 451,465 | 336,431 | 58,834    |  |  |  |  |
| c36                                                             | F.7    | Proportion of LSM 6-10 within 5km radius | 78.4%   | 27.2%   | 97.1%   | 69.9%   | 16.4%     |  |  |  |  |

**Table 7: Site Location Key Statistical Summary Data**

|                                                        |                                          |
|--------------------------------------------------------|------------------------------------------|
| <b>Mean monthly turnover for 69 stores<sup>3</sup></b> | 206,472 (South African Rands)            |
| <b>Standard Deviation</b>                              | 58,834 (South African Rands)             |
| <b>Median</b>                                          | 198,750 (South African Rands)            |
| <b>Range</b>                                           | 115,034 to 451,465 (South African Rands) |

#### **4.3.2 Site Location Individual Factor Regression**

Step 1 of the regression modelling process involved regressing each individual variable against turnover.

Factor F1.2 (McDonalds or Wimpy within a 3km radius) was not significant on its own.

This step determined that the following variables, when taken on their own, and regressed against turnover, were significant at an alpha level of 10%:

1. F.1.4. - Are there other major competitors (KFC, Nando's, Debonairs) within a 3km radius?
2. F.3.1. - Is there a bank in the centre?
3. F.5.3. - Is there direct access to the store from parking immediately in front of the store?<sup>4</sup> F5.3. fell away when it was included with a whole lot of other variables – as the complexity of relationships changed as more and more variables were added together.

---

<sup>3</sup> The intercept in the regression model is not equal to the mean turnover of the sample stores. This was due to 2 observations, namely store 14 and 69, being dropped during regression diagnostics in order to fulfill the assumptions of regression. These 2 stores had very high leverage values, that is, they were extreme outliers. Hence, only 69 observations are included in the final regression model. This explains why the intercept value is not equal to the mean turnover value.

<sup>4</sup> Factor 5.3 (direct access to store from the parking fell away when it was included with a whole lot of other variables; as the complexity of relationships changed as more and more variables were added together.

Table 8 below summarises the regression variable analysis.

**Table 8: Summary of Regression Analysis on Variables**

| Variable     | Coefficient      | Std error       | P-value      | Remark             |
|--------------|------------------|-----------------|--------------|--------------------|
| F1.1         | 3698.323         | 15879.47        | 0.817        | Not significant    |
| F1.2         | 13879.54         | 16395.32        | 0.400        | Not significant    |
| F1.3         | 6579.444         | 15187.48        | 0.666        | Not significant    |
| <b>F1.4</b>  | <b>-28093.37</b> | <b>16129.49</b> | <b>0.086</b> | <b>Borderline</b>  |
| F2           | -7814.304        | 15179           | 0.608        | Not significant    |
| <b>F3.1</b>  | <b>31343.58</b>  | <b>14232.66</b> | <b>0.031</b> | <b>Significant</b> |
| F3.2         | 14239.94         | 20144.35        | 0.482        | Not significant    |
| F4.1         | -.0113806        | .1946504        | 0.954        | Not significant    |
| F4.2         | .0334525         | .1322708        | 0.801        | Not significant    |
| F5.1         | 5816.134         | 21126.6         | 0.784        | Not significant    |
| F5.2         | -12330.58        | 19379.51        | 0.527        | Not significant    |
| <b>F5.3</b>  | <b>-43593.77</b> | <b>24733.76</b> | <b>0.082</b> | <b>Borderline</b>  |
| F5.4         | 28281.7          | 19135.75        | 0.144        | Not significant    |
| F5.5         | -3486.228        | 22237.83        | 0.876        | Not significant    |
| F6           | 1576.435         | 5876.664        | 0.789        | Not significant    |
| Lsm 6/10 cat | 507.0207         | 426.5357        | 0.239        | Not significant    |

#### **4.3.3 Site Location Stepwise Regression**

Stepwise regression was conducted to determine the significance of the variables when introduced in various combinations. As mentioned, 60 iterations of this regression were completed.

In this regression process, F5.3 (direct access to the store from parking) was eliminated as a significant variable.

In addition, F1.2 (McDonalds or Wimpy within a 3km radius) was introduced as a significant variable.

#### **4.3.4 Site Location Regression Diagnostics**

Regression diagnostics were carried out to eliminate any outliers which were responsible for the regression model not achieving the three basic regression assumptions. As a result, 2 of the sample stores were removed from the sample.

All other tests for regression validity demonstrated that the final regression model is valid. Regression Diagnostics can be viewed in detail in Appendix H.

#### **4.3.5 Site Location Final Regression Model**

Table 9 presents the final parameters of the regression model.

**Table 9: Parameters of Final Regression Model**

|                        |        |
|------------------------|--------|
| Number of Observations | 69     |
| F(3,67)                | 3.13   |
| P-value                | 0.032  |
| R-squared              | 0.126  |
| Adj R-squared          | 0.086  |
| Root MSE               | 48611  |
| Intercept ( $\alpha$ ) | 201765 |

The F-test (p-value = 0.0317) shows that the overall model is significant. This model explains only about 13% (adjusted = about 9%) in the variability of monthly turnover.

Thus, in the final model, three variables showed a significant relationship with annual turnover. These are:

1. The presence of a McDonalds or Wimpy outlet within a 3 km radius (F1.2)
2. The presence of major competitors (KFC, Nandos and Debonairs) with a 3km radius (F1.4)
3. The presence of a bank in the centre (F3.1).

#### 4.3.6 *Site Location Model Equation*

The linear relationship between a dependent variable and its significant predictors is additive. That is, the slope for each predictor represents its main effects on the outcome variable. This is represented mathematically by:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_nX_n$$

Where y = turnover

$b_0$  = intercept

$b_i - n$  = coefficient for respective variables.

#### 4.3.7 *Site Location Model Estimations*

Table 10 provides an overview of the model estimations for this analysis.

**Table 10: Model Estimations for Significant Variables**

| Significant variables | slope ( $\beta$ ) | p-value | 95% CI Lower | 95% CI Upper |
|-----------------------|-------------------|---------|--------------|--------------|
| F1.2                  | 32720.5           | 0.045   | 766.4        | -64674.6     |
| F1.4                  | -40082.8          | 0.019   | -73501.2     | -6664.3      |
| F3.1                  | 25877.5           | 0.042   | 979.8        | -50775.3     |

#### **4.3.8      *Site Location Interpretation***

##### **a. Intercept ( $\alpha$ )**

R201,765.20 is the monthly turnover when all significant predictors are equal to zero. The intercept refers to the intersection of a Least Squares Line (LSL) with the y-axis in the context of Simple Linear Regression (SLR). This is because the LSL embodies the predictions of the model. The intercept is the prediction of the SLR for the value "0" of the predictor x. SLR is often used to describe the evolution of the response variable y when a "control" variable x varies across a range. The intercept of the LSL then answers the question: "What would the value of y be if x were tuned to 0?" In this case, the value of turnover will be R201,765-20 if the explanatory (predictor) variables in the regression model are equal to zero. The intercept (often labeled, the constant) is the expected mean value of Y when all X=0.

##### **b. F1.2 Wimpy or McDonalds within a 3km Radius**

**( $\beta$ = 32,720.52)**

The Beta value of R32,750.52 represents the gain in annual turnover for stores that have a McDonalds or Wimpy outlet within a 3 km radius. This means in comparison to stores with no McDonalds or Wimpy outlets within a 3km radius, stores which have McDonalds and/or Wimpy outlets in a 3km radius will increase their monthly turnover by about R32,721. Thus the presence of McDonalds or Wimpy outlets within a 3 km radius has a positive effect on annual turnover.

##### **c. F1.4: Major Competitors within a 3km Radius**

**( $\beta$ = -40082.76)**

This is the effective loss in monthly turnover for stores that have major competitors (KFC, Nandos and Debonairs) within a 3 km radius. This means that stores which have major competitors in a 3km radius will have a reduced income of R40,082.76 in monthly turnover compared to stores with no such competitors. Thus the presence of major competitors within a 3 km radius has a negative effect on annual turnover of stores.

d. F3.1: Presence of a Bank in the Centre

( $\beta$ = 25877.53)

The slope of 25,877.53 for the presence of a bank in the centre means that in centres where a bank is present, compared to centres where there is none, a store will have an additional monthly turnover of R25,877 per month. Thus the presence of a bank in the centre tends to increase annual turnover.

e. Notes of F6.0: Cannibalisation

Previously cannibalisation variables were split into 6 depending on how many other “Fast-Food” outlets in a 3km radius from the sample store. Due to the size of the sample being only 71 stores, it was unproductive to split this variable into 6 sub-variables. Thus, only one variable was used as such: Is there a “Fast-Food” outlet within a 3km radius of the sample store? 18 of the 71 sample stores had no other “Fast-Food” outlet within a 3km radius (25.4%).

What is very interesting about this particular variable is that the mean turnover of stores that do not have a competitor “Fast-Food” store (R206,475) within a 3km radius is essentially the same as the mean turnover of stores that do (R206,471). This clearly demonstrates the insignificance of this variable as a factor impacting turnover.

f. Notes on F7.0: LSM

Splitting this variable into 10 sub-variables (LSM 1 to 10) made the regression model unproductive. Since the target market of “Fast-Food” is primarily LSM 6-10, it was decided to introduce a dichotomous dummy variable in order to categorise the LSM data into two groups: LSM 1 to 5 and LSM 6 to 10. The dummy variable for LSM 6-10, which represents the proportion (%) of LSM 6-10 households within a 5km radius of the sample store, was used in the regression modelling. Further information on the relationship of these variables is described in the regression section which follows.

**4.3.9      *Site Location Summation***

The research established that 3 site location variables correlate with store turnover. These variables are:

1. Presence of direct competitors (McDonalds, Wimpy): positive correlation
2. Presence of indirect competitors (Debonairs, KFC, Nandos): negative correlation
3. Presence of a bank within a 3km radius: positive correlation

Other hypothesised site location factors did not establish a meaningful correlation to store turnover.

**Table 11: Summary of Site Location Factors and Relationship to Store Turnover**

| Hypothesised Site Location Factor |                      | Significance | Direction of Relationship to Store Turnover                                                              |
|-----------------------------------|----------------------|--------------|----------------------------------------------------------------------------------------------------------|
| Competition                       | Direct competitors   | Yes          | Negative correlation  |
|                                   | Indirect Competitors | Yes          | Positive correlation  |
| Anchor tenants                    |                      | No           |                                                                                                          |
| Secondary attractors              | Banks                | Yes          | Positive correlation  |
|                                   | ATMs                 | No           |                                                                                                          |
| Demographic                       |                      | None         |                                                                                                          |
| LSM data                          |                      | None         |                                                                                                          |
| Site-specific data                |                      | None         |                                                                                                          |
| Cannibalisation                   |                      | None         |                                                                                                          |

## 4.4 Results pertaining to Customer Satisfaction (Hypotheses 8 to 13)

### 4.4.1 Customer Satisfaction Summary Appendices

For easy referral in this section, the appendices relating to customer satisfaction are summarised for the reader as follows:

| Description                                             | Appendix number |
|---------------------------------------------------------|-----------------|
| Customer Satisfaction Survey – Coded Sample of Stores   | Appendix I      |
| Customer Satisfaction Survey – Rating Cards             | Appendix J      |
| Customer Satisfaction Data – Questionnaire              | Appendix K      |
| Customer Satisfaction Data Collected for Selected Store | Appendix L      |
| Customer Satisfaction Data – Factor Analysis            | Appendix M      |
| Customer Satisfaction Data – Summary Statistics         | Appendix N      |

#### **4.4.2      *Customer Satisfaction Summary Statistics***

As discussed in the methodology, the customer satisfaction was measured in 14 stores, with 20 customers per store. The summary statistics are included in the appendices.

#### **4.4.3      *Customer Satisfaction Factor Analysis***

The researcher hypothesised that the following 7 factors are determinants of turnover for Steers franchises in South African.

1.      Differentiation
2.      Image
3.      Innovations
4.      Quality
5.      Service
6.      Staff
7.      Value

Given these 7 factors from the literature, a principal component analysis was carried on all collected variables to confirm these factors collected in the data.

##### **a. Extraction of initial solution (un-rotated factors)**

The principal component analysis uses the Kaiser "eigenvalue greater than 1" rule to select significant factors. This lead to the 7 principal-component factors being automatically retained.

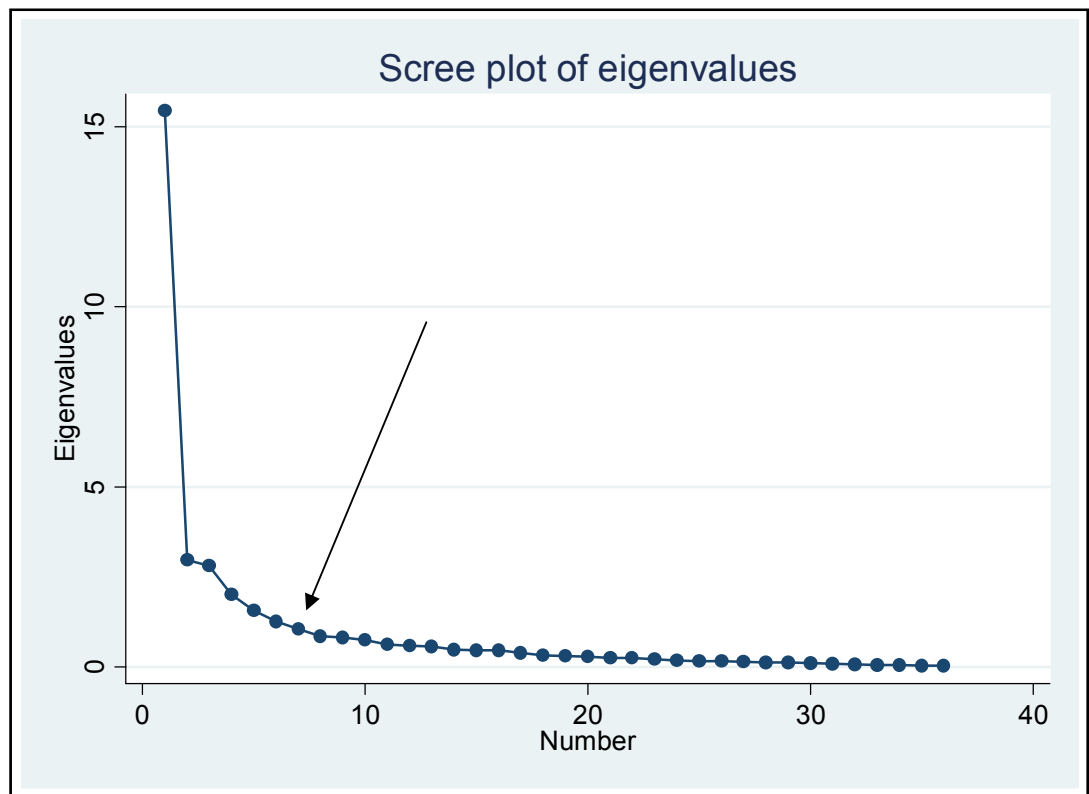


Figure 11: Scree plot of Eigen Values

Table 12: Extracted Factors and Explained Variance

| Factor   | Eigen value | Proportion of explained variance | Cumulative proportion |
|----------|-------------|----------------------------------|-----------------------|
| Factor1  | 15.44       | 0.4289                           | 0.4289                |
| Factor2  | 2.97        | 0.083                            | 0.5113                |
| Factor3  | 2.8         | 0.078                            | 0.5894                |
| Factor4  | 1.99        | 0.056                            | 0.6449                |
| Factor5  | 1.56        | 0.043                            | 0.6882                |
| Factor 6 | 1.26        | 0.0351                           | 0.7233                |
| Factor7  | 1.04        | 0.0288                           | 0.7521                |

The 7 retained principal component factors explain about 75% of the total variance in the dataset. As expected the proportion of explained variances decreases with successive factors.

b. Factor loadings (varimax rotation)

The original factor loadings were rotated to obtain loadings that are more interpretable. A varimax (orthogonal) rotation was carried out.

**Table 13: Factor Loading with Measured Variables**

| Var | Factor          | F1            | F2          | F3            | F4            | F5            | F6            | F7            | Uniq   |
|-----|-----------------|---------------|-------------|---------------|---------------|---------------|---------------|---------------|--------|
| 1   | Differentiation | 0.0636        | 0.2527      | 0.2477        | 0.2456        | 0.1853        | 0.0014        | 0.5619        | 0.4604 |
| 2   | Differentiation | 0.1019        | 0.0049      | 0.0266        | 0.0849        | 0.4035        | <b>0.6450</b> | -<br>0.0082   | 0.4028 |
| 3   | Differentiation | 0.0410        | -<br>0.0017 | 0.1289        | 0.0496        | 0.5010        | <b>0.6383</b> | -<br>0.1229   | 0.3057 |
| 4   | Image           | 0.2612        | 0.1731      | 0.0560        | 0.1331        | <b>0.7361</b> | 0.2415        | 0.0498        | 0.2783 |
| 5   | Image           | 0.2021        | 0.1697      | 0.1792        | 0.1541        | <b>0.7752</b> | 0.1457        | 0.1881        | 0.2170 |
| 6   | Image           | 0.1921        | 0.2170      | 0.0739        | 0.1986        | <b>0.7527</b> | 0.0763        | 0.2766        | 0.2223 |
| 7   | Image           | 0.1800        | 0.1343      | 0.1035        | 0.1820        | 0.3501        | 0.0110        | <b>0.7149</b> | 0.2719 |
| 8   | Image           | 0.1191        | 0.1760      | 0.1654        | 0.1628        | 0.0937        | 0.2119        | <b>0.7669</b> | 0.2591 |
| 9   | Innovation      | 0.1553        | 0.0616      | 0.0451        | 0.0706        | 0.0541        | 0.8186        | 0.3013        | 0.2012 |
| 10  | Innovation      | 0.1321        | 0.1622      | 0.2227        | <b>0.8372</b> | 0.0933        | 0.0374        | 0.1372        | 0.1768 |
| 11  | Innovation      | 0.1602        | 0.1679      | 0.2421        | <b>0.8371</b> | 0.0587        | 0.0295        | 0.2099        | 0.1384 |
| 12  | Innovation      | 0.1049        | 0.1636      | 0.1877        | <b>0.8630</b> | 0.1335        | 0.0512        | 0.0906        | 0.1535 |
| 13  | Innovation      | 0.1660        | 0.1773      | 0.0432        | 0.4829        | 0.1624        | 0.4773        | -<br>0.1193   | 0.4375 |
| 14  | Innovation      | 0.1636        | 0.2957      | 0.2124        | <b>0.7506</b> | 0.1653        | 0.1031        | -<br>0.0363   | 0.2381 |
| 15  | Quality         | 0.2862        | 0.2975      | <b>0.7626</b> | 0.2798        | 0.0853        | 0.0032        | 0.0334        | 0.1613 |
| 16  | Quality         | 0.2669        | 0.2737      | <b>0.7723</b> | 0.3017        | 0.0074        | 0.0286        | 0.0423        | 0.1638 |
| 17  | Quality         | 0.2988        | 0.2992      | <b>0.7776</b> | 0.2194        | 0.0851        | 0.0862        | 0.1569        | 0.1292 |
| 18  | Quality         | 0.3132        | 0.2741      | <b>0.7610</b> | 0.2290        | 0.1384        | 0.0894        | 0.1252        | 0.1524 |
| 19  | Quality         | 0.4107        | 0.3015      | <b>0.6096</b> | 0.1240        | 0.1786        | 0.0289        | 0.1372        | 0.3018 |
| 20  | Service         | <b>0.7269</b> | 0.1882      | 0.3908        | 0.1617        | 0.0964        | -<br>0.0730   | 0.1117        | 0.2303 |
| 21  | Service         | <b>0.7041</b> | 0.1941      | 0.4064        | 0.1399        | 0.0852        | -<br>0.0620   | 0.1436        | 0.2500 |

|    |         |               |               |             |        |             |             |             |        |
|----|---------|---------------|---------------|-------------|--------|-------------|-------------|-------------|--------|
| 22 | Service | <b>0.8023</b> | 0.1758        | 0.3048      | 0.1730 | 0.1016      | -<br>0.0140 | 0.1144      | 0.1791 |
| 23 | Service | <b>0.8075</b> | 0.2200        | 0.2100      | 0.0668 | 0.0653      | -<br>0.0428 | 0.1028      | 0.2344 |
| 24 | Service | <b>0.6731</b> | 0.0581        | -<br>0.0255 | 0.0397 | 0.1403      | 0.2258      | -<br>0.0965 | 0.4614 |
| 25 | Staff   | <b>0.8464</b> | 0.2278        | 0.1166      | 0.1148 | 0.1713      | 0.0742      | 0.0167      | 0.1698 |
| 26 | Staff   | <b>0.8675</b> | 0.1777        | 0.1801      | 0.0902 | 0.1366      | 0.1623      | 0.0169      | 0.1299 |
| 27 | Staff   | <b>0.8723</b> | 0.1784        | 0.1347      | 0.1118 | 0.1001      | 0.1750      | 0.0661      | 0.1316 |
| 28 | Value   | 0.5518        | 0.3624        | 0.3219      | 0.1586 | 0.0381      | 0.1419      | 0.2352      | 0.3585 |
| 29 | Value   | 0.1553        | <b>0.7740</b> | 0.2478      | 0.1186 | 0.0196      | 0.0434      | 0.1451      | 0.2780 |
| 30 | Value   | 0.2318        | <b>0.6838</b> | 0.0025      | 0.1992 | -<br>0.0665 | 0.2465      | -<br>0.0528 | 0.3710 |
| 31 | Value   | 0.1702        | <b>0.8207</b> | 0.2540      | 0.1679 | 0.1128      | 0.1084      | 0.0575      | 0.1770 |
| 32 | Value   | 0.1945        | <b>0.8418</b> | 0.2344      | 0.1500 | 0.1830      | -<br>0.0306 | 0.0919      | 0.1333 |
| 33 | Value   | 0.2581        | <b>0.8099</b> | 0.2143      | 0.1919 | 0.1115      | -<br>0.0580 | 0.1106      | 0.1666 |
| 34 | Value   | 0.2447        | <b>0.8236</b> | 0.2657      | 0.1482 | 0.1462      | 0.0159      | 0.1075      | 0.1361 |
| 35 | Value   | 0.3530        | <b>0.5266</b> | 0.1273      | 0.2593 | 0.2902      | -<br>0.1079 | 0.0887      | 0.4109 |
| 36 | Value   | 0.3202        | 0.4665        | 0.2918      | 0.2047 | 0.2026      | 0.2257      | 0.1623      | 0.4345 |

c. Naming the factor

Patterns of similarity between items that load high (high correlation) on a factor were used to name that factor. Factor loading equal to or greater than 0.5 (50%) was used as indication for high correlation. Since this factor analysis was done to validate a research proposition, the factor names in the propositions are used where applicable.

