The impact of dual vs multiple food grocer anchorage on the performance of shopping centres in South Africa

H du Toit
C E Cloete
Department of Construction Economics
University of Pretoria, South Africa

Keywords
Exclusivity clauses, retail leases, South Africa, multiple food grocer tenants

Abstract
Major food retail chain groups have historically insisted on exclusive trading rights. However, many developers who had conceded to exclusivity clauses in the 1980s and 1990s are reconsidering the implications of such clauses on their centres, and more specifically the potential effects of excluding a segment of the consumer market by virtue of tenant selection and consumer brand preferences. Legal inquiries ensued, including contract law and the rights of the tenant; common law and the potential effects of denying the consumer access to preferred brands; as well as potential anti-competitive practices by virtue of the exclusion of certain tenants from a shopping centre.

The quantifiable impacts of dual or even multiple food grocer anchorage on shopping centre performance are investigated in the present study. Analyses based on comprehensive quantitative trading statistics of specific shopping centre size categories revealed identifiable and positive correlations between multiple food grocer anchorage, on the one hand, and aggregate shopping centre trading densities and foot counts, on the other hand. These findings suggest, first, that the average consumer supports more than one food grocer brand on a weekly basis, and therefore does draw benefit from a shopping centre with multiple food grocer options and prefers such offerings over single grocer centres. Secondly, the shopping centre anchored by a multiple food grocer offering has an enhanced power of attraction and risk mitigation attributes over its single grocer peers.

The findings make a unique contribution to the debate about the relative merits of single grocery tenant in South African shopping centres as against the merits of having more than one food grocer anchor and provide shopping centre developers with a methodology for quantifying such effects.

1 Introduction
Supermarkets that serve as anchors in shopping centres often insist on being afforded the sole right to trade as food grocer retailers in such shopping centres. Food grocer retailers even extended the reach of exclusivity clauses by imposing restrictions on the type of food-related non-supermarket tenants that would or would not be allowed to trade in the same centre. These restrictions applied not only to other national food chains, but also to smaller line shops (smaller, perhaps, in terms of floor space and individual capitalised value but, in aggregate terms, significant in an overall economic context). Small businesses are directly affected by subsequent constraints on their product range and offering. Small businesses on which such constraints may be imposed include bakeries, confectionaries, butcheries and associated part-line stores.

Supermarkets having the exclusive right in a shopping centre have an obvious advantage over their competitors (Raven and Lunsford 2015; Marsh 2016). On 29 June 2009, the Competition Commission in South Africa formally initiated an investigation into exclusivity clause practices by South Africa’s major food retail chain groups (Smidt, 2014, p. 1). The focus of the investigation was on the alleged uncompetitive practices by South Africa’s major food and grocery retail chains. The Commission also raised concerns regarding the effects such exclusivity clauses had in terms of concentrating consumer buying power as well as related issues pertaining to, inter alia, category
management and information exchange. The Commission concluded part of its investigation on 27 January 2011 and noted that there was insufficient evidence to affirm contraventions in terms of the Competition Act. Concerns were, nevertheless, raised regarding the perceived negative effects of exclusivity clauses in long-term leases.

The topic of single versus dual/multiple grocer anchorage in South African shopping centres continues to be contested and controversial. In the absence of known, quantifiable industry research on the subject matter, this paper seeks to offer a contribution to the debate by researching certain quantitative effects of dual and multiple grocer anchorage versus single grocer anchorage, considering quantitative shopping centre data.

2. Research methodology

The present study investigates possible correlations between trading density and foot count data (as performance indicators) for single versus dual and multiple food grocer anchored centres. In brief, the methodology entails:

1. first, a quantitative assessment of shopping centre data in time series format to establish whether there is an increasing incidence of dual and multiple food grocer anchored centres compared with single grocer anchored centres;
2. secondly, the correlation between grocer anchorage and shopping centre performance for specific categories of the shopping centre hierarchy is investigated.

Quantitative analyses were conducted to assess, firstly, whether the frequency of dual and multiple food grocer anchored is increasing and secondly, to assess whether there is a discernible difference in performance data between, respectively, single and dual / multiple food grocer anchored centres.

In a comparative assessment, data for shopping centres operational prior to 2002 was compared with data for shopping centres developed from 2003 to 2013 – affording a decade long analytical time frame, which is sufficient to identify noteworthy sustained long term, structural market changes. In total, this part of the analysis included 1 460 centres.

The next level of the investigation is focused on specific categories of the shopping centre hierarchy. The objective was to assess whether correlations existed between foot count and trading density data as performance indicators, respectively for single and dual/multiple food grocer anchored centres. The focus is on centres measuring 25 000m$^2$ to 50 000m$^2$. Even though dual food grocer anchorage may be observed in convenience neighbourhood centres (5 000m$^2$ to 12 000m$^2$) and small community centres (12 000m$^2$ to 25 000m$^2$), reliable performance data is not readily available – in particular foot count data, as too few centre owners in this segment of the market install foot counters. The significance of the trend on neighbourhood shopping centre level is, however, not disputed. In turn, trading density data suggests that super-regional malls are losing market in respect of food and grocery purchases. Super-regional's *per se* therefore did not form part of this investigation. However, a subsequent section investigates the correlation between foot count and trading density data for single, dual and multiple food grocer anchored centres measuring from 12 000m$^2$ to 160 000m$^2$.

Various deductions can be made and inferences drawn from the respective analyses – all of which reveal a degree of congruence.

3. Definitions and Concepts

The nature and size of the food grocer should relate to the size and functionality of the shopping centre. Functional shopping centre differentiation can be observed in trading density data per merchandise category and by centre type – a quantitative indicator of revealed consumer behaviour. Table 1 summarises trading density data for the main shopping centre types, across the range of merchandise categories.
Table 1: National Trading Densities (R/m²/month) per merchandise category, 2013/2014

<table>
<thead>
<tr>
<th>Category</th>
<th>Apparel R/m²/month</th>
<th>Department Stores R/m²/month</th>
<th>Food R/m²/month</th>
<th>Food Service R/m²/month</th>
<th>Home Décor R/m²/month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Super Regional</td>
<td>4 552.70</td>
<td>3 609.90</td>
<td>2 641.80</td>
<td>3 667.90</td>
<td>3 153.30</td>
</tr>
<tr>
<td>Regional</td>
<td>3 186.60</td>
<td>3 105.50</td>
<td>2 752.10</td>
<td>3 249.90</td>
<td>2 131.00</td>
</tr>
<tr>
<td>Small Regional</td>
<td>2 539.80</td>
<td>2 637.80</td>
<td>2 986.70</td>
<td>2 657.20</td>
<td>1 832.90</td>
</tr>
<tr>
<td>Community</td>
<td>2 285.80</td>
<td>3 217.80</td>
<td>4 518.90</td>
<td>3 009.20</td>
<td>1 606.80</td>
</tr>
<tr>
<td>Neighborhood</td>
<td>1 658.60</td>
<td>2 314.70</td>
<td>3 901.80</td>
<td>2 760.60</td>
<td>1 219.70</td>
</tr>
</tbody>
</table>

Category Includes:
- Menswear, womenswear, children’s wear, unisex wear, accessories
- Department stores, mini department stores, junior department stores
- Grocery/ supermarket, food speciality, sweets, bottle stores
- Restaurants, coffee shops, takeaway, pizzerias, ice cream parlours, pubs
- Home furnishings, art, antiques, décor

Source: MSCI, Q4 2014. Note: Monetary units in South African Rands.

Trading density data affirms the prominence of (and, by implication, consumer preference for) neighbourhood and community type centres in respect food and grocery shopping: trading densities of R3 901.80/m²/month to R4 518.90/m²/month are notably higher for the smaller neighbourhood and community centre types, compared with appreciably lower trading density values of R2 641.80/m²/month to R2 752.10/m²/month for regional and super-regional malls – a difference that accounts for 32.29% to 39.09% higher food and grocery trading densities in community and neighbourhood centres. Although smaller grocery stores may command marginally higher product unit prices, this price differential is, in itself, not sufficient to account for the difference in trading density values. Conversely, regional and super-regional shopping centres reflect higher trading densities in durables and semi-durables.