- Factor 1 - Service/Staff
- Factor 2 - Value
- Factor 3 - Quality
- Factor 4 - Innovation

- Factor 5 - Image
- Factor 6 - Differentiation
- Factor 7 - Image (different dimension from factor 5)

This factor analysis confirms that the 7 factors that have been described in the literature are evident from our data.

d. Description of factors

| Variable | Obs. | Mean      | Std Dev | Min    | Max   |
|----------|------|-----------|---------|--------|-------|
| pcf1     | 280  | 1.07E-09  | 1       | -2.333 | 6.115 |
| pcf2     | 280  | 5.75E-10  | 1       | -2.174 | 3.586 |
| pcf3     | 280  | -4.42E-10 | 1       | -2.257 | 3.976 |
| pcf4     | 280  | -1.70E-09 | 1       | -2.645 | 2.867 |
| pcf5     | 280  | 1.31E-09  | 1       | -3.707 | 4.406 |
| pcf6     | 280  | 3.22E-09  | 1       | -2.336 | 4.011 |
| pcf7     | 280  | -6.85E-10 | 1       | -2.896 | 2.972 |

**Table 14: Summary Regression Co-efficients for all factors**

| Factor                 | R (%) | Coefficient | P-value | Remark          |
|------------------------|-------|-------------|---------|-----------------|
| PCF1 (Service/Staff)   | 4.1   | 10696       | 0.001   | Significant     |
| PCF2 (Value)           | 1.84  | -7174       | 0.082   | Not significant |
| PCF3 (Quality)         | 0.35  | -3101       | 0.404   | Not significant |
| PCF4 (Innovation)      | 0.65  | 4242        | 0.315   | Not significant |
| PCF5 (Image)           | 1.2   | 5677        | 0.144   | Not significant |
| PCF6 (Differentiation) | 0.53  | -3848       | 0.426   | Not significant |
| PCF7(Image)            | 0.01  | -614        | 0.935   | Not significant |

The only factor showing a significant relationship with monthly turnover is service/staff. Value, quality, differentiation and image showed a non-plausible relationship with outcome. However, this was not statistically significant.

#### **4.4.4 Customer Satisfaction Multiple Regression**

Multiple regression analysis was carried out using turnover as a continuous variable (Generalised linear model) and as a binary outcome (logistic regression). In both approaches, no significant multiple relationship existed with the outcome variable. Different hierarchical combinations of the factors were used. In all cases only service/staff showed a significant relationship with the outcome and it was a plausible relationship. The full model containing all 6 factors is shown below:

##### **a. Model parameters**

|                        |        |       |
|------------------------|--------|-------|
| Number of obs          | 280    |       |
| Clusters               | 14     |       |
| F( 6, 13)              | 11.31  |       |
| P-value                | 0.0002 |       |
| R-squared              | 0.0686 | 6.90% |
| Adj R-squared          | 0.0482 | 4.80% |
| Root MSE               | 51385  |       |
| Intercept ( $\alpha$ ) | 215670 |       |

b. Model estimation

**Table 15: Regression Analysis on Internal Customer Satisfaction Variables**

| Significant Variables | Slope ( $\beta$ ) | p-value | 95% Confidence Interval | 95% Confidence Interval2 |
|-----------------------|-------------------|---------|-------------------------|--------------------------|
| f1                    | 10953.6           | 0.00    | -16303.2                | -5603.9                  |
| f2                    | -7061.2           | 0.09    | -1392.9                 | 15515.4                  |
| f3                    | -3347.6           | 0.29    | -3154.3                 | 9849.6                   |
| f4                    | 3815.0            | 0.34    | -12187.5                | 4557.5                   |
| f5                    | 1707.3            | 0.77    | -13958.4                | 10543.8                  |
| f6                    | 1834.1            | 0.81    | -17871.6                | 14203.3                  |

Thus a multiple relationship did not exist between monthly turnover and the factors in our data.

All factors were assessed for any relationship with turnover in a multiple regression model. The F-test (p-value = 0.0002) shows that the overall model is significant. The model explained about 7% of the variance in annual turnover. This variance can be argued to be small based on the expectation that internal factors as measured by the customer satisfaction survey should explain more variance in turnover than the external factors. However, as explained before there are a lot of internal and external factors that could affect turnover. Furthermore, turnover (average monthly sales) in this study was not mentioned as a growth rate. This probably explains why external factors explained more of its variation than internal factors.

## **4.5 Summary of the results**

This section has presented the findings of this research for site location and customer satisfaction variables. It has demonstrated that only the site location

factors of competitors and secondary attractors have a significant impact on store turnover. Furthermore it concluded that the customer satisfaction variable of service /staff is the only factor that has any impact on store turnover.

## **CHAPTER 5: DISCUSSION OF THE RESULTS**

### **5.1 Introduction**

This chapter presents the conclusions of this research report. It provides a synopsis of the findings, explanations and any post-factum validity and reliability concerns. It further addresses issues such as the implications for business, opportunities for further research.

### **5.2 Discussion pertaining to Site Location (Hypotheses 1 to 7)**

#### **5.2.1 *Introduction***

This section offers interpretive discussion on the findings of the relationship between site location factors and turnover in the stores. This analysis covers the findings and interpretation for all the factors relating to site location.

#### **5.2.2 *Overview of Findings***

The results demonstrate a significant correlation between store turnover and three site location factors, namely: presence of a bank (F3.1), presence of a McDonalds or Wimpy store within a 3km radius (F1.2) and presence of other competitor stores within a 3km radius (F1.4). Both the presence of a bank and McDonalds / Wimpy store had a significant positive impact on store turnover, while the presence of other competitor stores (Debonairs, KFC and Nandos) had a negative impact on store turnover. None of the other hypothesised site location factors (anchor tenants, demographics, LSM data, site specific data or cannibalisation) had any significant impact on store turnover.

All three predictor variables in the model explained about 13% variance in annual turnover of all “Fast-Food” stores. This proportion of explained variance can be considered moderate considering that many variables, including external and internal, could potentially affect turnover. For example,

other factors not measured in this study like resources, years of experience, size, supplier relationship, and employee turnover have been reported to affect restaurants growth and turnover.

### **5.2.3      *Impact of Competitor Outlets on Turnover***

This study established that competitor activity as a general category produced no significant correlation to “Fast-Food” store turnover. As a result the regression was split out to include proximity to direct and indirect competitors. To recap, a direct competitor was defined as a store in the same category as the product under consideration, while an indirect competitor is one that is in a different category altogether but which is seen as an alternative purchase choice. In this study, McDonalds and Wimpy represented direct competitors while Nandos, KFC and Debonairs represented indirect competitors. The distributions of direct and indirect competitors around stores location were generally similar. About  $\frac{3}{4}$  of the “Fast-Food” stores have direct and indirect competitors within 3km radius while about a third had these competitors in the same shopping centre. The fact that stores are situated within close proximity to their competitors probably reflects the understanding that competition might have a positive effect on traffic counts.

The presence of McDonalds and Wimpy outlets within 3 km radius positively affected turnover. This competition effect has been reported in other settings. It confirms the findings in the study (Waterson, 2004) that restaurants and retailers benefit from close proximity to one another; so called restaurant density. Restaurants benefit from close proximity to competition as a result of increased traffic. However, excess density pressure might be negative. Another probable reason for increased turnover due to competition is the sharing of experience and knowledge as reported by Waterson (2004). Food outlets that are close together are more likely to be aware of changes in the market environment and appropriately respond to such changes to foster growth.

Extending this thought process in a slightly different way; it is also a plausible explanation that these attractor brands actually form a symbiotic relationship with “Fast-Food” for other reasons. Thus, they may be drawing on the same consumer group, but from different sub-segments within those consumer groups. For example, if a family decides to buy take-out, perhaps children would choose McDonalds or Wimpy over “Fast-Food”, while parents / adults would choose the “Fast-Food” products for improved quality. Groups may only make these choices if key brands are located close to each other. Thus, consumers may be making multiple stops to accommodate many tastes within a group for a meal, provided the overall product offering is the same e.g. burgers.

On the contrary, the presence of indirect competitors had a negative effect on annual turnover. Although the reasons for this don't seem obvious, a more detailed look at the findings reveals that it is plausible. When one of these brands was within the centre or within a 3km radius of the store, turnover of the “Fast-Food” store decreased. The key question to this finding is why these indirect competitors detract from “Fast-Food” while the other attractor brands, contribute to “Fast-Food” turnover. It is contended that perhaps these brands have a product range that is mutually exclusive. Thus, customers choose to eat either chicken or pizza on a night rather than burgers. When this happens, these brands may well be strong enough to attract the whole group to eat out from them; instead of creating a split order. Thus, business is lost to an indirect competitor precisely because it offers an alternative product that suits the entire group. Ironically, this turns traditionally defined indirect competitors into direct competitors. They may be competing for a different consumer choice but ultimately customers are choosing their product over a “Fast-Food” product.

On the relative importance of the two positive predictors, the effect of direct competition was more than that of a bank in the centre. There is nett negative effect of direct and indirect competition on average annual turnover. This is because the negative effect of indirect competitors (-40082.76) outweighs the positive effect of direct competitors (+32720.52). These differentials indicate

that it is essential that potential “Fast-Food” outlets understand the dynamism of competition in the retail food industry. From a business perspective it would imply that ultimately franchisees should aim to locate themselves in centres where there are no indirect competitors, while ensuring they have the key brand direct competitors within close proximity. In this way, they can benefit from symbiotic business without losing out to indirect competition.

Whether a positive or a negative influence, these findings support the previous conclusions reached by Thompson and Walker (2005) that competitor outlets are very significant factors to consider in evaluating a retail site. Where this research potentially differs from the findings of Walker and Thompson, however, is that it does discriminate between the types of surrounding businesses. Thus, the nature of the competitor stores will have a different effect on turnover. This finding is more in line with the conclusions reached by Brown (1987) who suggests that success of retail outlets is dependent on the nature of the surrounding businesses.

#### **5.2.4      *Impact of Anchor Tenants on Turnover***

The study also found that most (about 70%) of stores were in centres anchored by major tenants such as Pick n Pay, Checkers, Spar or Woolworths. However, there was no significant correlation between the presence of these tenants and store turnover. Interestingly, this finding does not provide any support for the broad conclusion that Brown (2007) reaches about the importance of surrounding businesses, particularly in reference to large retail chains.

There are several possible explanations for this. The first explanation hinges on a lack of differentiation. That is, perhaps as a result of most of the stores being in the vicinity of such anchor tenants, it is not possible to differentiate on this factor. Particularly in a South African context, this could be the case given that the retail sector is structured in malls or centres, almost always with anchor tenants in the area. Secondly, an explanation could lie in consumer

behaviour. Thus, customers visiting anchor stores do so regularly and as part of a more rushed daily routine, perhaps not always at traditional meal times. Therefore one would not specifically adjust regular eating choices to visit a fast food franchise, or would not be making food choices at that time.

#### **5.2.5      *Impact of Secondary Attractors on Turnover***

In excess of 85% of “Fast-Food” stores were situated near ATMs; while only 35% had a bank in the centre. About 90% had direct access to the centre from the main road and to the store itself from the parking area.

This research established a positive correlation between the presence of banks and increased store turnover. Interestingly, the presence of ATM's did not have the same positive correlation. From a consumer behaviour perspective, it is suggested that perhaps the interpretation lies in the nature of ATM versus bank visits. Thus, while ATMs are more likely to be regular, instantaneous, demand-driven and quick activities for customers, visiting a bank itself is perhaps something more deliberate in their behaviour. That is, customers often have to make time to visit a bank. It is postulated that perhaps business customers do this by combining lunch break visits to the bank with a purchase of fast food lunch. Over weekends, leisure customers may be doing the same thing, which would explain why the presence of a bank, accounts for an increase in store turnover. Therefore, customers needing to visit their banks would make use of fast food outlets nearby as a combined activity. There was no support in the academic literature that could account for this very specific finding or support such an interpretation. It is suggested, however, that perhaps business research conducted by the banks themselves may offer further insights into the rationale behind this behaviour.

As an alternative or complementary interpretation, it could be that the presence of a bank is likely to foster higher turnover because it could lead to increased traffic counts in the centre. Banks are only likely to be planted due to population size and demands for financial services. Also the presence of a bank in the centre might reflect the presence of other attractions in the centre. The presence of these attractions draws potential customers to the centre. This supports some of the literature presented by Simons (1992) who established a positive correlation between retail success and traffic counts. In addition, the findings on the bank as a primary positive anchor further supports Brown's theory (1987) that a retail outlet's success is dependent on the nature of neighboring businesses. In this instance, however, it could be argued that the bank is acting as a "magnet store" rather than a secondary attractor.

Interestingly, in this research, only 35% of the stores studied had a bank in the centre. Thus, a high proportion of "Fast-Food" outlets were in centres that had structures that could potentially foster turnover. It is unknown however, if these outlets came before these features or if these features attracted the erection of stores. Either way, this finding supports the concept of reciprocity of business in retail centres. Businesses feed off each other's trade. Thus, more support is provided for Meyer (1988) that the design of centres is a vital component which could either ensure the overall success of all the stores in the centre; or given the alternative scenario, could contribute to the overall failure of stores should they be incorrectly combined.

#### **5.2.6      *Impact of Demographics, LSM on Turnover***

Accessibility, security and LSM data did not affect turnover. These findings do not provide support for previous research by Simons (1992) and Thompson and Walker (2005) that factors of urbanisation play a role in the success of retail stores. At face value this seems counter-intuitive as one would expect the store turnover to be impacted positively in higher LSM areas. The lack of correlation may speak to sampling error owing the

convenience method used select stores; however this is unlikely, as the relatively large sample should have eliminated the possibility of this occurrence. As an alternative explanation, it is plausible that “Fast-Food” draws turnover from disparate LSM groups, thereby nullifying this as a factor contributing to store performance.

#### **5.2.7      *Impact of Cannibalisation on Turnover***

Cannibalisation was not established as a significant factor. Arguably, this finding is the most unexpected, in that there was virtually no difference between stores that had another “Fast-Food” store within a 3km radius and those that didn’t. This is a surprising finding, particularly as it does not support the findings of Bibb (2001) that this is a significant role player in the retail industry. However, only 25% of sample stores had a competitor “Fast-Food” store within a 3km radius. While this should not account for the lack of correlation, it does point to the possibility that cannibalisation as a factor may require further research to determine the boundaries of its impact. Bibb (2001) did not establish these parameters of influence. Thus, perhaps further research on cannibalisation may determine when this factor starts to take effect. It is argued that perhaps it is feasible that if stores are within a closer proximity to each other cannibalisation may play more of a role.

#### **5.2.8      *Relationship between Factors***

As discussed, these factors are additive. As a result, should a store have the all three significant factors present, it fundamentally would affect the earning potential of the store. Potential scenarios are put forward as follows:

### **Scenario 1: No significant factors impacting store site location**

Estimated turnover for a store with no factors present:

$$\text{Turnover} = \text{R}201,765.20$$

### **Scenario 2: All three significant factors impacting store site location**

This scenario presents the impact for stores with all three significant variables impacting the site location of a store.

Estimated turnover for a store with a McDonalds or Wimpy within a 3km radius, a Debonairs, KFC or Nando's within a 3km radius:

$$\begin{array}{rcl} \text{Turnover} & = & \text{R}201,765.20 \\ & + & \text{R } 32,720.52 \text{ (F1.2 positive correlation)} \\ & - & \text{R } 40,082.76 \text{ (F1.4 negative correlation)} \\ & + & \underline{\text{R } 25,877.53 \text{ (F1.3 positive correlation)}} \\ & & \underline{\text{R}220,280.49} \end{array}$$

### Scenario 3: Best case scenario factors

This scenario presents the best case for stores given the external site location factors established in this research.

Estimated turnover for a store with a McDonalds or Wimpy within a 3km radius, no detracting competitors within a 3km radius and a bank in the centre:

$$\begin{array}{rcl} \text{Turnover} & = & \text{R201,765.20} \\ & + & \text{R } 32,720.52 \text{ (F1.2 positive correlation)} \\ & + & \underline{\text{R } 25,877.53 \text{ (F1.3 positive correlation)}} \\ & & \underline{\text{R260,363.25}} \end{array}$$

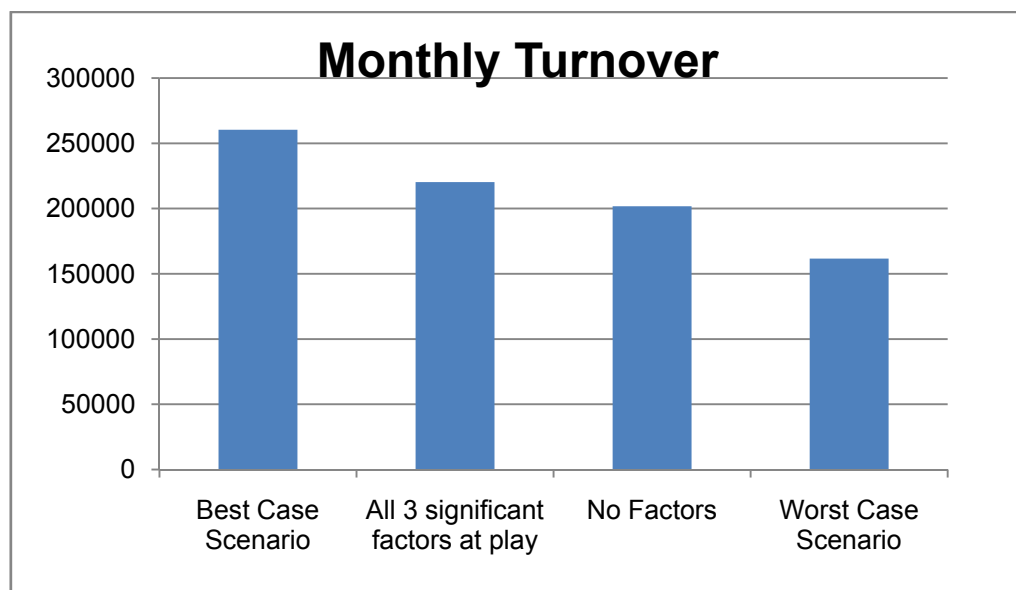
### Scenario 4: Worst case scenario factors

This scenario presents the worst case for stores given the external site location factors established in this research.

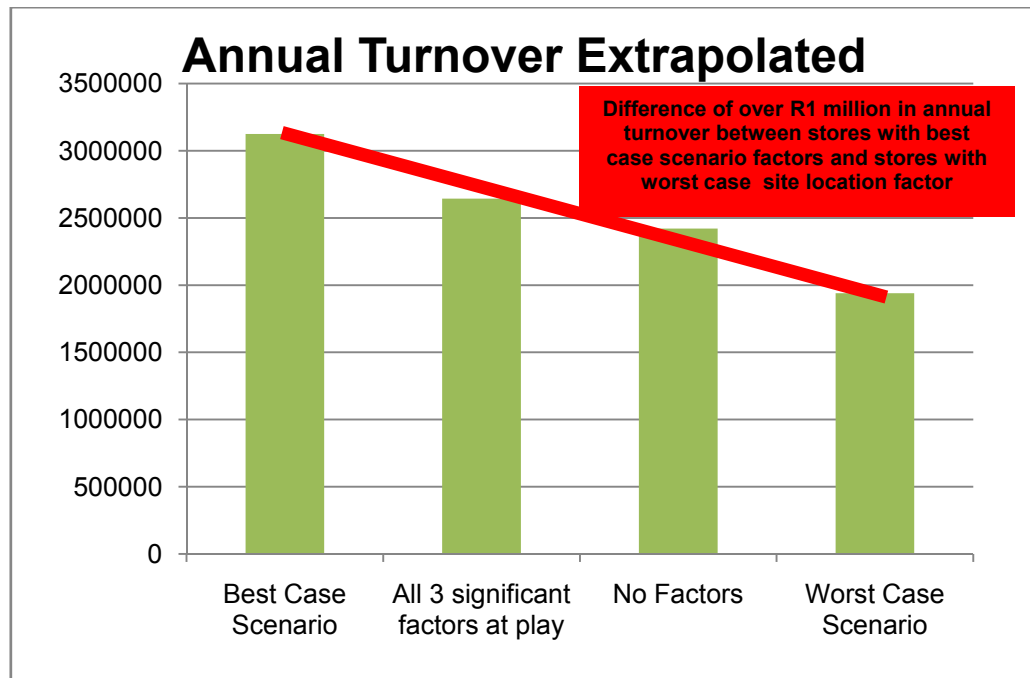
Estimated turnover for a store with no McDonalds or Wimpy within a 3km radius, detracting competitors within a 3km radius, and no bank in the centre:

$$\begin{array}{rcl} \text{Turnover} & & \text{R201,765.20} \\ & & \underline{\text{R } 40,082.76 \text{ (F1.4 negative correlation)}} \\ & & \underline{\text{R161,682.44}} \end{array}$$

These scenarios demonstrate a significant difference between average monthly turnover in stores with significant factors established in this research at play. Of interest is that a store located in the best case scenario potentially can earn R98,680.81 (61%) more per month than stores located with the worst case scenario factors for site location. Figure 12 and Figure 13 demonstrate the possible differences for business graphically:



**Figure 12: Graphic Representation of Differences in Store Turnover Based on Scenarios of Site Location Factors**



**Figure 13: Extrapolated Annual Turnover Differences between Stores with Varying Scenarios of Site Location Factors**

### 5.2.9 Conclusion

This section has discussed the site location factors demonstrated to have a correlation with store turnover. Of the hypothesised factors, only competitor activity (direct and indirect); and secondary attractors were found to have a correlation with store turnover. Table 10 provides a summary of the findings.

The implications of these findings may provide assistance to potential franchisors in making more accurate location decisions. Furthermore, as Rogers (2005) suggests, location research methods can be used to analyse and improve the performance of existing retail facilities. It is suggested that these findings add to the body of knowledge on factors that play a role in site location. The results can be used to aid decisions on how to reposition, re-brand or refurbish stores in order to improve performance.

Interpretively, it was suggested that these findings point to the reciprocal and symbiotic relationship between key competitors in the industry. Secondly it

suggests that banks possibly act as key magnet stores that attract traffic and perhaps then enhance the turnover of stores. Thirdly, the presence of indirect competitors which reduces “Fast-Food” turnover suggests that perhaps these competitors are taking away business based on consumer product choice.

## **5.3 Discussion pertaining Customer Satisfaction (Hypotheses 8 to 13)**

### **5.3.1 *Introduction***

This section offers interpretive discussion on the findings of the relationship between customer satisfaction factors and turnover in the “Fast-Food” stores. It is structured to include an overview, and interpretation on each of the identified factors: staff and service, value, quality, innovation, differentiation and image.

### **5.3.2 *Overview of Findings***

The findings demonstrated that the only customer satisfaction factor that correlates in any way with store turnover is staff/service. All other internal customer satisfaction factors had no significant correlation.

### **5.3.3 *Impact of Service on Turnover***

Service / staff was the only factor with a correlation effect on turnover. A possible explanation for this lack of differentiation may lie in the literature. As discussed in the literature review, Kotler (2003) explains that customer satisfaction is the key to customer retention. Customer satisfaction and service quality are conceptually distinct but closely related constructs (Sureshchandar et al, 2002). Thus, the underlying constructs of customer satisfaction may well be the same as the ones by which service quality is

measured. If one makes the bold assumption that perhaps the factor of service / staff are synonymous with the factor of customer satisfaction, then Allen's finding (1999) that there is a positive relationship between service and sales are verified by this research. Furthermore, while this research did not examine the relationship between loyalty and customer satisfaction, it is plausible to suggest that the findings may support Gilbert et al.'s theory (2004) that customer satisfaction relates to loyalty which in turn leads to higher repeat sales.

As the factor of service and staff were merged in the factor analysis, it is difficult to interpret issues pertaining to employee satisfaction as they relate to turnover. Thus, this research provides no direct support for the findings of Meyer (2003) and Cannon (2005) on the importance of satisfied staff. Indirectly it suggests that the role of the staff is vital, but does not qualify on the issue of employee satisfaction.

#### **5.3.4      *Impact of Other Customer Satisfaction Factors on Turnover***

It is interesting however that none of the other internal factors emerged as having any significant relationship to store turnover. There are several reasons that this research did not elicit any differentiation on these factors. The first relates to the research design; that is the entire sample was drawn from the same brand. Thus, the main dimension which varies from store to store is service/staff. The other dimensions like innovation, quality and value are fixed and regulated variables by the franchise brand itself. Therefore, it could be anticipated that factors of quality and value as postulated in the literature (Kara et al. 1995; Cronin et al., 2000; Swaddling and Miller, 2002 and Kotler, 2003), could not be detected as they are controlled by the franchise group itself and not the individual stores. It is suggested that perhaps, had the sample been drawn across multiple brands, factors of quality and value may have emerged more significantly. The conclusions of this research do provide support for the findings by Allen (1999) that while value was the tune of the early 1990s, service took its places in the course of time.

### **5.3.5 Conclusion**

This section has provided an interpretive assessment of the customer satisfaction factors impacting store turnover. It has demonstrated that only the factor of staff / service has a significant relationship with store turnover. Table 15 provides a summary of these findings.

## **5.4 Conclusion**

In interpreting these results, this section postulated various theories to support the findings. These interpretations largely support the findings of previous researchers into this topic that retail location plays a vital role in determining success (Meyer, 1988; Clarke and Rowley, 1995; Thompson and Walker, 2005). Similarly this research finds partial support for previous theory that customer satisfaction elements play an important role in the financial success of the store Meyer, 1988; Parasuraman et al., 1988; Sureschander et al; 2002; Law et. Al; 2004; Meyer et al, 2003; Cannon, 2005).

## **CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS**

### **6.1 Introduction**

This chapter provides an overview of the conclusions of the study, recommendations and implications for business, the key stakeholders of this research.

### **6.2 Conclusions of the study**

The factor analysis of customer satisfaction survey data confirmed the dimension which were hypothesised a-priori. Although 7 dimensions were hypothesised, 6 were extracted in this analysis as a result of two factors, service and staff, merging into 1. Other extracted factors included value, quality, innovation, differentiation and image.

Of the 6 extracted factors, only the service/staff factor had a statistically significant effect on annual turnover.

It was suggested that there are most plausible explanation for this lies in the nature of a franchise business. That is, in a franchise model, all other customer service factors are controlled by the brand and therefore only service/staff are controlled by store management.

The regression modeling of the retail site location variables revealed that only variables within the factor of competitive activity around the “Fast-Food” outlet, and that a variable within the factor of secondary attractors, had any significant correlation with financial performance of the “Fast-Food” outlet.

Table 16 hereunder summarises the results of the research and details the outcome of the 13 hypothesis tested:

**Table 16: Summary of Results of Hypotheses Tested**

| The first sub-problem is to identify and measure factors of store location that impact the financial performance of QSR stores in South Africa.        |       |                                                                                          |                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Hypothesis                                                                                                                                             | Ref   | Variable                                                                                 | Outcome                                                         |
| H1a: The accessibility of the shopping centre to consumers will influence the turnover of the "Fast-Food" outlet.                                      | F.5.1 | Is there direct access to the centre from a main road?                                   | Based on the data the alternate hypothesis is <b>rejected</b> . |
|                                                                                                                                                        | F.5.2 | Is there controlled access to the centre?                                                | Based on the data the alternate hypothesis is <b>rejected</b> . |
|                                                                                                                                                        | F.5.3 | Is there direct access to the store from parking immediately in front of the store?      | Based on the data the alternate hypothesis is <b>rejected</b> . |
|                                                                                                                                                        | F.5.4 | Does the centre employ professional security contractors?                                | Based on the data the alternate hypothesis is <b>rejected</b> . |
|                                                                                                                                                        | F.5.5 | Is the store signage visible from the main road?                                         | Based on the data the alternate hypothesis is <b>rejected</b> . |
| H2a: The market area characteristics of the community surrounding the retail site location will influence the turnover of the "Fast-Food" outlet.      | F.4.1 | How many households are there within a 5km radius?                                       | Based on the data the alternate hypothesis is <b>rejected</b> . |
|                                                                                                                                                        | F.4.2 | What is the average household income level within a 5km radius?                          | Based on the data the alternate hypothesis is <b>rejected</b> . |
| H3a: The predominant Living Standards Measure level of the local community will influence the turnover of the "Fast-Food" outlet.                      | F.7   | What is the proportion (%) of LSM 6-10 households within a 5km radius?                   | Based on the data the alternate hypothesis is <b>rejected</b> . |
| H4a: Competitor activity in and around the retail site location will influence the turnover of the "Fast-Food" outlet.                                 | F.1.1 | Is there a McDonalds or Wimpy outlet in the same shopping centre?                        | Based on the data the alternate hypothesis is <b>rejected</b> . |
|                                                                                                                                                        | F.1.2 | Is there a McDonalds or Wimpy outlet within a 3km radius?                                | Based on the data the alternate hypothesis is <b>accepted</b> . |
|                                                                                                                                                        | F.1.3 | Are there other major competitors (KFC, Nando's, Debonairs) in the same shopping centre? | Based on the data the alternate hypothesis is <b>rejected</b> . |
|                                                                                                                                                        | F.1.4 | Are there other major competitors (KFC, Nando's, Debonairs) within a 3km radius?         | Based on the data the alternate hypothesis is <b>accepted</b> . |
| H5a: The presence of a major national brand as an anchor tenant in the shopping centre will influence the turnover of the "Fast-Food" outlet.          | F.2.1 | Is the centre anchored by PicknPay, Checkers, Spar or Woolworths?                        | Based on the data the alternate hypothesis is <b>rejected</b> . |
| H6a: The presence of secondary attractors in the shopping centre will influence the turnover of the "Fast-Food" outlet.                                | F.3.1 | Is there a bank in the centre?                                                           | Based on the data the alternate hypothesis is <b>accepted</b> . |
|                                                                                                                                                        | F.3.2 | Is there an ATM in the centre?                                                           | Based on the data the alternate hypothesis is <b>rejected</b> . |
| H7a: The cannibalization of turnover by other "Fast-Food" outlets in the vicinity will influence the turnover of the "Fast-Food" outlet.               | F.6   | Is there another "Fast-Food" outlet within a 3km radius?                                 | Based on the data the alternate hypothesis is <b>rejected</b> . |
| The second sub-problem is to identify and measure factors of customer satisfaction that impact the financial performance of QSR stores in South Africa |       |                                                                                          |                                                                 |
| Hypothesis                                                                                                                                             | Fact  | Factor Name                                                                              | Outcome                                                         |
| H8a: The customers' satisfaction with the value of the product offering will influence turnover of the "Fast-Food" outlet.                             | 2     | Value                                                                                    | Based on the data the alternate hypothesis is <b>rejected</b> . |
| H9a: The customers' satisfaction with the product innovation and differentiation will influence turnover of the "Fast-Food" outlet.                    | 6     | Differentiation                                                                          | Based on the data the alternate hypothesis is <b>rejected</b> . |
| H10a: The customers' satisfaction with the quality of the service offering will influence turnover of the "Fast-Food" outlet.                          | 1     | Service/Staff                                                                            | Based on the data the alternate hypothesis is <b>accepted</b> . |
| H11a: The customers' satisfaction with the quality of the product offering will influence turnover of the "Fast-Food" outlet.                          | 3     | Quality                                                                                  | Based on the data the alternate hypothesis is <b>rejected</b> . |
| H12a: The customers' satisfaction with the image and atmosphere will influence turnover of the "Fast-Food" outlet.                                     | 5     | Image                                                                                    | Based on the data the alternate hypothesis is <b>rejected</b> . |
| H13a: The customers' satisfaction with the human interaction aspect will influence the turnover of the "Fast-Food" outlet.                             | 1     | Service Staff                                                                            | Based on the data the alternate hypothesis is <b>accepted</b> . |

### 6.3 Recommendations and Implications for Business

Table 17 provides an overview of suggested implications for business emanating from this research. In certain instances, these suggestions are interpretive as possible implications from this research. They would need to be verified for further research. However they provide for interesting business ideas:

**Table 17: Potential Implications for Business**

| FACTOR                | SUB-FACTOR           | BUSINESS CONSIDERATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Location         | Direct Competitors   | <ul style="list-style-type: none"> <li>Potentially businesses should seek to understand the affects of various types of competitors on their business before selecting a site, particularly if there are no key attractor businesses.</li> <li>Businesses, particularly within the QSR industry, should ensure they understand the effects of direct and indirect competition. With the emergence of new brands, they should seek to understand what effect those businesses are having on their own.</li> <li>Within the QSR industry, it would seem that seeking out a location within 3km of Wimpy or McDonalds would be advantageous.</li> <li>The definition of direct competitors within the QSR industry is perhaps misleading. The traditional definition implies that greater focus should be placed on it. However, equal focus should be placed on indirect competitors who may be "stealing" business on a product range basis.</li> </ul> |
|                       | Indirect competitors | <ul style="list-style-type: none"> <li>Within the QSR industry in South Africa, it would seem that seeking out a location that does not have a KFC, Debonairs or Nando's within a 3km radius would be advantageous to the business.</li> <li>QSR businesses should focus on understanding consumer behaviour better, particularly as it relates to food choices. There seems to be a relationship between a QSR business' success and its indirect competitor product ranges. Therefore understanding consumer food choice trends would be vital to understanding the competition.</li> <li>Equally, understanding worldwide trends on health would impact food choices for the consumer and therefore choice of fast foods.</li> </ul>                                                                                                                                                                                                                |
|                       | Secondary Attractors | <ul style="list-style-type: none"> <li>Banks seem to attract traffic and as such it would seem advantageous to select a store within a centre that has a bank. (No advantage if there is just an ATM.)</li> <li>Businesses in the QSR industry should perhaps be looking to collaborate research with banks to understand the dynamics of this relationship. If banks are key attractors, what are the reasons behind this and how can the QSR industry take advantage of such factors.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Customer Satisfaction | Staff/Service        | <ul style="list-style-type: none"> <li>Businesses in the QSR industry should focus on ensuring friendly, efficient staff as this appears to affect turnover positively.</li> <li>By implication, process efficiency would be important for businesses to focus on. Improved processes would assist staff to improve their service and delivery; and in turn, provide better customer service.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## **6.4 Further Research**

This section provides a list of possible areas for further research based on the findings in this research.

1. Further studies should be carried out confirm these findings. Follow-up studies or cross-sectional data with time-detailed information would be ideal.
2. Future studies could use annual growth rate and then analyse performance as a rate (using multiple regression) or as growth versus no growth (logistic regression).
3. If growth rate cannot be computed, a common definition for turnover should be used for all stores e.g. first year of sales. These values could then be inflation-adjusted.
4. Other factors like years of operation, experience of staff etc. should be included in future analysis.
5. Repeat research could be conducted using a sample across multiple brands within the QSR industry.
6. Research into the boundaries of cannibalisation could be done to determine at which point cannibalisation affects the franchise restaurant business.



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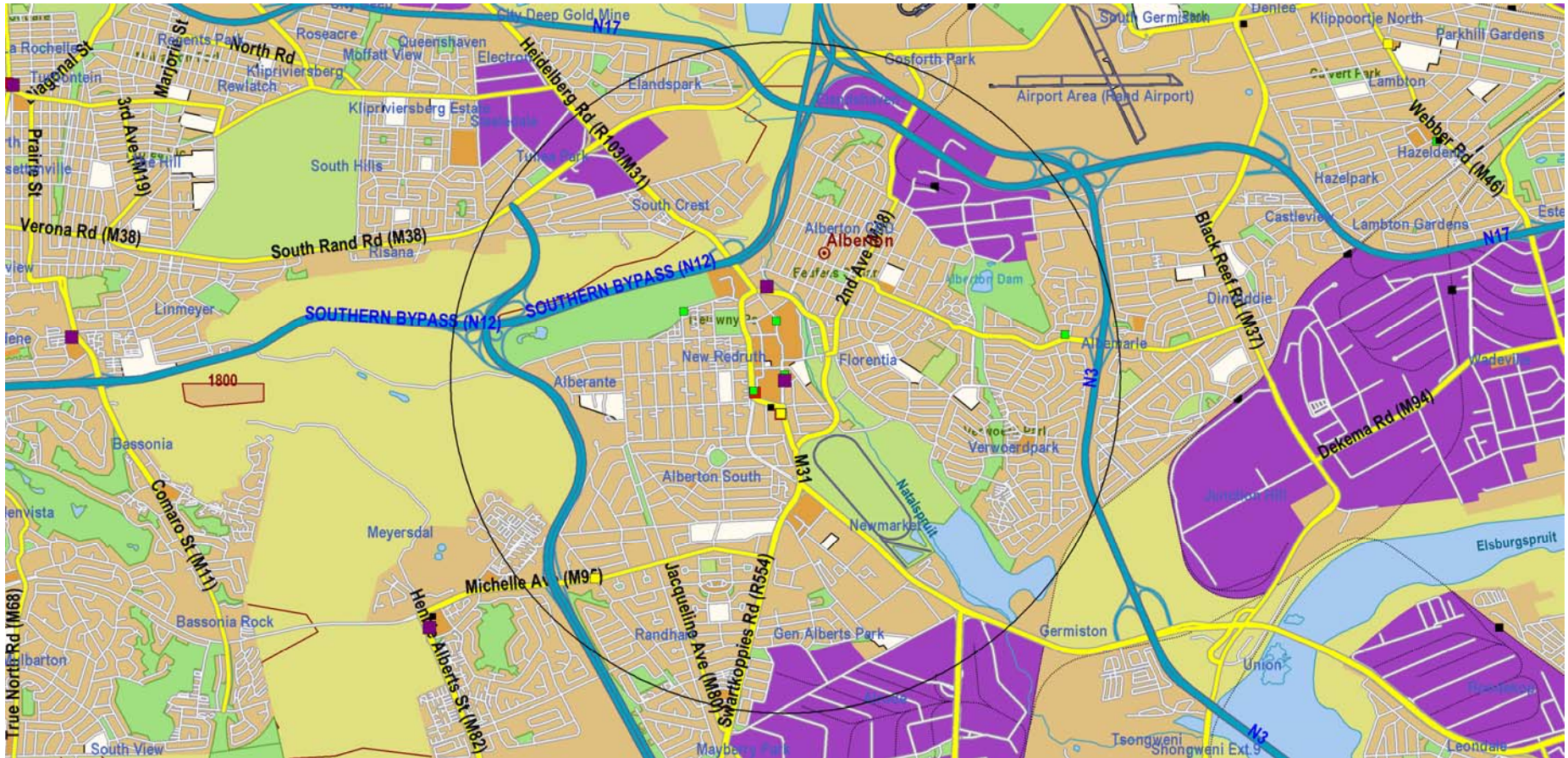
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## APPENDIX A

### Customer Satisfaction Data Survey - Example of Maps



## APPENDIX B

### Retail Site Location Data – Store Turnover

Month on Month Actual Store Turnover Fiscal 2007

| STORE | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     | TOTAL     | AVERAGE |
|-------|---------|---------|---------|---------|---------|---------|---------|-----------|---------|
| 1     | 228,582 | 225,108 | 184,204 | 90,464  | 215,106 | 200,461 | 224,801 | 1,368,726 | 195,532 |
| 2     | 187,279 | 173,247 | 180,870 | 181,781 | 193,143 | 196,756 | 198,160 | 1,311,234 | 187,319 |
| 3     | 291,898 | 264,913 | 294,180 | 269,946 | 281,854 | 301,995 | 294,320 | 1,999,106 | 285,587 |
| 4     | 158,085 | 187,901 | 184,746 | 195,844 | 211,365 | 204,746 | 210,686 | 1,353,372 | 193,339 |
| 5     | 218,748 | 197,849 | 212,718 | 229,986 | 238,295 | 230,217 | 231,521 | 1,559,335 | 222,762 |
| 6     | 198,716 | 182,986 | 198,904 | 191,144 | 194,243 | 208,540 | 216,717 | 1,391,250 | 198,750 |
| 7     | 170,865 | 148,822 | 172,865 | 164,034 | 158,861 | 134,511 | 149,572 | 1,099,530 | 157,076 |
| 8     | 251,107 | 224,903 | 234,413 | 253,586 | 243,411 | 268,165 | 282,628 | 1,758,214 | 251,173 |
| 9     | 132,965 | 122,523 | 128,745 | 126,975 | 139,815 | 139,256 | 143,850 | 934,129   | 133,447 |
| 10    | 254,566 | 237,783 | 247,511 | 240,574 | 279,664 | 268,241 | 289,582 | 1,817,922 | 259,703 |
| 11    | 192,569 | 191,204 | 179,453 | 172,389 | 184,129 | 180,554 | 103,929 | 1,204,226 | 172,032 |
| 12    | 146,858 | 141,509 | 139,843 | 142,135 | 143,414 | 145,270 | 145,233 | 1,004,262 | 143,466 |
| 13    | 205,495 | 219,351 | 195,617 | 208,230 | 216,798 | 215,733 | 241,939 | 1,503,163 | 214,738 |
| 14    | 169,621 | 143,436 | 165,126 | 161,270 | 159,121 | 167,684 | 172,565 | 1,138,824 | 162,689 |
| 15    | 119,039 | 105,044 | 104,804 | 99,073  | 130,028 | 163,598 | 138,987 | 860,573   | 122,939 |
| 16    | 114,853 | 110,396 | 114,110 | 115,804 | 115,397 | 117,195 | 117,487 | 805,241   | 115,034 |
| 17    | 288,731 | 276,087 | 236,277 | 239,558 | 179,788 | 214,147 | 236,240 | 1,670,827 | 238,690 |
| 18    | 126,800 | 108,181 | 121,875 | 123,847 | 106,136 | 110,419 | 112,107 | 809,366   | 115,624 |
| 19    | 157,979 | 142,906 | 125,443 | 164,877 | 162,877 | 163,040 | 141,469 | 1,058,592 | 151,227 |
| 20    | 325,040 | 296,188 | 310,118 | 323,848 | 319,198 | 326,856 | 329,357 | 2,230,605 | 318,658 |
| 21    | 315,229 | 259,047 | 289,880 | 278,748 | 272,489 | 298,286 | 299,238 | 2,012,918 | 287,560 |
| 22    | 275,796 | 224,596 | 242,482 | 232,741 | 232,787 | 243,523 | 234,431 | 1,686,355 | 240,908 |
| 23    | 230,264 | 223,292 | 225,764 | 219,561 | 223,022 | 224,017 | 223,548 | 1,569,469 | 224,210 |
| 24    | 188,190 | 212,311 | 233,566 | 234,655 | 229,099 | 224,349 | 226,432 | 1,548,602 | 221,229 |
| 25    | 293,314 | 266,805 | 287,393 | 280,184 | 272,562 | 288,500 | 299,448 | 1,988,207 | 284,030 |
| 26    | 221,033 | 204,016 | 226,179 | 216,187 | 222,809 | 230,910 | 230,567 | 1,551,702 | 221,672 |
| 27    | 223,942 | 247,809 | 217,904 | 224,802 | 285,928 | 286,798 | 253,840 | 1,741,023 | 248,718 |
| 28    | 273,404 | 256,823 | 286,193 | 285,600 | 273,452 | 283,091 | 277,628 | 1,936,191 | 276,599 |
| 29    | 136,312 | 144,609 | 155,326 | 151,648 | 135,158 | 140,436 | 138,381 | 1,001,871 | 143,124 |
| 30    | 256,719 | 233,624 | 248,039 | 250,719 | 252,121 | 237,111 | 250,325 | 1,728,658 | 246,951 |
| 31    | 158,011 | 162,904 | 182,002 | 174,674 | 174,060 | 172,463 | 175,970 | 1,200,084 | 171,441 |
| 32    | 196,128 | 184,498 | 190,911 | 200,204 | 202,884 | 200,329 | 226,436 | 1,401,390 | 200,199 |
| 33    | 230,768 | 176,641 | 223,120 | 205,662 | 220,907 | 204,368 | 202,183 | 1,463,651 | 209,093 |

|    |         |         |         |         |         |         |         |           |         |
|----|---------|---------|---------|---------|---------|---------|---------|-----------|---------|
| 34 | 275,614 | 240,470 | 245,425 | 227,658 | 240,602 | 248,149 | 234,080 | 1,711,997 | 244,571 |
| 35 | 161,565 | 143,920 | 156,969 | 158,137 | 158,441 | 174,608 | 173,309 | 1,126,950 | 160,993 |
| 36 | 190,186 | 171,455 | 209,292 | 215,463 | 211,042 | 191,411 | 179,729 | 1,368,579 | 195,511 |
| 37 | 197,505 | 187,291 | 217,472 | 215,095 | 225,093 | 224,356 | 227,947 | 1,494,759 | 213,537 |
| 38 | 224,919 | 204,573 | 225,644 | 235,189 | 242,743 | 227,215 | 223,584 | 1,583,867 | 226,267 |
| 39 | 296,652 | 335,303 | 276,091 | 289,722 | 342,482 | 296,052 | 330,631 | 2,166,935 | 309,562 |
| 40 | 176,664 | 150,065 | 159,299 | 167,136 | 160,251 | 160,363 | 170,868 | 1,144,646 | 163,521 |
| 41 | 124,628 | 114,450 | 118,093 | 111,497 | 118,209 | 113,012 | 125,976 | 825,864   | 117,981 |
| 42 | 167,947 | 169,568 | 190,466 | 194,228 | 190,659 | 194,781 | 188,472 | 1,296,119 | 185,160 |
| 43 | 177,668 | 165,261 | 169,588 | 164,948 | 175,176 | 179,875 | 169,311 | 1,201,826 | 171,689 |
| 44 | 133,851 | 119,133 | 123,448 | 128,073 | 130,361 | 127,731 | 134,858 | 897,455   | 128,208 |
| 45 | 198,044 | 181,632 | 185,348 | 187,004 | 196,755 | 182,604 | 185,442 | 1,316,829 | 188,118 |
| 46 | 202,979 | 178,378 | 211,732 | 225,530 | 212,806 | 194,052 | 222,352 | 1,447,830 | 206,833 |
| 47 | 230,817 | 205,637 | 221,198 | 224,864 | 228,334 | 216,605 | 228,344 | 1,555,799 | 222,257 |
| 48 | 221,044 | 209,073 | 217,330 | 223,497 | 237,669 | 231,239 | 243,865 | 1,583,718 | 226,245 |
| 49 | 189,366 | 187,241 | 189,840 | 186,503 | 189,660 | 193,376 | 182,507 | 1,318,492 | 188,356 |
| 50 | 143,872 | 122,727 | 144,393 | 145,809 | 150,130 | 148,481 | 147,098 | 1,002,510 | 143,216 |
| 51 | 170,228 | 163,469 | 178,338 | 184,560 | 189,297 | 187,612 | 186,098 | 1,259,602 | 179,943 |
| 52 | 234,534 | 200,783 | 233,670 | 233,343 | 236,196 | 249,307 | 238,244 | 1,626,077 | 232,297 |
| 53 | 194,324 | 154,673 | 165,361 | 174,196 | 187,982 | 170,605 | 203,049 | 1,250,190 | 178,599 |
| 54 | 127,151 | 138,385 | 153,364 | 167,031 | 158,806 | 128,745 | 137,733 | 1,011,216 | 144,459 |
| 55 | 139,431 | 133,835 | 147,811 | 143,662 | 143,047 | 143,793 | 146,699 | 998,278   | 142,611 |
| 56 | 160,391 | 151,809 | 145,939 | 139,934 | 149,647 | 166,048 | 178,098 | 1,091,865 | 155,981 |
| 57 | 272,045 | 234,989 | 298,938 | 250,942 | 267,513 | 285,676 | 418,759 | 2,028,861 | 289,837 |
| 58 | 249,903 | 224,723 | 241,964 | 222,254 | 242,654 | 240,358 | 247,272 | 1,669,127 | 238,447 |
| 59 | 187,624 | 176,909 | 189,248 | 188,734 | 201,174 | 203,890 | 199,371 | 1,346,951 | 192,422 |
| 60 | 234,924 | 202,474 | 229,603 | 233,154 | 241,386 | 249,401 | 231,864 | 1,622,805 | 231,829 |
| 61 | 347,114 | 338,140 | 259,262 | 286,724 | 288,164 | 283,374 | 313,344 | 2,116,123 | 302,303 |
| 62 | 168,994 | 166,088 | 170,700 | 172,001 | 173,799 | 186,411 | 186,953 | 1,224,946 | 174,992 |
| 63 | 457,766 | 430,931 | 412,666 | 425,829 | 469,929 | 458,913 | 504,220 | 3,160,253 | 451,465 |
| 64 | 123,458 | 109,492 | 120,105 | 122,933 | 118,934 | 124,761 | 122,143 | 841,824   | 120,261 |
| 65 | 207,444 | 191,097 | 198,482 | 184,897 | 208,051 | 206,599 | 218,921 | 1,415,492 | 202,213 |
| 66 | 201,003 | 186,892 | 187,936 | 192,536 | 174,157 | 187,696 | 189,197 | 1,319,417 | 188,488 |
| 67 | 256,481 | 220,430 | 233,290 | 226,006 | 227,564 | 224,977 | 216,398 | 1,605,146 | 229,307 |
| 68 | 266,177 | 235,997 | 256,315 | 264,316 | 281,498 | 273,172 | 293,661 | 1,871,135 | 267,305 |
| 69 | 180,996 | 155,391 | 175,330 | 168,690 | 168,996 | 180,554 | 173,259 | 1,203,217 | 171,888 |

|    |         |         |         |         |         |         |         |           |         |
|----|---------|---------|---------|---------|---------|---------|---------|-----------|---------|
| 70 | 306,598 | 270,085 | 276,579 | 258,585 | 267,222 | 252,864 | 265,441 | 1,897,373 | 271,053 |
| 71 | 175,524 | 169,532 | 182,666 | 186,502 | 192,163 | 195,161 | 202,431 | 1,303,979 | 186,283 |

**MEDIAN**

**198,750**

**MEAN**

**206,472**

# APPENDIX C

## Retail Site Location Checklist

### RETAIL SITE LOCATION CHECKLIST

STORE NAME: \_\_\_\_\_

STORE CONTROL NUMBER: \_\_\_\_\_

| Factor Number | Factors Identified in the Literature | Question Number                                                          | Question                                                                            | YES = 1              | NO = 0               |
|---------------|--------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------|----------------------|
| F.1           | Location of Competitor outlets       | F.1.1                                                                    | Is there a McDonalds or Wimpy outlet in the same shopping centre?                   | <input type="text"/> | <input type="text"/> |
|               |                                      | F.1.2                                                                    | Is there a McDonalds or Wimpy outlet within a 3km radius?                           | <input type="text"/> | <input type="text"/> |
|               |                                      | F.1.3                                                                    | Are there other major competitors (KFC, Nando's, Debonairs) in the same             | <input type="text"/> | <input type="text"/> |
|               |                                      | F.1.4                                                                    | Are there other major competitors (KFC, Nando's, Debonairs) within a 3km radius?    | <input type="text"/> | <input type="text"/> |
| F.2           | Anchor Tenants                       | F.2.1                                                                    | Is the centre anchored by PicknPay, Checkers, Spar or Woolworths?                   | <input type="text"/> | <input type="text"/> |
| F.3           | Secondary Attractors                 | F.3.1                                                                    | Is there a bank in the centre?                                                      | <input type="text"/> | <input type="text"/> |
|               |                                      | F.3.2                                                                    | Is there an ATM in the centre?                                                      | <input type="text"/> | <input type="text"/> |
| F.4           | Market-area characteristics          | F.4.1                                                                    | How many households are there within a 5km radius?                                  | <input type="text"/> |                      |
|               |                                      | F.4.2                                                                    | What is the average disposable income level within a 5km radius?                    | <input type="text"/> |                      |
| F.5           | Accessibility                        | F.5.1                                                                    | Is there direct access to the centre from a main road?                              | <input type="text"/> | <input type="text"/> |
|               |                                      | F.5.2                                                                    | Is there controlled access to the centre?                                           | <input type="text"/> | <input type="text"/> |
|               |                                      | F.5.3                                                                    | Is there direct access to the store from parking immediately in front of the store? | <input type="text"/> | <input type="text"/> |
|               |                                      | F.5.4                                                                    | Does the centre employ professional security contractors?                           | <input type="text"/> | <input type="text"/> |
|               |                                      | F.5.5                                                                    | Is the store signage visible from the main road?                                    | <input type="text"/> | <input type="text"/> |
| F.6           | Cannibalisation                      | F.6.1                                                                    | Is there 0 Steers outlets within a 3km radius?                                      | <input type="text"/> | <input type="text"/> |
|               |                                      | F.6.2                                                                    | Is there 1 Steers outlet within a 3km radius?                                       | <input type="text"/> | <input type="text"/> |
|               |                                      | F.6.3                                                                    | Is there 2 Steers outlets within a 3km radius?                                      | <input type="text"/> | <input type="text"/> |
|               |                                      | F.6.4                                                                    | Is there 3 Steers outlets within a 3km radius?                                      | <input type="text"/> | <input type="text"/> |
|               |                                      | F.6.5                                                                    | Is there 4 Steers outlets within a 3km radius?                                      | <input type="text"/> | <input type="text"/> |
|               |                                      | F.6.6                                                                    | Is there 5 Steers outlets within a 3km radius?                                      | <input type="text"/> | <input type="text"/> |
| F.7           | LSM Data                             | What is the predominant LSM level within the 5km radius? (%age of total) |                                                                                     |                      |                      |
|               |                                      | F.7.1                                                                    | -LSM 1                                                                              | <input type="text"/> |                      |
|               |                                      | F.7.2                                                                    | -LSM 2                                                                              | <input type="text"/> |                      |
|               |                                      | F.7.3                                                                    | -LSM 3                                                                              | <input type="text"/> |                      |
|               |                                      | F.7.4                                                                    | -LSM 4                                                                              | <input type="text"/> |                      |
|               |                                      | F.7.5                                                                    | -LSM 5                                                                              | <input type="text"/> |                      |
|               |                                      | F.7.6                                                                    | -LSM 6                                                                              | <input type="text"/> |                      |
|               |                                      | F.7.7                                                                    | -LSM 7                                                                              | <input type="text"/> |                      |
|               |                                      | F.7.8                                                                    | -LSM 8                                                                              | <input type="text"/> |                      |
|               |                                      | F.7.9                                                                    | -LSM 9                                                                              | <input type="text"/> |                      |
|               |                                      | F.7.10                                                                   | -LSM 10                                                                             | <input type="text"/> |                      |

# APPENDIX D

## Retail Site Location Data for 71 Stores

| Control Number | Store Name | F.1              | F.1 | F.1 | F.1 | F.2 | F.3 | F.3 | F.4     | F.4     | F.5 | F.5 | F.5 | F.5 | F.5 | F.6.1 | F.6.2 | F.6.3 | F.6.4 | F.6.5 | F.6.6 | F.7.1 | F.7.1 | F.7.1 | F.7.1 | F.7.1 | F.7.1 | F.7.1 | F.7.1 | F.7.1 | F.7.1   | F.7.1   | Turnover | LSM 6 | F.6 |
|----------------|------------|------------------|-----|-----|-----|-----|-----|-----|---------|---------|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|---------|----------|-------|-----|
| 1              | 1          | Alberton City    | 1   | 1   | 1   | 1   | 1   | 1   | 48,785  | 104,463 | 1   | 1   | 0   | 1   | 1   | 0     | 1     | 0     | 1     | 0     | 0     | 0     | 0     | 1.1   | 3.7   | 5.7   | 5.6   | 9.3   | 10.4  | 13.2  | 24.1    | 26.9    | 195,532  | 84.0  | 0   |
| 3              | 2          | Atlasville       | 1   | 1   | 0   | 1   | 0   | 0   | 32,534  | 151,587 | 1   | 0   | 1   | 1   | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 0.9   | 2.4   | 3.3   | 1.6   | 3.8   | 10.1  | 15.1  | 29.4  | 33.4    | 187,319 | 91.7     | 0     |     |
| 4              | 3          | Auckland Park    | 0   | 1   | 0   | 1   | 0   | 1   | 136,611 | 85,594  | 1   | 0   | 1   | 1   | 1   | 0     | 0     | 1     | 0     | 0     | 0     | 0     | 0.9   | 1.7   | 4.9   | 10.5  | 29.6  | 19.6  | 11.7  | 10.0  | 11.3    | 285,587 | 82.2     | 0     |     |
| 5              | 4          | Bedford Centre   | 0   | 1   | 0   | 1   | 1   | 1   | 77,248  | 100,107 | 1   | 1   | 1   | 1   | 1   | 0     | 0     | 0     | 0     | 0     | 1     | 0     | 1.5   | 4.3   | 5.3   | 5.6   | 13.9  | 12.1  | 12.8  | 20.4  | 24.1    | 193,339 | 85.3     | 0     |     |
| 6              | 5          | Bedford Village  | 0   | 1   | 1   | 1   | 1   | 0   | 65,140  | 114,897 | 1   | 0   | 1   | 1   | 1   | 0     | 0     | 0     | 0     | 1     | 0     | 0     | 1.9   | 5.5   | 5.8   | 4.7   | 12.8  | 11.7  | 13.0  | 20.7  | 23.9    | 222,762 | 82.1     | 0     |     |
| 7              | 6          | Bergbronn        | 0   | 1   | 0   | 1   | 1   | 0   | 79,458  | 143,940 | 0   | 1   | 1   | 1   | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 0.9   | 2.0   | 2.2   | 4.1   | 12.5  | 12.9  | 14.0  | 24.3  | 27.2    | 198,750 | 90.9     | 1     |     |
| 8              | 7          | Blaigowrie       | 1   | 1   | 0   | 1   | 1   | 0   | 81,000  | 191,891 | 1   | 0   | 1   | 1   | 1   | 0     | 0     | 0     | 0     | 1     | 0     | 0     | 0.3   | 1.1   | 1.7   | 3.5   | 7.8   | 9.7   | 11.9  | 25.7  | 38.5    | 157,076 | 93.5     | 0     |     |
| 9              | 8          | Bonaero Park     | 1   | 1   | 0   | 0   | 1   | 0   | 37,349  | 157,128 | 1   | 0   | 1   | 1   | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 0.7   | 1.6   | 2.8   | 2.1   | 4.8   | 9.9   | 14.8  | 29.8  | 33.5    | 133,447 | 92.8     | 0     |     |
| 10             | 9          | Boulders         | 0   | 1   | 0   | 1   | 1   | 1   | 68,449  | 60,541  | 1   | 1   | 1   | 1   | 1   | 0     | 0     | 1     | 0     | 0     | 0     | 0     | 3.1   | 10.6  | 15.1  | 16.5  | 25.0  | 9.1   | 5.4   | 7.1   | 8.1     | 259,703 | 54.6     | 0     |     |
| 12             | 10         | Brits            | 0   | 0   | 0   | 0   | 1   | 0   | 21,772  | 38,986  | 1   | 0   | 1   | 1   | 1   | 1     | 0     | 0     | 0     | 0     | 0     | 5.8   | 16.3  | 21.9  | 21.6  | 7.2   | 9.3   | 4.5   | 5.6   | 3.3   | 172,032 | 27.2    | 1        |       |     |
| 13             | 11         | Broadacres       | 0   | 0   | 0   | 1   | 1   | 1   | 32,746  | 189,655 | 1   | 1   | 1   | 1   | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 2.8   | 8.8   | 8.6   | 3.9   | 8.8   | 7.6   | 9.0   | 19.8  | 30.8    | 143,466 | 75.9     | 0     |     |
| 14             | 12         | Brokhorstspuit   | 0   | 0   | 0   | 0   | 0   | 0   | 13,674  | 45,771  | 1   | 0   | 1   | 1   | 1   | 0     | 0     | 0     | 0     | 0     | 0     | 9.0   | 19.3  | 22.9  | 11.1  | 12.7  | 6.7   | 4.7   | 7.7   | 5.9   | 214,738 | 37.7    | 1        |       |     |
| 15             | 13         | Brooklyn         | 0   | 1   | 1   | 1   | 1   | 1   | 68,571  | 137,656 | 1   | 1   | 1   | 1   | 1   | 0     | 0     | 1     | 0     | 0     | 0     | 0     | 0.3   | 0.7   | 1.3   | 7.6   | 19.5  | 14.9  | 12.6  | 19.6  | 23.6    | 162,689 | 90.1     | 0     |     |
| 16             | 14         | Carltonville     | 0   | 1   | 0   | 1   | 0   | 0   | 11,749  | 70,161  | 1   | 0   | 1   | 0   | 0   | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 4.5   | 11.1  | 12.8  | 7.5   | 14.5  | 10.7  | 12.1  | 16.6  | 10.3    | 122,939 | 64.2     | 1     |     |
| 17             | 15         | Cascades         | 0   | 0   | 0   | 0   | 1   | 0   | 43,605  | 162,023 | 1   | 0   | 1   | 1   | 1   | 0     | 0     | 1     | 0     | 0     | 0     | 1.5   | 3.1   | 3.4   | 2.9   | 6.3   | 8.7   | 14.0  | 28.9  | 31.4  | 115,034 | 89.2    | 0        |       |     |
| 18             | 16         | Centurion        | 1   | 1   | 1   | 1   | 1   | 1   | 43,465  | 174,997 | 0   | 1   | 1   | 1   | 1   | 0     | 0     | 1     | 0     | 0     | 0     | 0     | 0.6   | 1.8   | 2.0   | 1.0   | 2.8   | 9.1   | 14.0  | 30.5  | 38.2    | 238,690 | 94.6     | 0     |     |
| 19             | 17         | Darras Centre    | 0   | 0   | 1   | 1   | 1   | 0   | 133,975 | 76,048  | 1   | 0   | 1   | 1   | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 0.7   | 1.4   | 5.3   | 11.2  | 29.8  | 19.3  | 11.5  | 9.7   | 11.2    | 115,624 | 81.5     | 0     |     |
| 20             | 18         | Dowerglen        | 0   | 1   | 1   | 1   | 0   | 1   | 107,750 | 85,586  | 0   | 0   | 1   | 1   | 1   | 1     | 0     | 0     | 0     | 0     | 0     | 1.5   | 6.6   | 12.1  | 14.3  | 14.9  | 9.5   | 9.1   | 14.5  | 17.7  | 151,227 | 65.6    | 1        |       |     |
| 23             | 19         | Edenglen         | 0   | 1   | 0   | 1   | 1   | 1   | 43,674  | 153,552 | 1   | 0   | 1   | 1   | 1   | 1     | 1     | 0     | 0     | 0     | 0     | 0     | 0.4   | 1.2   | 1.9   | 2.7   | 7.4   | 11.4  | 15.0  | 28.0  | 32.0    | 318,658 | 93.8     | 1     |     |
| 24             | 20         | Elardus          | 0   | 1   | 1   | 0   | 1   | 0   | 41,656  | 211,541 | 0   | 0   | 1   | 1   | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 0.2   | 1.0   | 1.0   | 0.6   | 1.9   | 8.7   | 13.1  | 30.4  | 43.0    | 287,560 | 97.1     | 0     |     |
| 25             | 21         | Eldoraigne       | 0   | 1   | 1   | 1   | 1   | 1   | 37,942  | 173,117 | 1   | 0   | 1   | 1   | 1   | 0     | 0     | 1     | 0     | 0     | 0     | 0     | 0.9   | 2.7   | 2.7   | 0.9   | 3.5   | 9.4   | 13.9  | 29.4  | 36.6    | 240,908 | 92.8     | 0     |     |
| 26             | 22         | Elspark          | 0   | 0   | 1   | 0   | 1   | 0   | 54,125  | 70,951  | 1   | 0   | 1   | 1   | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 4.2   | 13.4  | 14.0  | 6.4   | 18.0  | 11.6  | 9.0   | 12.5  | 11.0    | 224,210 | 62.1     | 0     |     |
| 27             | 23         | Epsom Downs      | 0   | 1   | 0   | 1   | 1   | 0   | 49,883  | 217,202 | 1   | 0   | 1   | 1   | 1   | 0     | 0     | 0     | 1     | 0     | 0     | 0     | 0.4   | 1.5   | 2.0   | 2.2   | 5.0   | 8.7   | 11.9  | 26.9  | 41.4    | 221,229 | 93.9     | 0     |     |
| 28             | 24         | Flamwood         | 0   | 0   | 0   | 1   | 1   | 0   | 16,435  | 73,130  | 1   | 0   | 1   | 1   | 1   | 1     | 0     | 0     | 0     | 0     | 0     | 2.4   | 5.7   | 6.5   | 10.5  | 6.1   | 10.5  | 13.0  | 13.2  | 19.8  | 12.4    | 284,030 | 68.9     | 1     |     |
| 29             | 25         | Florida Junction | 0   | 1   | 0   | 1   | 1   | 0   | 119,637 | 80,318  | 1   | 0   | 1   | 1   | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 1.3   | 3.0   | 2.7   | 2.8   | 8.1   | 9.8   | 14.1  | 27.7  | 30.6  | 221,672 | 90.3    | 0        |       |     |
| 30             | 26         | Fordsburg        | 0   | 1   | 1   | 1   | 0   | 0   | 128,821 | 69,585  | 1   | 0   | 1   | 1   | 1   | 0     | 0     | 1     | 0     | 0     | 0     | 0     | 0.9   | 1.6   | 5.2   | 11.2  | 32.0  | 20.9  | 12.0  | 8.6   | 7.7     | 248,718 | 81.2     | 0     |     |
| 31             | 27         | Fountainbleau    | 0   | 1   | 0   | 1   | 1   | 0   | 80,175  | 194,728 | 1   | 0   | 1   | 1   | 1   | 0     | 0     | 0     | 0     | 1     | 0     | 0     | 0.3   | 1.0   | 1.3   | 2.3   | 5.6   | 9.1   | 13.0  | 28.3  | 39.1    | 276,599 | 95.1     | 0     |     |
| 32             | 28         | Glen Fair        | 0   | 1   | 1   | 1   | 1   | 1   | 61,008  | 184,544 | 1   | 0   | 1   | 1   | 1   | 0     | 0     | 1     | 0     | 0     | 0     | 0     | 0.2   | 1.0   | 1.1   | 1.3   | 4.6   | 10.7  | 13.4  | 28.4  | 39.4    | 171,441 | 96.5     | 0     |     |
| 33             | 29         | Glen Village     | 1   | 1   | 1   | 1   | 1   | 1   | 50,864  | 146,944 | 1   | 0   | 1   | 1   | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 3.2   | 6.7   | 7.3   | 4.0   | 8.9   | 10.5  | 10.2  | 21.3  | 28.0  | 143,124 | 78.9    | 0        |       |     |
| 34             | 30         | Glenanda         | 0   | 1   | 0   | 1   | 1   | 0   | 51,987  | 122,874 | 1   | 0   | 1   | 1   | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 0.5   | 1.2   | 2.8   | 5.3   | 14.0  | 14.6  | 15.1  | 23.3  | 23.3    | 246,951 | 90.3     | 0     |     |
| 35             | 31         | Glynwood         | 0   | 1   | 1   | 0   | 0   | 1   | 52,058  | 110,083 | 1   | 0   | 1   | 1   | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 1.4   | 4.1   | 6.3   | 6.2   | 12.1  | 11.7  | 13.2  | 21.7  | 23.3    | 200,199 | 82.0     | 0     |     |
| 36             | 32         | Grosvenor        | 0   | 1   | 0   | 0   | 0   | 0   | 54,340  | 216,679 | 1   | 0   | 1   | 1   | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 1.4   | 4.1   | 6.3   | 6.2   | 12.1  | 11.7  | 13.2  | 21.7  | 23.3    | 209,093 | 82.0     | 0     |     |
| 37             | 33         | Hatfield         | 1   | 1   | 1   | 1   | 0   | 0   | 79,375  | 133,830 | 1   | 0   | 1   | 0   | 1   | 0     | 0     | 0     | 0     | 1     | 0     | 0     | 0.3   | 0.7   | 1.3   | 7.4   | 19.2  | 15.4  | 13.1  | 19.7  | 22.9    | 244,571 | 90.3     | 0     |     |
| 40             | 34         | Honeydew         | 0   | 1   | 0   | 1   | 1   | 1   | 46,944  | 172,871 | 0   | 0   | 1   | 1   | 1   | 0     | 0     | 0     | 1     | 0     | 0     | 0     | 1.8   | 5.0   | 5.3   | 2.1   | 5.5   | 8.0   | 12.5  | 26.9  | 33.0    | 160,993 | 85.9     | 0     |     |
| 41             | 35         | Illovo           | 0   | 1   | 0   | 1   | 0   | 0   | 129,308 | 110,503 | 1   | 0   | 1   | 1   | 1   | 0     | 0     | 0     | 0     | 1     | 0     | 0     | 1.3   | 6.2   | 11.2  | 13.9  | 15.1  | 9.1   | 8.0   | 13.9  | 21.2    | 195,511 | 67.3     | 0     |     |
| 43             | 36         | Kramerville      | 0   | 1   | 0   | 1   | 0   | 0   | 107,700 | 99,016  | 1   | 0   | 1   | 0   | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 1.5   | 7.2   | 13.0  | 15.6  | 16.7  | 9.3   | 7.4   | 11.9  | 17.4    | 213,537 | 62.7     | 0     |     |
| 45             | 37         | Kyalami          | 0   | 0   | 1   | 0   | 1   | 1   | 18,000  | 224,540 | 1   | 0   | 1   | 1   | 1   | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0.6   | 1.8   | 2.8   | 4.2   | 6.3   | 7.9   | 12.5  | 26.3  | 37.4    | 226,267 | 90.4     | 1     |     |
| 48             | 38         | Merlo Park       | 1   | 1   | 1   | 1   | 1   | 1   | 60,521  | 198,010 | 1   | 1   | 0   | 1   | 0   | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0.2   | 1.0   | 1.0   | 1.1   | 4.1   | 10.4  | 13.3  | 28.8  | 40.2    | 309,562 | 96.8     | 0     |     |
| 49             | 39         | Meyerton         | 0   | 1   | 0   | 1   | 0   | 0   | 9,668   | 61,747  | 1   | 0   | 1   | 0   | 1   | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 4.5   | 10.8  | 15.5  | 12.8  | 11.0  | 9.2   | 9.3   | 13.7  | 13.2    | 163,521 | 56.4     | 1     |     |
| 50             | 40         | Middleburg       | 0   | 0   | 0   | 1   | 0   | 0   | 32,523  | 51,866  | 1   | 0   | 1   | 1   | 1   | 1     | 0     | 0     | 0     | 0     | 0     | 5.2   | 10.8  | 10.3  | 12.6  | 14.5  | 16.8  | 7.2   | 8.3   | 8.3   | 6.1     | 117,981 | 46.7     | 1     |     |
| 53             | 41         | Monument Mall    | 0   | 1   | 0   | 1   | 1   | 0   | 45,445  | 93,456  | 1   | 0   | 1   | 1   | 1   | 0     | 0     | 1     | 0     | 0     | 0     | 0     | 2.1   | 5.4   | 8.3   | 11.6  | 15.7  | 9.6   | 10.8  | 19.4  | 17.0    | 185,160 | 72.5     | 0     |     |
| 54             | 42         | Morningside      | 0   | 1   | 1   | 1   | 1   | 0   | 97,791  | 100,968 | 1   | 0   | 1   | 1   | 1   | 0     | 0     | 1     | 0     | 0     | 0     | 0     | 1.6   | 7.5   | 13.6  | 16.1  | 16.4  | 8.8   | 6.9   | 11.4  | 17.7    | 171,689 | 61.2     | 0     |     |
| 56             | 43         | Noordheuwel      | 0   | 1   | 0   | 0   | 0   | 0   | 30,610  | 133,001 | 1   | 0   | 1   | 1   | 1   | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 2.6   | 6.1   | 6.2   | 3.8   | 8.3   | 9.0   | 13.3  | 25.9  | 24.8    | 128,208 | 81.3     | 0     |     |
| 57             | 44         | Norsem Park      | 1   | 1   | 0   | 1   | 1   | 0   | 89,785  | 71,501  | 1   | 0   | 1   | 1   | 1   | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 1.6   | 5.9   | 11.9  | 15.6  | 19.4  | 9.9   | 8.7   | 13.1  | 13.9    | 188,118 | 65.0     | 1     |     |
| 59             | 45         | Northmead        | 0   | 1   | 0   | 1   | 1   | 1   | 33,813  | 143,168 | 1   | 0   | 1   | 1   | 1   | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0.9   | 2.2   | 3.6   | 3.2   | 8.0   | 11.8  | 14.8  | 26.0  | 29.5    | 206,833 | 90.1     | 1     |     |
| 60             | 46         | Norwood          | 0   | 1   | 0   | 1   | 0   | 0   | 191,804 | 73,053  | 1   | 0   | 1   | 0   | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 0     | 1.2   | 4.3   | 9.7   | 14.6  | 26.2  | 15.5  | 9.3   | 8.5   | 10.8    | 222,257 | 70.3     | 0     |     |
|                |            |                  |     |     |     |     |     |     |         |         |     |     |     |     |     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |         |         |          |       |     |

# APPENDIX E

## Retail Site Location LSM Data Survey (Example – Atlasville)

| TOWN         | CODE    | HOUSEHOLDS | PREDOM_LSM | LSM_GROUP1 | LSM_GROUP2 | LSM_GROUP3 | LSM_GROUP4 | LSM_GROUPS | LSM_GROUPS | LSM_GROUP7 | LSM_GROUPS | LSM_GROUPS | LSM_GROUPS | GROUP10 |  |  |
|--------------|---------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------|--|--|
| BENONI       | 2260-06 | 2130       | LSM_10     | 0          | 13         | 32         | 19         | 5          | 1          | 225        | 346        | 647        | 843        |         |  |  |
| BOKSBURG     | 2268-00 | 109        | LSM_10     | 0          | 1          | 2          | 4          | 2          | 5          | 14         | 17         | 29         | 37         |         |  |  |
| BOKSBURG     | 2268-00 | 506        | LSM_10     | 0          | 3          | 10         | 22         | 1          | 1          | 24         | 69         | 169        | 207        |         |  |  |
| BOKSBURG     | 2268-00 | 42         | LSM_10     | 0          | 1          | 2          | 4          | 1          | 2          | 5          | 6          | 10         | 11         |         |  |  |
| KEMPTON PARK | 2285-04 | 873        | LSM_09     | 0          | 36         | 50         | 90         | 41         | 79         | 111        | 102        | 188        | 176        |         |  |  |
| KEMPTON PARK | 2285-04 | 155        | LSM_10     | 0          | 1          | 5          | 12         | 3          | 0          | 5          | 19         | 50         | 61         |         |  |  |
| BENONI       | 2260-03 | 74         | LSM_09     | 0          | 0          | 1          | 3          | 3          | 10         | 13         | 13         | 15         | 15         |         |  |  |
| BENONI       | 2260-05 | 164        | LSM_10     | 0          | 1          | 3          | 5          | 3          | 0          | 4          | 19         | 52         | 78         |         |  |  |
| BENONI       | 2260-06 | 248        | LSM_10     | 0          | 8          | 9          | 20         | 7          | 0          | 24         | 29         | 65         | 87         |         |  |  |
| BENONI       | 2260-00 | 340        | LSM_10     | 0          | 1          | 3          | 5          | 4          | 1          | 28         | 51         | 117        | 130        |         |  |  |
| BENONI       | 2260-02 | 73         | LSM_09     | 0          | 0          | 1          | 2          | 3          | 9          | 12         | 13         | 16         | 16         |         |  |  |
| BENONI       | 2260-07 | 25         | LSM_09     | 0          | 0          | 1          | 2          | 0          | 0          | 3          | 4          | 8          | 7          |         |  |  |
| BENONI       | 2260-06 | 3          | LSM_10     | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 1          | 1          |         |  |  |
| BENONI       | 2260-01 | 608        | LSM_03     | 0          | 80         | 212        | 147        | 1          | 85         | 25         | 27         | 4          | 3          |         |  |  |
| BENONI       | 2260-01 | 190        | LSM_10     | 0          | 6          | 12         | 32         | 19         | 4          | 13         | 18         | 40         | 46         |         |  |  |
| BENONI       | 2260-07 | 10         | LSM_10     | 0          | 0          | 0          | 1          | 0          | 0          | 1          | 1          | 3          | 3          |         |  |  |
| BENONI       | 2260-00 | 1424       | LSM_09     | 0          | 9          | 22         | 49         | 58         | 191        | 248        | 248        | 299        | 299        |         |  |  |
| BENONI       | 2260-02 | 36         | LSM_10     | 0          | 0          | 0          | 1          | 0          | 0          | 2          | 5          | 12         | 15         |         |  |  |
| BENONI       | 2260-01 | 141        | LSM_10     | 0          | 0          | 1          | 0          | 0          | 0          | 14         | 24         | 51         | 51         |         |  |  |
| BENONI       | 2260-01 | 253        | LSM_10     | 0          | 11         | 12         | 19         | 3          | 0          | 24         | 30         | 65         | 88         |         |  |  |
| BENONI       | 2260-05 | 2950       | LSM_10     | 0          | 6          | 25         | 41         | 34         | 8          | 243        | 446        | 1018       | 1128       |         |  |  |
| BENONI       | 2260-05 | 297        | LSM_10     | 0          | 1          | 2          | 0          | 0          | 0          | 20         | 44         | 105        | 126        |         |  |  |
| BENONI       | 2260-01 | 537        | LSM_10     | 0          | 2          | 5          | 8          | 12         | 20         | 47         | 77         | 159        | 166        |         |  |  |
| BENONI       | 2260-01 | 80         | LSM_10     | 0          | 0          | 1          | 1          | 1          | 4          | 10         | 12         | 22         | 29         |         |  |  |
| BOKSBURG     | 2268-05 | 75         | LSM_10     | 0          | 0          | 3          | 8          | 3          | 17         | 3          | 8          | 15         | 19         |         |  |  |
| BENONI       | 2260-04 | 16         | LSM_10     | 0          | 0          | 0          | 0          | 0          | 0          | 1          | 2          | 4          | 7          |         |  |  |
| BENONI       | 2260-06 | 122        | LSM_09     | 0          | 0          | 2          | 2          | 10         | 18         | 18         | 16         | 32         | 24         |         |  |  |
| BENONI       | 2260-03 | 216        | LSM_09     | 0          | 0          | 4          | 4          | 0          | 7          | 33         | 40         | 65         | 63         |         |  |  |
| BENONI       | 2260-08 | 267        | LSM_10     | 0          | 1          | 4          | 6          | 5          | 4          | 21         | 29         | 73         | 124        |         |  |  |
| BENONI       | 2260-02 | 3498       | LSM_10     | 0          | 11         | 46         | 74         | 33         | 0          | 210        | 493        | 1184       | 1447       |         |  |  |
| BENONI       | 2260-03 | 38         | LSM_10     | 0          | 0          | 1          | 1          | 1          | 1          | 3          | 4          | 10         | 18         |         |  |  |
| BENONI       | 2260-02 | 54         | LSM_09     | 0          | 0          | 1          | 1          | 0          | 2          | 8          | 10         | 16         | 16         |         |  |  |
| BENONI       | 2260-04 | 1281       | LSM_10     | 0          | 2          | 10         | 0          | 0          | 35         | 148        | 177        | 374        | 535        |         |  |  |
| BENONI       | 2260-06 | 393        | LSM_09     | 0          | 7          | 21         | 40         | 30         | 26         | 41         | 65         | 93         | 70         |         |  |  |
| BENONI       | 2260-02 | 55         |            | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |         |  |  |
| BENONI       | 2260-07 | 134        | LSM_10     | 0          | 0          | 1          | 2          | 2          | 1          | 7          | 10         | 26         | 44         |         |  |  |
| BENONI       | 2260-01 | 0          |            | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |         |  |  |
| BENONI       | 2260-02 | 219        | LSM_10     | 0          | 11         | 17         | 27         | 10         | 23         | 28         | 22         | 39         | 41         |         |  |  |
| BOKSBURG     | 2268-06 | 599        | LSM_10     | 0          | 3          | 9          | 6          | 0          | 4          | 65         | 103        | 204        | 205        |         |  |  |
| BOKSBURG     | 2268-00 | 1287       | LSM_10     | 0          | 4          | 21         | 43         | 7          | 0          | 47         | 168        | 426        | 572        |         |  |  |
| BENONI       | 2260-00 | 322        | LSM_10     | 0          | 0          | 2          | 1          | 0          | 0          | 21         | 35         | 94         | 169        |         |  |  |
| BENONI       | 2260-03 | 4          | LSM_10     | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 1          | 2          |         |  |  |
| BOKSBURG     | 2268-00 | 10         |            | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |         |  |  |
| BENONI       | 2260-06 | 1          | LSM_10     | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |         |  |  |
| BOKSBURG     | 2268-02 | 6          |            | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |         |  |  |
| BOKSBURG     | 2268-05 | 33         | LSM_10     | 0          | 0          | 0          | 0          | 0          | 3          | 4          | 6          | 10         | 10         |         |  |  |
| BOKSBURG     | 2268-01 | 6          |            | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |         |  |  |
| BOKSBURG     | 2268-04 | 1          |            | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |         |  |  |
| BOKSBURG     | 2268-03 | 1272       | LSM_10     | 0          | 5          | 19         | 41         | 3          | 0          | 83         | 187        | 438        | 496        |         |  |  |
| KEMPTON PARK | 2285-01 | 17         | LSM_10     | 0          | 0          | 0          | 0          | 0          | 0          | 1          | 3          | 6          | 6          |         |  |  |
| KEMPTON PARK | 2285-01 | 1435       | LSM_10     | 0          | 5          | 19         | 39         | 22         | 0          | 114        | 214        | 484        | 532        |         |  |  |
| BOKSBURG     | 2268-07 | 553        | LSM_10     | 0          | 2          | 8          | 18         | 1          | 0          | 36         | 81         | 190        | 215        |         |  |  |
| BOKSBURG     | 2268-00 | 1582       | LSM_10     | 0          | 4          | 16         | 15         | 0          | 1          | 140        | 253        | 556        | 596        |         |  |  |
| KEMPTON PARK | 2285-00 | 12         |            | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |         |  |  |
| BOKSBURG     | 2268-01 | 1449       | LSM_09     | 0          | 10         | 24         | 41         | 40         | 149        | 237        | 289        | 395        | 264        |         |  |  |
| BOKSBURG     | 2268-02 | 121        | LSM_09     | 0          | 1          | 3          | 4          | 0          | 4          | 16         | 24         | 36         | 35         |         |  |  |
| BOKSBURG     | 2268-05 | 670        | LSM_09     | 0          | 3          | 8          | 7          | 9          | 66         | 109        | 138        | 189        | 142        |         |  |  |
| BOKSBURG     | 2268-03 | 187        | LSM_10     | 0          | 1          | 3          | 4          | 0          | 9          | 23         | 30         | 52         | 66         |         |  |  |
| BOKSBURG     | 2268-04 | 0          |            | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          | 0          |         |  |  |
| BOKSBURG     | 2268-00 | 376        | LSM_10     | 0          | 11         | 16         | 33         | 11         | 18         | 48         | 51         | 92         | 96         |         |  |  |
| BOKSBURG NU  | 2269-04 | 31         | LSM_10     | 0          | 1          | 1          | 3          | 1          | 2          | 4          | 4          | 8          | 8          |         |  |  |
| KEMPTON PARK | 2285-02 | 7          | LSM_09     | 0          | 0          | 0          | 0          | 0          | 1          | 1          | 1          | 1          | 1          |         |  |  |
| BENONI       | 2260-08 | 2403       | LSM_09     | 0          | 16         | 38         | 82         | 98         | 322        | 419        | 419        | 505        | 504        |         |  |  |
|              |         |            |            | 0          | 278        | 708        | 989        | 487        | 1133       | 3004       | 4502       | 8763       | 9950       | 29814   |  |  |
|              |         |            |            | 0.00%      | 0.93%      | 2.37%      | 3.32%      | 1.63%      | 3.80%      | 10.08%     | 15.10%     | 29.39%     | 33%        | 100%    |  |  |

## APPENDIX F

### Retail Site Location Census Data Survey (Example – Olivedale)

| POLYGONID | SP_CODE  | SP_NAME            | SUB_PLACE          | PROVINCE | TOT_HINC             | AVG_HINC          | TOT_HHOLD     |
|-----------|----------|--------------------|--------------------|----------|----------------------|-------------------|---------------|
| 77421051  | 77421051 | Randparkrif Ext    | Randparkrif Ext    | GAUTENG  | 620,808,840          | 224,362           | 2,767         |
| 77421050  | 77421050 | Randparkrif        | Randparkrif        | GAUTENG  | 508,472,252          | 230,078           | 2,210         |
| 77421065  | 77421065 | Windsor Glen       | Windsor Glen       | GAUTENG  | 62,019,191           | 214,599           | 289           |
| 77421011  | 77421011 | Bush Hill Estate   | Bush Hill Estate   | GAUTENG  | 47,190,359           | 271,209           | 174           |
| 77421005  | 77421005 | Boskruin           | Boskruin           | GAUTENG  | 139,170,359          | 227,032           | 613           |
| 77421022  | 77421022 | Fontainebleau      | Fontainebleau      | GAUTENG  | 149,985,393          | 149,091           | 1,006         |
| 77421061  | 77421061 | Sundowner          | Sundowner          | GAUTENG  | 348,656,430          | 213,900           | 1,630         |
| 77421006  | 77421006 | Boskruin Ext       | Boskruin Ext       | GAUTENG  | 261,788,604          | 231,262           | 1,132         |
| 77421008  | 77421008 | Bromhof Ext        | Bromhof Ext        | GAUTENG  | 438,381,498          | 200,632           | 2,185         |
| 77421039  | 77421039 | Moret              | Moret              | GAUTENG  | 40,193,592           | 131,782           | 305           |
| 77421036  | 77421036 | Malanshof          | Malanshof          | GAUTENG  | 162,844,983          | 226,488           | 719           |
| 77421020  | 77421020 | Ferndale           | Ferndale           | GAUTENG  | 625,844,795          | 155,219           | 4,032         |
| 77421044  | 77421044 | Northworld         | Northworld         | GAUTENG  | 194,089,148          | 222,324           | 873           |
| 77421055  | 77421055 | Ruiterhof          | Ruiterhof          | GAUTENG  | 40,716,935           | 209,881           | 194           |
| 77421047  | 77421047 | President Ridge    | President Ridge    | GAUTENG  | 31,954,524           | 158,191           | 202           |
| 77421021  | 77421021 | Ferndale Ext 3     | Ferndale Ext 3     | GAUTENG  | 143,990              | 20,570            | 7             |
| 77421042  | 77421042 | North Riding AH    | North Riding AH    | GAUTENG  | 170,016,347          | 168,167           | 1,011         |
| 77421062  | 77421062 | Sundowner Ext      | Sundowner Ext      | GAUTENG  | 68,292,078           | 188,652           | 362           |
| 77421060  | 77421060 | Strydom Park       | Strydom Park       | GAUTENG  | 86,396               | 28,799            | 3             |
| 77421058  | 77421058 | Sonnedal AH        | Sonnedal AH        | GAUTENG  | 25,065,081           | 66,310            | 378           |
| 77421059  | 77421059 | Sonneglans Ext     | Sonneglans Ext     | GAUTENG  | 125,358,144          | 171,723           | 730           |
| 77421045  | 77421045 | Northworld Ext     | Northworld Ext     | GAUTENG  | 165,716,399          | 195,190           | 849           |
| 77421026  | 77421026 | Hunters Hill       | Hunters Hill       | GAUTENG  | 20,310,965           | 124,607           | 163           |
| 77421004  | 77421004 | Bordeaux           | Bordeaux           | GAUTENG  | 226,290,068          | 187,949           | 1,204         |
| 77421025  | 77421025 | Golden Harvest     | Golden Harvest     | GAUTENG  | 43,530,887           | 190,925           | 228           |
| 77421043  | 77421043 | Northgate Ext 4    | Northgate Ext 4    | GAUTENG  | 59,503,899           | 174,498           | 341           |
| 77421056  | 77421056 | Sharonlea          | Sharonlea          | GAUTENG  | 226,375,469          | 209,607           | 1,080         |
| 77421033  | 77421033 | Kensington B       | Kensington B       | GAUTENG  | 137,040,677          | 174,352           | 786           |
| 77421001  | 77421001 | Beverley Gardens   | Beverley Gardens   | GAUTENG  | 33,107,175           | 189,184           | 175           |
| 77421009  | 77421009 | Bryanston Ext 3    | Bryanston Ext 3    | GAUTENG  | 140,660,615          | 195,091           | 721           |
| 77421046  | 77421046 | Olivedale          | Olivedale          | GAUTENG  | 151,671,866          | 229,806           | 660           |
| 77424063  | 77424063 | St Sithians        | St Sithians        | GAUTENG  | 45,708,911           | 204,973           | 223           |
| 77421010  | 77421010 | Bryanston Ext 5    | Bryanston Ext 5    | GAUTENG  | 58,468,451           | 235,760           | 248           |
| 77421063  | 77421063 | Vandia Grove       | Vandia Grove       | GAUTENG  | 36,700,031           | 293,600           | 125           |
| 77421041  | 77421041 | North Riding       | North Riding       | GAUTENG  | 117,365,759          | 197,919           | 593           |
| 77424013  | 77424013 | Bryanston West     | Bryanston West     | GAUTENG  | 13,031,888           | 167,075           | 78            |
| 77424011  | 77424011 | Bryanston          | Bryanston          | GAUTENG  | 1,266,669,516        | 206,130           | 6,145         |
| 77424017  | 77424017 | Cowdray Park Ext 1 | Cowdray Park Ext 1 | GAUTENG  | 33,082,011           | 236,300           | 140           |
| 77421029  | 77421029 | Johannesburg North | Johannesburg North | GAUTENG  | 103,727,834          | 195,713           | 530           |
| 77424045  | 77424045 | Mill Hill Ext 2    | Mill Hill Ext 2    | GAUTENG  | 68,409,722           | 194,899           | 351           |
| 77421057  | 77421057 | Sonnedal           | Sonnedal           | GAUTENG  | 7,574,184            | 47,339            | 160           |
| 77421030  | 77421030 | Jujskei Park       | Jujskei Park       | GAUTENG  | 293,031,083          | 237,850           | 1,232         |
| 77421034  | 77421034 | Kya Sand           | Kya Sand           | GAUTENG  | 280,779              | 16,516            | 17            |
| 77421040  | 77421040 | Noordhang          | Noordhang          | GAUTENG  | 111,765,455          | 209,299           | 534           |
| 77424019  | 77424019 | Douglasdale Ext    | Douglasdale Ext    | GAUTENG  | 420,979,161          | 248,073           | 1,697         |
| 77421031  | 77421031 | Kaya Sand          | Kaya Sand          | GAUTENG  | 9,515,460            | 10,988            | 866           |
| 77421003  | 77421003 | Bloubosrand        | Bloubosrand        | GAUTENG  | 144,018,864          | 134,597           | 1,070         |
| 77424022  | 77424022 | Epsom Downs        | Epsom Downs        | GAUTENG  | 69,333,837           | 263,627           | 263           |
| 77424050  | 77424050 | Norscot            | Norscot            | GAUTENG  | 87,391,245           | 223,507           | 391           |
| 77421027  | 77421027 | Inadan AH          | Inadan AH          | GAUTENG  | 22,870,112           | 40,550            | 564           |
| 77421037  | 77421037 | Maroeladal         | Maroeladal         | GAUTENG  | 66,078,795           | 226,297           | 292           |
| 77424024  | 77424024 | Fourways           | Fourways           | GAUTENG  | 377,239,347          | 236,662           | 1,594         |
| 77424012  | 77424012 | Bryanston East     | Bryanston East     | GAUTENG  | 51,472,365           | 168,210           | 306           |
| 77421019  | 77421019 | Farmall AH         | Farmall AH         | GAUTENG  | 38,411,040           | 153,644           | 250           |
| 77418001  | 77418001 | Pipeline           | Pipeline           | GAUTENG  | 1,694,253            | 10,861            | 156           |
| 77421014  | 77421014 | Craigavon AH       | Craigavon AH       | GAUTENG  | 64,972,376           | 224,043           | 290           |
| 77424040  | 77424040 | Magaliessig        | Magaliessig        | GAUTENG  | 401,071,197          | 234,682           | 1,709         |
| 77421012  | 77421012 | Cedar Lakes        | Cedar Lakes        | GAUTENG  | 21,063,521           | 357,009           | 59            |
| 77421038  | 77421038 | Maroeladal Ext 4   | Maroeladal Ext 4   | GAUTENG  | 6,796,740            | 169,919           | 40            |
| 77421013  | 77421013 | Chartwell AH       | Chartwell AH       | GAUTENG  | 79,807,643           | 125,880           | 634           |
| 77421067  | 77421067 | Witkoppen          | Witkoppen          | GAUTENG  | 169,371,968          | 288,048           | 588           |
| 77421024  | 77421024 | Fourways Gardens   | Fourways Gardens   | GAUTENG  | 398,437,200          | 290,406           | 1,372         |
| 77421007  | 77421007 | Broadacres AH      | Broadacres AH      | GAUTENG  | 31,772,187           | 201,090           | 158           |
|           |          |                    |                    |          | <b>9,883,399,894</b> | <b>11,632,946</b> | <b>49,704</b> |
|           |          |                    |                    |          |                      | <b>198,845</b>    |               |

## APPENDIX G

### Retail Site Location Summary Statistics

| Var | Question                                                                                 | Ref          | Sum       | Yes | No   |
|-----|------------------------------------------------------------------------------------------|--------------|-----------|-----|------|
| C4  | Is there a McDonalds or Wimpy outlet in the same shopping centre?                        | F.1.1        | 19        | 27% | 73%  |
| C5  | Is there a McDonalds or Wimpy outlet within a 3km radius?                                | F.1.2        | 54        | 76% | 24%  |
| C6  | Are there other major competitors (KFC, Nando's, Debonairs) in the same shopping centre? | F.1.3        | 22        | 31% | 69%  |
| C7  | Are there other major competitors (KFC, Nando's, Debonairs) within a 3km radius?         | F.1.4        | 54        | 76% | 24%  |
| C8  | Is the centre anchored by PicknPay, Checkers, Spar or Woolworths?                        | F.2.1        | 49        | 69% | 31%  |
| C9  | Is there a bank in the centre?                                                           | F.3.1        | 25        | 35% | 65%  |
| C10 | Is there an ATM in the centre?                                                           | F.3.2        | 61        | 86% | 14%  |
| C11 | How many households are there within a 5km radius?                                       | F.4.1        | 4 345 748 |     |      |
| C12 | What is the average disposable income level within a 5km radius?                         | F.4.2        | 9 000 373 |     |      |
| C13 | Is there direct access to the centre from a main road?                                   | F.5.1        | 62        | 87% | 13%  |
| C14 | Is there controlled access to the centre?                                                | F.5.2        | 11        | 15% | 85%  |
| C15 | Is there direct access to the store from parking immediately in front of the store?      | F.5.3        | 65        | 92% | 8%   |
| C16 | Does the centre employ professional security contractors?                                | F.5.4        | 60        | 85% | 15%  |
| C17 | Is the store signage visible from the main road?                                         | F.5.5        | 63        | 89% | 11%  |
| C18 | Is there a Steers outlet within a 3km radius?                                            | F.6.1 (none) | 18        | 25% | 75%  |
| C19 | Is there a Steers outlet within a 3km radius?                                            | F.6.2 (1)    | 22        | 31% | 69%  |
| C20 | Is there a Steers outlet within a 3km radius?                                            | F.6.3 (2)    | 17        | 24% | 76%  |
| C21 | Is there a Steers outlet within a 3km radius?                                            | F.6.4 (3)    | 9         | 13% | 87%  |
| C22 | Is there a Steers outlet within a 3km radius?                                            | F.6.5 (4)    | 5         | 7%  | 93%  |
| C23 | Is there a Steers outlet within a 3km radius?                                            | F.6.6 (5)    | -         | 0%  | 100% |
| C24 | What is the predominant LSM level within the 5km radius?                                 | F.7.1.1      |           |     |      |
| C25 | What is the predominant LSM level within the 5km radius?                                 | F.7.1.2      |           |     |      |
| C26 | What is the predominant LSM level within the 5km radius?                                 | F.7.1.3      |           |     |      |
| C27 | What is the predominant LSM level within the 5km radius?                                 | F.7.1.4      |           |     |      |
| C28 | What is the predominant LSM level within the 5km radius?                                 | F.7.1.5      |           |     |      |
| C29 | What is the predominant LSM level within the 5km radius?                                 | F.7.1.6      |           |     |      |
| C30 | What is the predominant LSM level within the 5km radius?                                 | F.7.1.7      |           |     |      |
| C31 | What is the predominant LSM level within the 5km radius?                                 | F.7.1.8      |           |     |      |
| C32 | What is the predominant LSM level within the 5km radius?                                 | F.7.1.9      |           |     |      |
| C33 | What is the predominant LSM level within the 5km radius?                                 | F.7.1.10     |           |     |      |

## APPENDIX H

### Retail Site Location Data Analysis - Regression Diagnostics

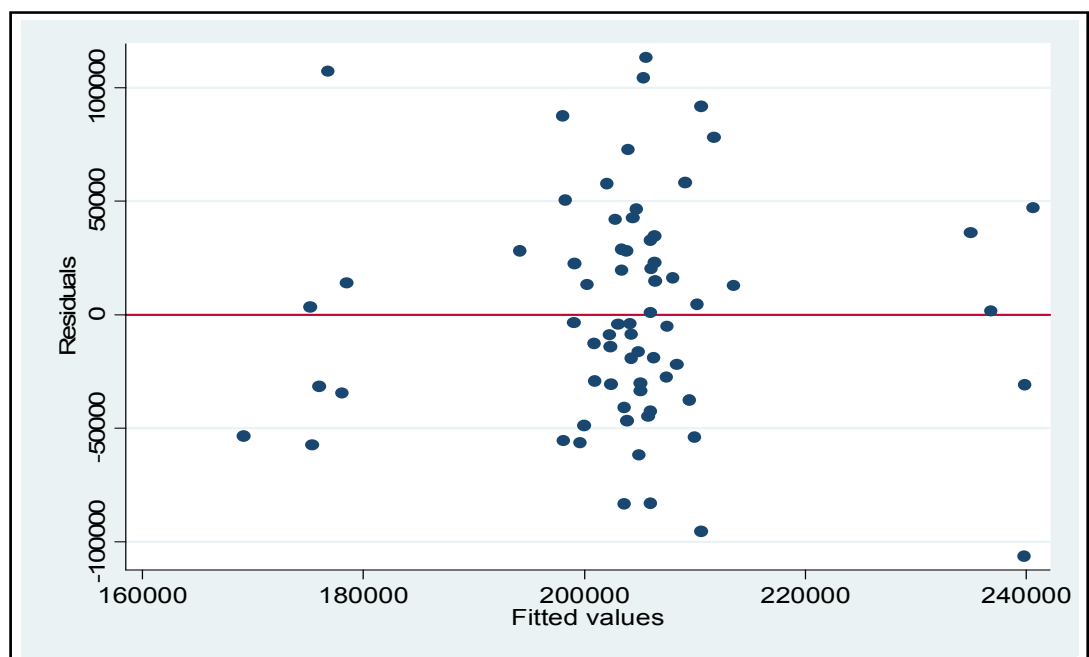
#### Ramsey RESET test

This test was carried out (using powers of the fitted values of turnover) to assess for any regression specification error – omitted variable bias. The null hypothesis for this test states that the model has no omitted variables. The model had a p-value of 0.0741. Since the p-value was greater than the  $\alpha$ -level of 0.05, the null hypothesis is accepted. That is, the null hypothesis that our model has no omitted variables is accepted.

#### Homoscedasticity (constant variance) of residuals

One important assumption of multiple regression is that of constant variance of the residuals. This was assessed graphical using the residual versus fitted values plot and statistically using test for constant variance.

**Figure 14: Variance Residuals**



The graph in Figure 14 shows that our residuals are within 2 standard deviations from the mean and have constant variance.

In the Breusch-Pagan / Cook-Weisberg test for heteroscedasticity

Ho: Constant variance

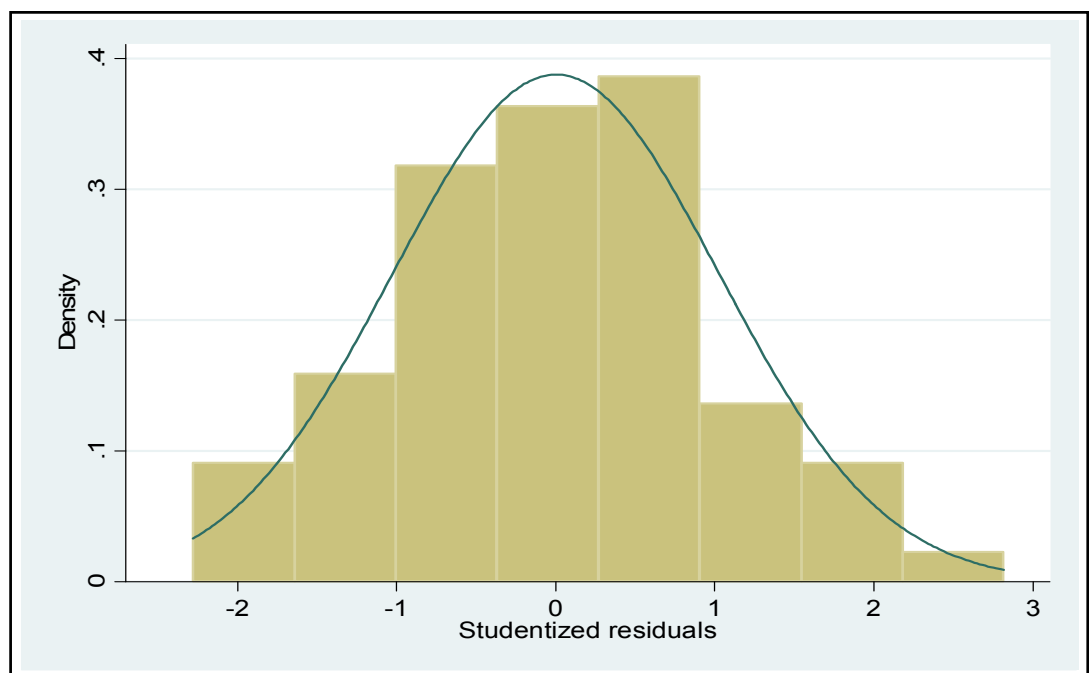
Variables: fitted values of turnover

$\chi^2(1) = 0.38$ , P-value = 0.5361

The p-value is greater than 0.05, thus we can accept the null hypothesis of constant variance. Therefore our model also meets this assumption.

### Normality of Residuals

The assumption of the normal distribution was also assessed graphically and by a statistical test.



**Figure 15: Frequency Distribution Plot for Normality**

Figure 15 shows a good approximation to normality.

#### Statistically by sktest for normality

Ho: There is normality

Skewness p-value 0.556

Kurtosis p-value 0.795

Overall p-value 0.8106

The null hypothesis therefore can be accepted. Thus, it can be concluded from both approaches that the residuals are normally distributed.

#### Multi-collinearity

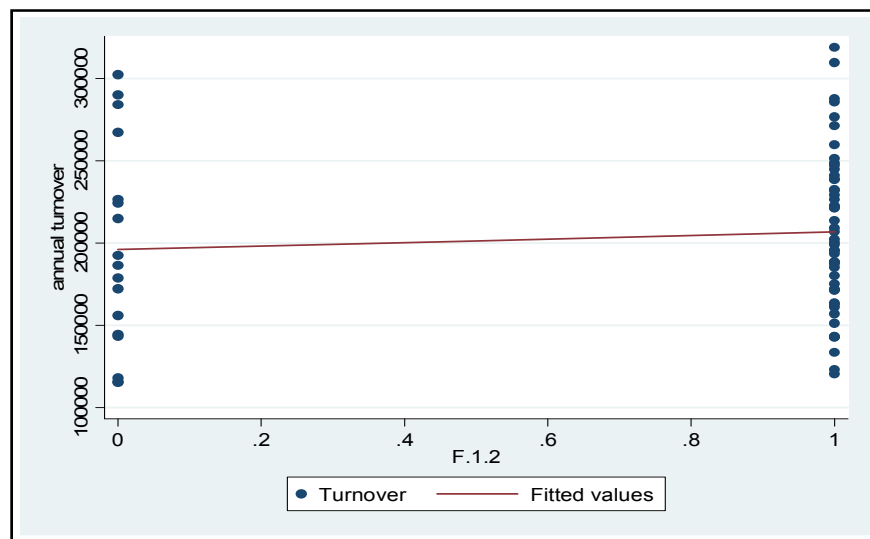
The Variance inflation factor (VIF) test was used to assess for multi-collinearity in our model. A variable with a VIF greater than 10 may be collinear with another variable and warrants investigation.

| Variable    | VIF  | 1/VIF    |
|-------------|------|----------|
| -----+----- |      |          |
| F1.4        | 1.39 | 0.718925 |
| F1.2        | 1.39 | 0.720500 |
| F3.1        | 1.03 | 0.971396 |
| -----+----- |      |          |
| Mean VIF    | 1.27 |          |

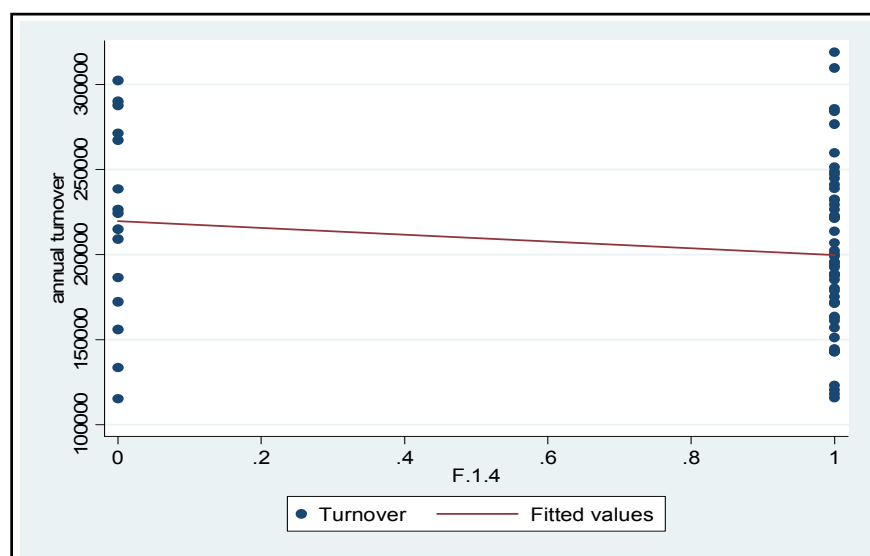
The VIFs are close to 1 indicating non-collinearity in our model.

## Linearity

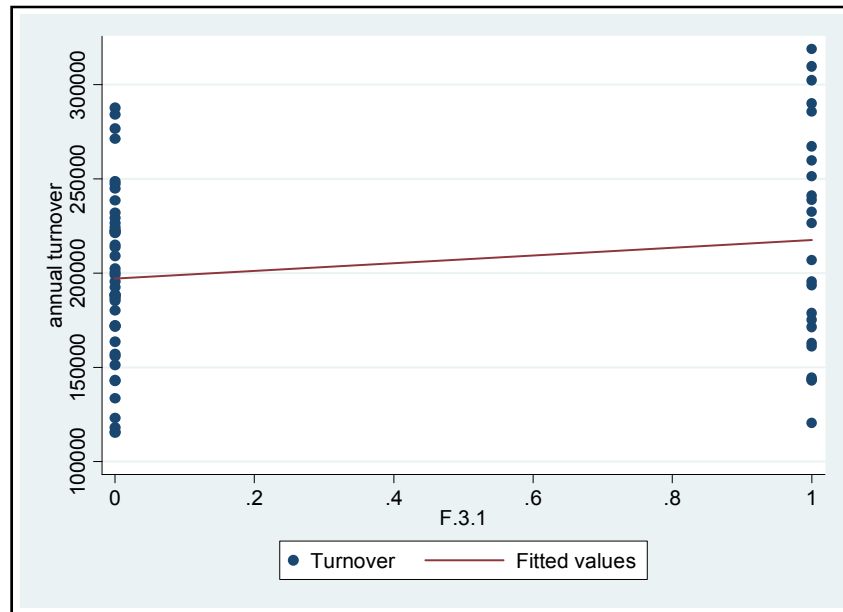
Linear regression assumes that the relationship between the response variable and the predictors is linear. If this assumption is violated, the linear regression will try to fit a straight line to data that does not follow a straight line. We assessed for linearity by plotting a scatter graph between the response variable and the predictor variables. Figure 16, Figure 17 and Figure 18 indicate a linear relationship. This linearity can also be seen from the graph of residual against fitted values above.



**Figure 16: Linearity for F1.2 Variable (Presence of McDonalds or Wimpy)**



**Figure 17: Linearity for F1.4 (Presence of KFC, Nandos or Kentucky)**



**Figure 18: Linearity for F3.1 (Presence of a bank in the centre)**

## APPENDIX I

### Customer Satisfaction Survey Store Sample

#### CUSTOMER SATISFACTION SURVEY STORE SAMPLE

| Below Average Turnover Stores |      |
|-------------------------------|------|
| 1                             | BA1  |
| 2                             | BA2  |
| 3                             | BA3  |
| 4                             | BA4  |
| 5                             | BA5  |
| 6                             | BA6  |
| 7                             | BA7  |
| 8                             | BA8  |
| 9                             | BA9  |
| 10                            | BA10 |

| Above Average Turnover Stores |      |
|-------------------------------|------|
| 1                             | AA1  |
| 2                             | AA2  |
| 3                             | AA3  |
| 4                             | AA4  |
| 5                             | AA5  |
| 6                             | AA6  |
| 7                             | AA7  |
| 8                             | AA8  |
| 9                             | AA9  |
| 10                            | AA10 |

## APPENDIX J

### Customer Satisfaction Rating Cards

#### RATING SCALES

|                      |                       |                                      |                       |                  |
|----------------------|-----------------------|--------------------------------------|-----------------------|------------------|
| <b>Very<br/>Good</b> | <b>Quite<br/>Good</b> | <b>Neither<br/>Good nor<br/>Poor</b> | <b>Quite<br/>Poor</b> | <b>Very Poor</b> |
|----------------------|-----------------------|--------------------------------------|-----------------------|------------------|

|                  |             |                |            |                 |
|------------------|-------------|----------------|------------|-----------------|
| <b>Excellent</b> | <b>Good</b> | <b>Neutral</b> | <b>Bad</b> | <b>Terrible</b> |
|------------------|-------------|----------------|------------|-----------------|

|                          |                           |                |                           |                          |
|--------------------------|---------------------------|----------------|---------------------------|--------------------------|
| <b>Very<br/>Positive</b> | <b>Quite<br/>Positive</b> | <b>Neutral</b> | <b>Quite<br/>Negative</b> | <b>Very<br/>Negative</b> |
|--------------------------|---------------------------|----------------|---------------------------|--------------------------|

# APPENDIX K

## Customer Satisfaction Survey - Questionnaire

### CUSTOMER SATISFACTION SURVEY

|             |  |
|-------------|--|
| STORE       |  |
| DATE        |  |
| TIME        |  |
| INTERVIEWER |  |

| Question | Statement                                                                | Very Good | Quite Good | Neither Good Nor Poor | Quite Poor | Very Poor |
|----------|--------------------------------------------------------------------------|-----------|------------|-----------------------|------------|-----------|
| 1        | Has a unique taste                                                       |           |            |                       |            |           |
| 2        | Has a different/distinctive store layout & environment                   |           |            |                       |            |           |
| 3        | Has a distinct preparation method                                        |           |            |                       |            |           |
| 4        | Is a nice place to sit down and eat                                      |           |            |                       |            |           |
| 5        | Has an inviting atmosphere                                               |           |            |                       |            |           |
| 6        | My type of place                                                         |           |            |                       |            |           |
| 7        | Is a place/environment that I know well                                  |           |            |                       |            |           |
| 8        | Is clean                                                                 |           |            |                       |            |           |
| 9        | Has creative packaging                                                   |           |            |                       |            |           |
| 10       | Has exciting menu options                                                |           |            |                       |            |           |
| 11       | Has a wide menu range                                                    |           |            |                       |            |           |
| 12       | Always has new items on the menu                                         |           |            |                       |            |           |
| 13       | Is an innovative, creative or inventive fast food or takeaway restaurant |           |            |                       |            |           |
| 14       | Is always coming up with new offerings                                   |           |            |                       |            |           |
| 15       | Offers consistent quality (always the same)                              |           |            |                       |            |           |
| 16       | Uses fresh ingredients                                                   |           |            |                       |            |           |
| 17       | Has the best flame grilled burgers                                       |           |            |                       |            |           |
| 18       | Has the best taste                                                       |           |            |                       |            |           |
| 19       | Is seen to be a specialist in what they do                               |           |            |                       |            |           |
| 20       | Friendly service                                                         |           |            |                       |            |           |
| 21       | Fast service                                                             |           |            |                       |            |           |
| 22       | Service leaves you feeling good                                          |           |            |                       |            |           |
| 23       | Has well presented staff                                                 |           |            |                       |            |           |
| 24       | You have full view of the food preparation                               |           |            |                       |            |           |
| 25       | Staff are willing to go the extra mile for you                           |           |            |                       |            |           |
| 26       | Staff are knowledgeable and inspire you with confidence                  |           |            |                       |            |           |
| 27       | Staff seem happy and enjoy their job                                     |           |            |                       |            |           |
| 28       | Has regular specials & promotions                                        |           |            |                       |            |           |
| 29       | Is affordable on a regular basis                                         |           |            |                       |            |           |
| 30       | Has prices that are lower than other fast food/takeaway restaurants      |           |            |                       |            |           |
| 31       | The portions are worth paying more for                                   |           |            |                       |            |           |
| 32       | Is good value for money                                                  |           |            |                       |            |           |
| 33       | Has generous portion sizes                                               |           |            |                       |            |           |
| 34       | The taste experience is worth paying more for                            |           |            |                       |            |           |
| 35       | Satisfies your hunger                                                    |           |            |                       |            |           |
| 36       | The one I like best                                                      |           |            |                       |            |           |
| 37       | Please rate your overall level of satisfaction                           |           |            |                       |            |           |

|                    |  |
|--------------------|--|
| RESPONDENTS NAME:  |  |
| FREQUENCY STEERS:  |  |
| FREQUENCY OUTLET:  |  |
| ADDRESS:           |  |
| HOME TELEPHONE:    |  |
| CELL PHONE NUMBER: |  |
| EMAIL ADDRESS:     |  |

## APPENDIX L

### Customer Satisfaction Data Collection (Example for store BA1)

| Obs | Store | Ref | Turnover | Differentiation 1  |   |   | Differentiation 2                                      |   |   | Differentiation 3                 |   |   | Image 1                             | Image 2 | Image 3 | Image 4                    | Image 5 | Innovation 1 | Innovation 2     | Innovation 3 | Innovation 4 | Innovation 5                            | Innovation 6 | Quality 1 | Quality 2 | Quality 3 | Quality 4 | Quality 5              | Service 1 | Service 2 | Service 3                 | Service 4 | Service 5 | Staff 1               | Staff 2 | Staff 3 | Value 1                          | Value 2 | Value 3 | Value 4                                                                  | Value 5 | Value 6 | Value 7                                | Value 8 | Value 9 | Overall Rating                              |   |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
|-----|-------|-----|----------|--------------------|---|---|--------------------------------------------------------|---|---|-----------------------------------|---|---|-------------------------------------|---------|---------|----------------------------|---------|--------------|------------------|--------------|--------------|-----------------------------------------|--------------|-----------|-----------|-----------|-----------|------------------------|-----------|-----------|---------------------------|-----------|-----------|-----------------------|---------|---------|----------------------------------|---------|---------|--------------------------------------------------------------------------|---------|---------|----------------------------------------|---------|---------|---------------------------------------------|---|---|------------------------|--|--|------------------------------------|--|--|--------------------|--|--|--------------------------------------------|--|--|------------------|--|--|--------------|--|--|---------------------------------|--|--|--------------------------|--|--|--------------------------------------------|--|--|------------------------------------------------|--|--|---------------------------------------------------------|--|--|--------------------------------------|--|--|-----------------------------------|--|--|----------------------------------|--|--|---------------------------------------------------------------------|--|--|----------------------------------------|--|--|-------------------------|--|--|----------------------------|--|--|-----------------------------------------------|--|--|-----------------------|--|--|---------------------|--|--|------------------------------------------------|--|--|
|     |       |     |          | Has a unique taste |   |   | Has a different/distinctive store layout & environment |   |   | Has a distinct preparation method |   |   | Is a nice place to sit down and eat |         |         | Has an inviting atmosphere |         |              | My type of place |              |              | Is a place/environment that I know well |              |           | Is clean  |           |           | Has creative packaging |           |           | Has exciting menu options |           |           | Has a wide menu range |         |         | Always has new items on the menu |         |         | Is an innovative, creative or inventive fast food or takeaway restaurant |         |         | Is always coming up with new offerings |         |         | Offers consistent quality (always the same) |   |   | Uses fresh ingredients |  |  | Has the best flame grilled burgers |  |  | Has the best taste |  |  | Is seen to be a specialist in what they do |  |  | Friendly service |  |  | Fast service |  |  | Service leaves you feeling good |  |  | Has well presented staff |  |  | You have full view of the food preparation |  |  | Staff are willing to go the extra mile for you |  |  | Staff are knowledgeable and inspire you with confidence |  |  | Staff seem happy and enjoy their job |  |  | Has regular specials & promotions |  |  | Is affordable on a regular basis |  |  | Has prices that are lower than other fast food/takeaway restaurants |  |  | The portions are worth paying more for |  |  | Is good value for money |  |  | Has generous portion sizes |  |  | The taste experience is worth paying more for |  |  | Satisfies your hunger |  |  | The one I like best |  |  | Please rate your overall level of satisfaction |  |  |
| 1   | BA1   | 1   | 120,261  | 2                  | 3 | 3 | 4                                                      | 5 | 2 | 2                                 | 3 | 3 | 2                                   | 2       | 2       | 2                          | 3       | 2            | 2                | 2            | 2            | 3                                       | 2            | 4         | 3         | 3         | 3         | 3                      | 4         | 2         | 4                         | 2         | 3         | 3                     | 4       | 4       | 3                                | 3       | 2       | 3                                                                        | 2       | 2       | 3                                      | 2       | 3       | 3                                           |   |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 2   | BA1   | 2   | 120,261  | 2                  | 2 | 3 | 3                                                      | 2 | 3 | 2                                 | 1 | 2 | 2                                   | 2       | 2       | 2                          | 3       | 2            | 2                | 2            | 3            | 2                                       | 2            | 1         | 1         | 1         | 2         | 1                      | 2         | 2         | 2                         | 2         | 2         | 1                     | 4       | 1       | 2                                | 1       | 1       | 1                                                                        | 3       | 1       | 1                                      | 1       | 1       | 1                                           | 2 | 2 |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 3   | BA1   | 3   | 120,261  | 4                  | 2 | 3 | 2                                                      | 2 | 2 | 2                                 | 2 | 2 | 2                                   | 2       | 2       | 2                          | 3       | 2            | 2                | 3            | 2            | 3                                       | 2            | 2         | 2         | 2         | 3         | 2                      | 2         | 2         | 2                         | 2         | 2         | 3                     | 3       | 2       | 3                                | 2       | 3       | 5                                                                        | 2       | 2       | 2                                      | 2       | 2       | 1                                           | 1 |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 4   | BA1   | 4   | 120,261  | 2                  | 3 | 3 | 3                                                      | 2 | 2 | 2                                 | 2 | 2 | 2                                   | 2       | 2       | 2                          | 2       | 1            | 1                | 1            | 2            | 2                                       | 2            | 2         | 2         | 2         | 2         | 2                      | 2         | 2         | 2                         | 2         | 2         | 2                     | 2       | 2       | 2                                | 2       | 2       | 1                                                                        | 2       | 2       | 2                                      | 2       | 3       | 2                                           |   |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 5   | BA1   | 5   | 120,261  | 2                  | 2 | 2 | 2                                                      | 2 | 2 | 2                                 | 2 | 1 | 1                                   | 1       | 1       | 1                          | 1       | 2            | 1                | 1            | 2            | 1                                       | 1            | 1         | 2         | 1         | 1         | 1                      | 1         | 1         | 1                         | 1         | 1         | 2                     | 2       | 2       | 2                                | 2       | 2       | 2                                                                        | 2       | 2       | 2                                      | 2       | 1       | 1                                           | 2 |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 6   | BA1   | 6   | 120,261  | 2                  | 2 | 2 | 2                                                      | 2 | 2 | 2                                 | 2 | 2 | 2                                   | 2       | 2       | 2                          | 2       | 2            | 2                | 2            | 1            | 1                                       | 1            | 1         | 1         | 1         | 1         | 1                      | 3         | 3         | 3                         | 3         | 2         | 2                     | 2       | 2       | 2                                | 2       | 2       | 2                                                                        | 2       | 3       | 2                                      | 2       | 2       | 2                                           |   |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 7   | BA1   | 7   | 120,261  | 2                  | 2 | 2 | 2                                                      | 2 | 2 | 2                                 | 3 | 2 | 2                                   | 2       | 2       | 2                          | 2       | 2            | 2                | 2            | 2            | 2                                       | 2            | 3         | 2         | 2         | 2         | 2                      | 3         | 3         | 3                         | 3         | 3         | 4                     | 4       | 4       | 4                                | 2       | 2       | 2                                                                        | 2       | 2       | 2                                      | 2       | 2       | 2                                           |   |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 8   | BA1   | 8   | 120,261  | 1                  | 2 | 2 | 3                                                      | 1 | 1 | 1                                 | 1 | 2 | 2                                   | 2       | 2       | 2                          | 2       | 2            | 2                | 2            | 2            | 3                                       | 2            | 2         | 2         | 2         | 2         | 2                      | 3         | 2         | 3                         | 2         | 3         | 3                     | 3       | 3       | 3                                | 3       | 5       | 3                                                                        | 1       | 2       | 3                                      | 3       | 5       | 2                                           |   |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 9   | BA1   | 9   | 120,261  | 1                  | 2 | 2 | 3                                                      | 1 | 1 | 1                                 | 1 | 2 | 2                                   | 2       | 2       | 2                          | 2       | 2            | 2                | 2            | 2            | 3                                       | 2            | 2         | 2         | 2         | 2         | 2                      | 2         | 2         | 2                         | 2         | 3         | 3                     | 2       | 2       | 2                                | 3       | 3       | 3                                                                        | 3       | 3       | 3                                      | 3       | 2       | 2                                           | 2 |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 10  | BA1   | 10  | 120,261  | 2                  | 2 | 2 | 2                                                      | 1 | 2 | 1                                 | 1 | 2 | 2                                   | 2       | 2       | 2                          | 2       | 2            | 2                | 2            | 2            | 2                                       | 2            | 2         | 2         | 2         | 1         | 2                      | 2         | 2         | 2                         | 2         | 2         | 2                     | 4       | 2       | 2                                | 2       | 2       | 2                                                                        | 2       | 3       | 2                                      | 2       | 2       | 2                                           | 1 | 1 |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 11  | BA1   | 11  | 120,261  | 1                  | 2 | 2 | 5                                                      | 4 | 3 | 2                                 | 2 | 2 | 2                                   | 2       | 1       | 2                          | 2       | 2            | 2                | 1            | 2            | 2                                       | 3            | 1         | 1         | 1         | 1         | 1                      | 2         | 2         | 2                         | 2         | 2         | 2                     | 4       | 2       | 2                                | 2       | 2       | 2                                                                        | 2       | 2       | 2                                      | 2       | 2       | 2                                           | 1 | 1 |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 12  | BA1   | 12  | 120,261  | 2                  | 3 | 3 | 3                                                      | 2 | 2 | 1                                 | 1 | 3 | 1                                   | 1       | 3       | 1                          | 1       | 2            | 3                | 2            | 1            | 2                                       | 2            | 1         | 1         | 1         | 1         | 2                      | 1         | 1         | 1                         | 1         | 1         | 2                     | 2       | 2       | 2                                | 2       | 2       | 1                                                                        | 1       | 1       | 1                                      | 1       | 1       | 1                                           | 1 |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 13  | BA1   | 13  | 120,261  | 2                  | 2 | 2 | 3                                                      | 3 | 4 | 2                                 | 2 | 2 | 2                                   | 2       | 2       | 2                          | 2       | 2            | 2                | 2            | 2            | 2                                       | 2            | 2         | 2         | 1         | 2         | 2                      | 2         | 2         | 2                         | 2         | 2         | 4                     | 2       | 3       | 3                                | 2       | 2       | 2                                                                        | 2       | 2       | 2                                      | 2       | 2       | 2                                           | 1 | 1 |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 14  | BA1   | 14  | 120,261  | 2                  | 3 | 3 | 2                                                      | 2 | 3 | 1                                 | 1 | 2 | 1                                   | 1       | 2       | 1                          | 2       | 2            | 2                | 2            | 2            | 2                                       | 2            | 2         | 3         | 1         | 2         | 1                      | 1         | 1         | 1                         | 1         | 1         | 2                     | 3       | 1       | 3                                | 2       | 1       | 1                                                                        | 3       | 3       | 2                                      | 1       | 3       | 2                                           | 3 | 1 |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 15  | BA1   | 15  | 120,261  | 1                  | 2 | 3 | 2                                                      | 2 | 1 | 1                                 | 2 | 3 | 2                                   | 2       | 2       | 2                          | 1       | 1            | 1                | 1            | 1            | 1                                       | 1            | 1         | 2         | 3         | 3         | 1                      | 2         | 2         | 2                         | 1         | 2         | 2                     | 3       | 2       | 2                                | 2       | 1       | 2                                                                        | 1       | 1       | 1                                      | 2       | 2       | 2                                           | 1 |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 16  | BA1   | 16  | 120,261  | 2                  | 3 | 2 | 1                                                      | 1 | 1 | 1                                 | 4 | 4 | 1                                   | 1       | 1       | 2                          | 2       | 3            | 2                | 1            | 1            | 2                                       | 3            | 2         | 1         | 1         | 1         | 1                      | 1         | 1         | 1                         | 1         | 2         | 1                     | 2       | 3       | 3                                | 2       | 2       | 1                                                                        | 3       | 4       | 2                                      | 2       | 2       | 2                                           | 3 | 2 |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 17  | BA1   | 17  | 120,261  | 2                  | 2 | 2 | 2                                                      | 2 | 2 | 2                                 | 2 | 2 | 1                                   | 1       | 1       | 1                          | 1       | 1            | 1                | 1            | 1            | 1                                       | 3            | 2         | 2         | 2         | 2         | 2                      | 3         | 3         | 3                         | 3         | 2         | 3                     | 3       | 3       | 2                                | 2       | 2       | 2                                                                        | 3       | 2       | 2                                      | 2       | 2       | 2                                           |   |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 18  | BA1   | 18  | 120,261  | 2                  | 2 | 4 | 3                                                      | 5 | 3 | 1                                 | 2 | 3 | 4                                   | 2       | 3       | 4                          | 2       | 2            | 3                | 4            | 2            | 2                                       | 3            | 2         | 1         | 3         | 3         | 2                      | 1         | 1         | 2                         | 1         | 2         | 2                     | 3       | 3       | 2                                | 3       | 2       | 4                                                                        | 3       | 3       | 2                                      | 1       | 3       | 2                                           |   |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 19  | BA1   | 19  | 120,261  | 1                  | 1 | 3 | 2                                                      | 2 | 2 | 2                                 | 2 | 1 | 1                                   | 1       | 1       | 2                          | 2       | 1            | 1                | 1            | 2            | 2                                       | 2            | 2         | 2         | 1         | 2         | 2                      | 2         | 1         | 1                         | 2         | 2         | 2                     | 2       | 2       | 2                                | 1       | 2       | 2                                                                        | 2       | 2       | 2                                      | 2       | 2       | 1                                           | 1 |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |
| 20  | BA1   | 20  | 120,261  | 1                  | 2 | 1 | 1                                                      | 1 | 2 | 1                                 | 1 | 2 | 1                                   | 1       | 1       | 2                          | 2       | 1            | 1                | 1            | 2            | 2                                       | 1            | 1         | 2         | 1         | 1         | 1                      | 2         | 2         | 2                         | 2         | 2         | 2                     | 2       | 1       | 2                                | 3       | 1       | 1                                                                        | 1       | 1       | 2                                      | 1       | 1       | 1                                           | 2 |   |                        |  |  |                                    |  |  |                    |  |  |                                            |  |  |                  |  |  |              |  |  |                                 |  |  |                          |  |  |                                            |  |  |                                                |  |  |                                                         |  |  |                                      |  |  |                                   |  |  |                                  |  |  |                                                                     |  |  |                                        |  |  |                         |  |  |                            |  |  |                                               |  |  |                       |  |  |                     |  |  |                                                |  |  |

# APPENDIX M

## Customer Satisfaction Data – Factor Analysis

UNROTATED FACTOR LOADINGS (pattern matrix) and unique variances

| VARIABLE          | FACTOR 1 | FACTOR 2 | FACTOR 3 | FACTOR 4 | FACTOR 5 | FACTOR 6 | UNIQUENESS |
|-------------------|----------|----------|----------|----------|----------|----------|------------|
| Differentiation 1 | 0.503    | 0.247    | 0.037    | - 0.016  | - 0.250  | - 0.181  | 0.589      |
| Differentiation 2 | 0.291    | 0.041    | 0.572    | 0.113    | 0.055    | 0.217    | 0.524      |
| Differentiation 3 | 0.286    | 0.062    | 0.576    | 0.124    | 0.027    | 0.315    | 0.468      |
| Image 1           | 0.532    | 0.028    | 0.506    | 0.187    | - 0.053  | - 0.012  | 0.423      |
| Image 2           | 0.585    | 0.110    | 0.477    | 0.149    | - 0.214  | - 0.074  | 0.345      |
| Image 3           | 0.573    | 0.151    | 0.435    | 0.167    | - 0.192  | - 0.185  | 0.361      |
| Image 4           | 0.503    | 0.154    | 0.231    | 0.012    | - 0.379  | - 0.362  | 0.396      |
| Image 5           | 0.480    | 0.190    | 0.165    | 0.008    | - 0.330  | - 0.216  | 0.551      |
| Innovation 1      | 0.344    | 0.035    | 0.482    | 0.091    | - 0.005  | 0.211    | 0.595      |
| Innovation 2      | 0.609    | 0.422    | 0.065    | - 0.434  | 0.240    | - 0.159  | 0.175      |
| Innovation 3      | 0.640    | 0.409    | 0.041    | - 0.451  | 0.197    | - 0.191  | 0.143      |
| Innovation 4      | 0.590    | 0.438    | 0.102    | - 0.405  | 0.269    | - 0.106  | 0.203      |
| Innovation 5      | 0.449    | 0.167    | 0.307    | - 0.054  | 0.279    | 0.177    | 0.565      |
| Innovation 6      | 0.645    | 0.355    | 0.068    | - 0.242  | 0.301    | 0.014    | 0.304      |
| Quality 1         | 0.765    | 0.073    | - 0.241  | - 0.228  | - 0.181  | 0.281    | 0.188      |
| Quality 2         | 0.740    | 0.087    | - 0.265  | - 0.277  | - 0.172  | 0.314    | 0.170      |
| Quality 3         | 0.794    | 0.060    | - 0.185  | - 0.189  | - 0.280  | 0.276    | 0.142      |
| Quality 4         | 0.794    | 0.047    | - 0.137  | - 0.192  | - 0.265  | 0.283    | 0.162      |
| Quality 5         | 0.755    | - 0.074  | - 0.115  | - 0.062  | - 0.210  | 0.124    | 0.348      |
| Service 1         | 0.762    | - 0.372  | - 0.119  | - 0.169  | - 0.062  | - 0.107  | 0.223      |
| Service 2         | 0.756    | - 0.357  | - 0.127  | - 0.158  | - 0.099  | - 0.103  | 0.239      |
| Service 3         | 0.771    | - 0.420  | - 0.040  | - 0.143  | 0.018    | - 0.119  | 0.192      |
| Service 4         | 0.700    | - 0.470  | - 0.082  | - 0.033  | 0.041    | - 0.141  | 0.260      |
| Service 5         | 0.447    | - 0.417  | 0.204    | 0.026    | 0.181    | 0.046    | 0.549      |
| Staff 1           | 0.733    | - 0.492  | 0.077    | 0.019    | 0.171    | - 0.087  | 0.178      |
| Staff 2           | 0.744    | - 0.538  | 0.112    | - 0.019  | 0.152    | 0.011    | 0.121      |
| Staff 3           | 0.737    | - 0.528  | 0.119    | - 0.022  | 0.167    | - 0.035  | 0.134      |
| Value 1           | 0.749    | - 0.149  | - 0.054  | 0.016    | - 0.022  | - 0.018  | 0.413      |
| Value 2           | 0.653    | 0.207    | - 0.289  | 0.323    | 0.033    | 0.007    | 0.341      |
| Value 3           | 0.538    | 0.112    | - 0.124  | 0.280    | 0.285    | 0.088    | 0.515      |
| Value 4           | 0.727    | 0.243    | - 0.235  | 0.381    | 0.117    | 0.085    | 0.191      |
| Value 5           | 0.743    | 0.232    | - 0.282  | 0.414    | 0.064    | - 0.043  | 0.137      |
| Value 6           | 0.748    | 0.183    | - 0.308  | 0.336    | 0.099    | - 0.091  | 0.182      |
| Value 7           | 0.774    | 0.189    | - 0.271  | 0.380    | 0.061    | - 0.011  | 0.144      |
| Value 8           | 0.675    | 0.064    | - 0.078  | 0.157    | 0.075    | - 0.166  | 0.477      |
| Value 9           | 0.719    | 0.075    | 0.046    | 0.130    | - 0.004  | 0.064    | 0.455      |

ROTATED FACTOR LOADINGS (pattern matrix) and unique variances

| VARIABLE          | FACTOR 1     | FACTOR 2     | FACTOR 3     | FACTOR 4     | FACTOR 5     | FACTOR 6     | UNIQUENESS |
|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|
| Differentiation 1 | 0.090        | 0.269        | 0.258        | 0.259        | 0.050        | 0.441        | 0.589      |
| Differentiation 2 | 0.125        | 0.019        | 0.019        | 0.104        | <b>0.663</b> | 0.094        | 0.524      |
| Differentiation 3 | 0.082        | 0.021        | 0.085        | 0.073        | <b>0.714</b> | 0.058        | 0.468      |
| Image 1           | 0.285        | 0.200        | 0.040        | 0.142        | <b>0.564</b> | 0.342        | 0.423      |
| Image 2           | 0.237        | 0.210        | 0.141        | 0.166        | <b>0.506</b> | <b>0.501</b> | 0.345      |
| Image 3           | 0.219        | 0.252        | 0.069        | 0.203        | 0.428        | <b>0.545</b> | 0.361      |
| Image 4           | 0.179        | 0.164        | 0.150        | 0.204        | 0.110        | <b>0.685</b> | 0.396      |
| Image 5           | 0.117        | 0.191        | 0.221        | 0.196        | 0.126        | <b>0.544</b> | 0.551      |
| Innovation 1      | 0.148        | 0.053        | 0.104        | 0.098        | <b>0.588</b> | 0.119        | 0.595      |
| Innovation 2      | 0.143        | 0.175        | 0.207        | <b>0.844</b> | 0.055        | 0.122        | 0.175      |
| Innovation 3      | 0.168        | 0.178        | 0.237        | <b>0.844</b> | 0.018        | 0.166        | 0.143      |
| Innovation 4      | 0.114        | 0.180        | 0.195        | <b>0.833</b> | 0.118        | 0.083        | 0.203      |
| Innovation 5      | 0.169        | 0.172        | 0.089        | 0.399        | 0.452        | - 0.075      | 0.565      |
| Innovation 6      | 0.175        | 0.307        | 0.216        | <b>0.698</b> | 0.195        | - 0.008      | 0.304      |
| Quality 1         | 0.307        | 0.310        | <b>0.737</b> | 0.278        | 0.033        | 0.040        | 0.188      |
| Quality 2         | 0.281        | 0.279        | <b>0.765</b> | 0.298        | 0.013        | - 0.001      | 0.170      |
| Quality 3         | 0.316        | 0.306        | <b>0.767</b> | 0.224        | 0.083        | 0.136        | 0.142      |
| Quality 4         | 0.330        | 0.284        | <b>0.750</b> | 0.229        | 0.125        | 0.133        | 0.162      |
| Quality 5         | 0.429        | 0.320        | <b>0.552</b> | 0.141        | 0.086        | 0.182        | 0.348      |
| Service 1         | <b>0.742</b> | 0.193        | 0.359        | 0.171        | - 0.067      | 0.164        | 0.223      |
| Service 2         | <b>0.718</b> | 0.198        | 0.379        | 0.152        | - 0.071      | 0.186        | 0.239      |
| Service 3         | <b>0.803</b> | 0.185        | 0.278        | 0.182        | 0.003        | 0.140        | 0.192      |
| Service 4         | <b>0.795</b> | 0.228        | 0.193        | 0.076        | - 0.031      | 0.110        | 0.260      |
| Service 5         | <b>0.610</b> | 0.065        | 0.020        | 0.027        | 0.266        | - 0.051      | 0.549      |
| Staff 1           | <b>0.848</b> | 0.234        | 0.104        | 0.110        | 0.152        | 0.048        | 0.178      |
| Staff 2           | <b>0.874</b> | 0.180        | 0.174        | 0.086        | 0.214        | 0.004        | 0.121      |
| Staff 3           | <b>0.874</b> | 0.178        | 0.137        | 0.109        | 0.198        | 0.024        | 0.134      |
| Value 1           | <b>0.539</b> | 0.362        | 0.318        | 0.177        | 0.097        | 0.155        | 0.413      |
| Value 2           | 0.173        | <b>0.734</b> | 0.251        | 0.137        | 0.015        | 0.093        | 0.341      |
| Value 3           | 0.224        | <b>0.596</b> | 0.074        | 0.182        | 0.163        | - 0.119      | 0.515      |
| Value 4           | 0.185        | <b>0.814</b> | 0.249        | 0.174        | 0.137        | 0.035        | 0.191      |
| Value 5           | 0.212        | <b>0.853</b> | 0.212        | 0.156        | 0.044        | 0.138        | 0.137      |
| Value 6           | 0.273        | <b>0.805</b> | 0.199        | 0.201        | - 0.019      | 0.121        | 0.182      |
| Value 7           | 0.260        | <b>0.827</b> | 0.250        | 0.157        | 0.062        | 0.121        | 0.144      |
| Value 8           | 0.362        | <b>0.519</b> | 0.125        | 0.252        | 0.056        | 0.202        | 0.477      |
| Value 9           | 0.332        | 0.456        | 0.292        | 0.216        | 0.261        | 0.164        | 0.455      |

FACTOR ROTATION MATRIX

| FACTORS | FACTOR 1 | FACTOR 2 | FACTOR 3 | FACTOR 4 | FACTOR 5 | FACTOR 6 |
|---------|----------|----------|----------|----------|----------|----------|
| Factor1 | 0.5733   | 0.5083   | 0.4253   | 0.3681   | 0.2141   | 0.2252   |
| Factor2 | -0.7698  | 0.3176   | 0.0797   | 0.5146   | 0.0914   | 0.1643   |
| Factor3 | 0.0537   | -0.388   | -0.2854  | 0.1205   | 0.8078   | 0.3132   |
| Factor4 | -0.0971  | 0.6743   | -0.3492  | -0.5821  | 0.2588   | 0.0903   |
| Factor5 | 0.1807   | 0.1859   | -0.5312  | 0.4374   | 0.085    | -0.6723  |
| Factor6 | -0.1836  | -0.0315  | 0.572    | -0.2344  | 0.468    | -0.6034  |

# INITIAL FACTOR ANALYSIS OF 36 VARIABLES

Factor analysis/correlation                      Number of obs                      280  
Method: principal factors                      Retained factors                      22  
Rotation: (unrotated)                      Number of params                      561

| FACTOR   | EIGENVALUE | DIFFERENCE | PROPORTION | CUMULATIVE |
|----------|------------|------------|------------|------------|
| Factor1  | 15.24      | 12.45      | 55.8%      | 55.8%      |
| Factor2  | 2.80       | 0.31       | 10.2%      | 66.0%      |
| Factor3  | 2.48       | 0.66       | 9.1%       | 75.1%      |
| Factor4  | 1.82       | 0.58       | 6.7%       | 81.8%      |
| Factor5  | 1.24       | 0.22       | 4.6%       | 86.3%      |
| Factor6  | 1.02       | 0.34       | 3.7%       | 90.1%      |
| Factor7  | 0.68       | 0.04       | 2.5%       | 92.6%      |
| Factor8  | 0.64       | 0.12       | 2.3%       | 94.9%      |
| Factor9  | 0.52       | 0.09       | 1.9%       | 96.8%      |
| Factor10 | 0.43       | 0.10       | 1.6%       | 98.4%      |
| Factor11 | 0.33       | 0.03       | 1.2%       | 99.6%      |
| Factor12 | 0.30       | 0.06       | 1.1%       | 100.7%     |
| Factor13 | 0.24       | 0.03       | 0.9%       | 101.5%     |
| Factor14 | 0.21       | 0.05       | 0.8%       | 102.3%     |
| Factor15 | 0.16       | 0.00       | 0.6%       | 102.9%     |
| Factor16 | 0.16       | 0.09       | 0.6%       | 103.5%     |
| Factor17 | 0.08       | 0.01       | 0.3%       | 103.8%     |
| Factor18 | 0.06       | 0.01       | 0.2%       | 104.0%     |
| Factor19 | 0.05       | 0.02       | 0.2%       | 104.2%     |
| Factor20 | 0.03       | 0.01       | 0.1%       | 104.3%     |
| Factor21 | 0.02       | 0.02       | 0.1%       | 104.4%     |
| Factor22 | 0.00       | 0.02       | 0.0%       | 104.4%     |
| Factor23 | - 0.02     | 0.01       | -0.1%      | 104.3%     |
| Factor24 | - 0.02     | 0.01       | -0.1%      | 104.3%     |
| Factor25 | - 0.03     | 0.01       | -0.1%      | 104.1%     |
| Factor26 | - 0.04     | 0.00       | -0.2%      | 104.0%     |
| Factor27 | - 0.05     | 0.01       | -0.2%      | 103.8%     |
| Factor28 | - 0.06     | 0.01       | -0.2%      | 103.6%     |
| Factor29 | - 0.07     | 0.02       | -0.3%      | 103.3%     |
| Factor30 | - 0.09     | 0.01       | -0.3%      | 103.0%     |
| Factor31 | - 0.11     | 0.01       | -0.4%      | 102.6%     |
| Factor32 | - 0.11     | 0.01       | -0.4%      | 102.2%     |
| Factor33 | - 0.12     | 0.02       | -0.5%      | 101.7%     |
| Factor34 | - 0.14     | 0.01       | -0.5%      | 101.2%     |
| Factor35 | - 0.15     | 0.02       | -0.6%      | 100.7%     |
| Factor36 | - 0.18     | .          | -0.7%      | 100.0%     |

LR test: independent vs. saturated:  $\chi^2(630) = 1.0e+04$  Prob> $\chi^2 = 0.0000$

# FACTOR ANALYSIS RETAINING 6 FACTORS

Factor analysis/correlation                      Number of obs                      280  
Method: principal factors                      Retained factors                      6  
Rotation: (unrotated)                      Number of params                      201

| FACTOR   | EIGENVALUE | DIFFERENCE | PROPORTION | CUMULATIVE |
|----------|------------|------------|------------|------------|
| Factor1  | 15.24      | 12.45      | 55.8%      | 55.8%      |
| Factor2  | 2.80       | 0.31       | 10.2%      | 66.0%      |
| Factor3  | 2.48       | 0.66       | 9.1%       | 75.1%      |
| Factor4  | 1.82       | 0.58       | 6.7%       | 81.8%      |
| Factor5  | 1.24       | 0.22       | 4.6%       | 86.3%      |
| Factor6  | 1.02       | 0.34       | 3.7%       | 90.1%      |
| Factor7  | 0.68       | 0.04       | 2.5%       | 92.6%      |
| Factor8  | 0.64       | 0.12       | 2.3%       | 94.9%      |
| Factor9  | 0.52       | 0.09       | 1.9%       | 96.8%      |
| Factor10 | 0.43       | 0.10       | 1.6%       | 98.4%      |
| Factor11 | 0.33       | 0.03       | 1.2%       | 99.6%      |
| Factor12 | 0.30       | 0.06       | 1.1%       | 100.7%     |
| Factor13 | 0.24       | 0.03       | 0.9%       | 101.5%     |
| Factor14 | 0.21       | 0.05       | 0.8%       | 102.3%     |
| Factor15 | 0.16       | 0.00       | 0.6%       | 102.9%     |
| Factor16 | 0.16       | 0.09       | 0.6%       | 103.5%     |
| Factor17 | 0.08       | 0.01       | 0.3%       | 103.8%     |
| Factor18 | 0.06       | 0.01       | 0.2%       | 104.0%     |
| Factor19 | 0.05       | 0.02       | 0.2%       | 104.2%     |
| Factor20 | 0.03       | 0.01       | 0.1%       | 104.3%     |
| Factor21 | 0.02       | 0.02       | 0.1%       | 104.4%     |
| Factor22 | 0.00       | 0.02       | 0.0%       | 104.4%     |
| Factor23 | - 0.02     | 0.01       | -0.1%      | 104.3%     |
| Factor24 | - 0.02     | 0.01       | -0.1%      | 104.3%     |
| Factor25 | - 0.03     | 0.01       | -0.1%      | 104.1%     |
| Factor26 | - 0.04     | 0.00       | -0.2%      | 104.0%     |
| Factor27 | - 0.05     | 0.01       | -0.2%      | 103.8%     |
| Factor28 | - 0.06     | 0.01       | -0.2%      | 103.6%     |
| Factor29 | - 0.07     | 0.02       | -0.3%      | 103.3%     |
| Factor30 | - 0.09     | 0.01       | -0.3%      | 103.0%     |
| Factor31 | - 0.11     | 0.01       | -0.4%      | 102.6%     |
| Factor32 | - 0.11     | 0.01       | -0.4%      | 102.2%     |
| Factor33 | - 0.12     | 0.02       | -0.5%      | 101.7%     |
| Factor34 | - 0.14     | 0.01       | -0.5%      | 101.2%     |
| Factor35 | - 0.15     | 0.02       | -0.6%      | 100.7%     |
| Factor36 | - 0.18     | .          | -0.7%      | 100.0%     |

LR test: independent vs. saturated:  $\chi^2(630) = 1.0e+04$  Prob> $\chi^2 = 0.0000$

LR test: independent vs. saturated:  $\chi^2(630) = 1.0e+04$  Prob> $\chi^2 = 0.0000$

# APPENDIX N

## Customer Satisfaction Data Summary Statistics

| SUMMARY STATISTICS - CUSTOMER SATISFACTION DATA |                                                                          |       |         |                    |          |         |         |         |
|-------------------------------------------------|--------------------------------------------------------------------------|-------|---------|--------------------|----------|---------|---------|---------|
|                                                 |                                                                          | Count | Mean    | Standard Deviation | Standard | Minimum | Maximum | Range   |
|                                                 | Turnover                                                                 | 280   | 215,670 | 52,669             | 3,148    | 120,261 | 318,658 | 198,397 |
| FACTOR                                          | QUESTION                                                                 | Count | Mean    | Standard Deviation | Standard | Min     | Max     | Range   |
| Differentiation 1                               | Has a unique taste                                                       | 280   | 1.818   | 0.455              | 0.027    | 1       | 4       | 3       |
| Differentiation 2                               | Has a different/distinctive store layout & environment                   | 280   | 2.196   | 0.480              | 0.029    | 1       | 4       | 3       |
| Differentiation 3                               | Has a distinct preparation method                                        | 280   | 2.307   | 0.534              | 0.032    | 1       | 4       | 3       |
| Image 1                                         | Is a nice place to sit down and eat                                      | 280   | 2.125   | 0.517              | 0.031    | 1       | 5       | 4       |
| Image 2                                         | Has an inviting atmosphere                                               | 280   | 2.036   | 0.534              | 0.032    | 1       | 5       | 4       |
| Image 3                                         | My type of place                                                         | 280   | 1.989   | 0.490              | 0.029    | 1       | 4       | 3       |
| Image 4                                         | Is a place/environment that I know well                                  | 280   | 1.846   | 0.450              | 0.027    | 1       | 4       | 3       |
| Image 5                                         | Is clean                                                                 | 280   | 1.879   | 0.455              | 0.027    | 1       | 4       | 3       |
| Innovation 1                                    | Has creative packaging                                                   | 280   | 2.189   | 0.518              | 0.031    | 1       | 5       | 4       |
| Innovation 2                                    | Has exciting menu options                                                | 280   | 1.646   | 0.542              | 0.032    | 1       | 4       | 3       |
| Innovation 3                                    | Has a wide menu range                                                    | 280   | 1.643   | 0.530              | 0.032    | 1       | 3       | 2       |
| Innovation 4                                    | Always has new items on the menu                                         | 280   | 1.721   | 0.543              | 0.032    | 1       | 4       | 3       |
| Innovation 5                                    | Is an innovative, creative or inventive fast food or takeaway restaurant | 280   | 2.021   | 0.486              | 0.029    | 1       | 3       | 2       |
| Innovation 6                                    | Is always coming up with new offerings                                   | 280   | 1.768   | 0.522              | 0.031    | 1       | 4       | 3       |
| Quality 1                                       | Offers consistent quality (always the same)                              | 280   | 1.729   | 0.746              | 0.045    | 1       | 4       | 3       |
| Quality 2                                       | Uses fresh ingredients                                                   | 280   | 1.721   | 0.683              | 0.041    | 1       | 4       | 3       |
| Quality 3                                       | Has the best flame grilled burgers                                       | 280   | 1.693   | 0.666              | 0.040    | 1       | 4       | 3       |
| Quality 4                                       | Has the best taste                                                       | 280   | 1.761   | 0.685              | 0.041    | 1       | 4       | 3       |
| Quality 5                                       | Is seen to be a specialist in what they do                               | 280   | 1.850   | 0.580              | 0.035    | 1       | 4       | 3       |
| Service 1                                       | Friendly service                                                         | 280   | 1.775   | 0.658              | 0.039    | 1       | 5       | 4       |
| Service 2                                       | Fast service                                                             | 280   | 1.768   | 0.639              | 0.038    | 1       | 5       | 4       |
| Service 3                                       | Service leaves you feeling good                                          | 280   | 1.932   | 0.644              | 0.038    | 1       | 5       | 4       |
| Service 4                                       | Has well presented staff                                                 | 280   | 1.943   | 0.578              | 0.035    | 1       | 5       | 4       |
| Service 5                                       | You have full view of the food preparation                               | 280   | 2.254   | 0.642              | 0.038    | 1       | 5       | 4       |
| Staff 1                                         | Staff are willing to go the extra mile for you                           | 280   | 2.089   | 0.636              | 0.038    | 1       | 5       | 4       |
| Staff 2                                         | Staff are knowledgeable and inspire you with confidence                  | 280   | 2.100   | 0.596              | 0.036    | 1       | 5       | 4       |
| Staff 3                                         | Staff seem happy and enjoy their job                                     | 280   | 2.100   | 0.596              | 0.036    | 1       | 5       | 4       |
| Value 1                                         | Has regular specials & promotions                                        | 280   | 1.896   | 0.494              | 0.030    | 1       | 4       | 3       |
| Value 2                                         | Is affordable on a regular basis                                         | 280   | 2.154   | 0.684              | 0.041    | 1       | 4       | 3       |
| Value 3                                         | Has prices that are lower than other fast food/takeaway restaurants      | 280   | 2.586   | 0.892              | 0.053    | 1       | 5       | 4       |
| Value 4                                         | The portions are worth paying more for                                   | 280   | 2.157   | 0.721              | 0.043    | 1       | 5       | 4       |
| Value 5                                         | Is good value for money                                                  | 280   | 2.075   | 0.670              | 0.040    | 1       | 4       | 3       |
| Value 6                                         | Has generous portion sizes                                               | 280   | 2.082   | 0.675              | 0.040    | 1       | 4       | 3       |
| Value 7                                         | The taste experience is worth paying more for                            | 280   | 2.046   | 0.623              | 0.037    | 1       | 4       | 3       |
| Value 8                                         | Satisfies your hunger                                                    | 280   | 1.864   | 0.489              | 0.029    | 1       | 4       | 3       |
| Value 9                                         | The one I like best                                                      | 280   | 1.921   | 0.587              | 0.035    | 1       | 5       | 4       |
| Overall Rating                                  | Please rate your overall level of satisfaction                           | 280   | 1.879   | 0.478              | 0.029    | 1       | 3       | 2       |

## APPENDIX O

### Consistency Matrix

#### CONSISTENCY MATRIX - SUB PROBLEM 1

| <b>Research Problem:</b> What are the variables that influence store performance as a result of the store's unique retail site location (external), and from the perspective of the Customer (internal)?                                                                                                                                                                                                                                                                                 |                   |                                                                                                                                                   |                                                                        |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Hypothesis Number | Hypothesis                                                                                                                                        | Literature Reference                                                   | Data Source                                                                                                                                                                                                                                            | Data Analysis                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Sub Problem 1</b> - Identify and measure the variables that influence individual store performance as a result of their unique retail site locations. Analyse these variables across a number of similar stores in order to find correlations between the variables and store performance. Using regression techniques, determine the relevant importance of each variable in explaining performance. In this instance, performance measures will be turnover and annual growth rate. | 1                 | H1a: The accessibility of the shopping centre to consumers will influence the turnover of the "Fast-Food" outlet.                                 | Thompson and Walker (2005); Tucker (1985); Meyer (1988); Simons (1992) | Quantitative survey instrument for collecting primary data. Secondary data to be obtained from MapIT and the Franchisor. Sample will be 71 "Fast-Food" outlets in the Gauteng geographic region purposively selected from a population of 146 outlets. | Aggregate data for each factor collected from selected outlets will be used as independent variables in a multiple regression models. The response variable in the models will be average monthly store turnover. The objective of the model will be to determine how the independent variables influence the response variable, and by so doing will test each of the hypotheses postulated. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2                 | H2a: The market area characteristics of the community surrounding the retail site location will influence the turnover of the "Fast-Food" outlet. | Thompson and Walker (2005); Tucker (1985); Meyer (1988); Simons (1992) |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3                 | H3a: The predominant Living Standards Measure level of the local community will influence the turnover of the "Fast-Food" outlet.                 | Thompson and Walker (2005); Tucker (1985); Simons (1992)               |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4                 | H4a: Competitor activity in and around the retail site location will influence the turnover of the "Fast-Food" outlet.                            | Thompson and Walker (2005); Tucker (1985); Meyer (1988)                |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5                 | H5a: The presence of a major national brand as an anchor tenant in the shopping centre will influence the turnover of the "Fast-Food" outlet.     | Brown (1987)                                                           |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6                 | H6a: The presence of secondary attractors in the shopping centre will influence the turnover of the "Fast-Food" outlet.                           | Brown (1987)                                                           |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7                 | H7a: The cannibalization of turnover by other "Fast-Food" outlets in the vicinity will influence the turnover of the "Fast-Food" outlet.          | Bibb (2001)                                                            |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                               |

## CONSISTENCY MATRIX - SUB PROBLEM 2

**Research Problem:** What are the variables that influence store performance as a result of the store's unique retail site location (external), and from the perspective of the Customer (internal)?

| <b>Sub Problem 2</b> - Identify and measure variables that impact store performance from a Customer perspective, and how they might be correlated. Identify the underlying dimensions, or factors, that explain the correlations among the identified variables. Use the identified factors in subsequent multivariate analysis as independent variables in order to explain store performance as measured by the surveys. In this instance, performance measures will be turnover and annual growth rate. | Hypothesis Number | Hypothesis                                                                                                                          | Literature Reference                                                                 | Data Source                                                                                                                                                                                                                                                                                                          | Data Analysis                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 8                 | H8a: The customers' satisfaction with the value of the product offering will influence turnover of the "Fast-Food" outlet.          | Cronin et al (2000); Kara et al (1995)                                               | Primary data will be collected using a quantitative measuring instrument in face-to-face interviews with Customers. The interviews will be conducted immediately following a service encounter at 20 purposively selected stores in the Gauteng geographic region. Twenty customers will be selected systematically. | Factor analysis will be conducted to validate the a-priori dimensions of customer satisfaction. Factor scores will be used as independent variables in multiple regression models to determine the influence of the independent variables on store turnover and annual turnover growth rate. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 9                 | H9a: The customers' satisfaction with the product innovation and differentiation will influence turnover of the "Fast-Food" outlet. | Kara et al (1995);                                                                   |                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10                | H10a: The customers' satisfaction with the quality of the service offering will influence turnover of the "Fast-Food" outlet.       | Kara et al (1995); Cronin et al (2000); Law et al (2004); Sureshchandar et al (2002) |                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 11                | H11a: The customers' satisfaction with the quality of the product offering will influence turnover of the "Fast-Food" outlet.       | Cronin et al (2000); Sureshchandar et al (2002)                                      |                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 12                | H12a: The customers' satisfaction with the image and atmosphere will influence turnover of the "Fast-Food" outlet.                  | Kara et al (1995); Law et al (2004); Mayer et al (2003); Sureshchandar et al (2002)  |                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 13                | H13a: The customers' satisfaction with the human interaction aspect will influence the turnover of the "Fast-Food" outlet.          | Sureshchandar (2002); Cannon (2005)                                                  |                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                              |