Trading density data affirms the functional differentiation between convenience and destination orientated shopping centres. The data furthermore illustrates revealed consumer preferences at various shopping centre types. The data suggests that, in respect of food and grocery shopping, the convenience offered by the smaller and conveniently located neighbourhood and community shopping centres remains a key consideration to the consumer. Muller (2015) affirmed the diminishing convenience factor associated with food and grocery shopping in regional and super-regional malls, but indicated that office development around the mall has, in their experience, countered this trend.

Market research findings with reference to dual and multiple grocer anchorage in subsequent analyses refer specifically to the full-line grocer types, as defined by Du Toit and Cloete (2016): namely a supermarket upwards of 1 500m² – 2 000m² which, by virtue of size, provides a comprehensive and competitive product offering that spans all or most of the following product categories (confirmed by Gomes, 2014): groceries, personal care, fresh produce and perishables, bakery, butchery, wines, frozen foods, sweets, coffee counter, cheese section, seafood section and cigarette counter.

4. Quantitative analysis
4.1 Comparative Assessment of Single versus Dual/Multiple Grocer Anchored Shopping Centres, 2002 – 2013

Quantitative analyses were conducted to assess, firstly, whether changes have occurred in the incidence of dual and multiple food grocer anchored centres and secondly, to assess whether there is
a discernible difference in performance data between, respectively, single and dual/multiple food grocer anchored centres.

A comparative static assessment was conducted of shopping centres operational in 2002 and those completed in the decade hence – up to and including 2013 – respectively for single and dual/multiple food grocer anchored centres. The full spectrum of shopping centres across the hierarchy formed part of the analysis. A total ±1 460 centres were analysed. This analysis revealed distinct development trends.

<table>
<thead>
<tr>
<th>Number</th>
<th>Number of Centres (2002)</th>
<th>Distribution (%)</th>
<th>Number of New Centres (2013)</th>
<th>Distribution (%)</th>
<th>Total Number of Centres</th>
<th>Increase (2002 to 2012/13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Grocer</td>
<td>686</td>
<td>70.6</td>
<td>323</td>
<td>66.2</td>
<td>1009</td>
<td>47.1%</td>
</tr>
<tr>
<td>Dual/Multiple Grocer</td>
<td>57</td>
<td>5.9</td>
<td>56</td>
<td>11.5</td>
<td>113</td>
<td>98.2%</td>
</tr>
<tr>
<td>No grocer</td>
<td>229</td>
<td>23.6</td>
<td>109</td>
<td>22.3</td>
<td>338</td>
<td>47.6%</td>
</tr>
<tr>
<td>Total</td>
<td>972</td>
<td>100.0</td>
<td>488</td>
<td>100.0</td>
<td>1460</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: National Comparative Analysis of Single and Dual/Multiple Grocer Anchored Shopping Centres, 2002 & 2013

Source: Calculations based on South African Council of Shopping Centres Electronic Database, 2014

The comparative-static data analysis revealed the following quantifiable trends:

1. In 2002, 57 (5.9%) out of 972 shopping centres were anchored by dual/multiple food grocer stores;
2. over the next decade, an additional 56 centres with dual/multiple food grocer anchors were built – this represents an increase of 98.2% over the 10 year period (a compound rate of 7.1% per annum);
3. Similarly, single grocer anchored centres increased from 686(70.6%) in 2002, by 323 centres to 1 009 over the same period – this represents an increase of 47.1% (the proportional contribution decreased from 70.6% to 66.2%);
4. Centres with no food grocer anchor (for instance certain specialist centre types) increased by a marginally higher aggregate rate of 47.6% over the same period;
5. Evidently, by far the greatest real and proportional increases can be observed in respect of the increase in dual/multiple food grocer anchored centres.

It is evident that there has been a noticeable increase in the development of dual/multiple grocer anchored centres over the time period analysed. This quantifiable trend reveals the interrelatedness between consumer demand and the free-market supply-side response.

The comparative-static analysis was progressed to a more focused and in-depth quantitative assessment of selected performance indicators (foot count and trading density data) available for, respectively single and dual/multiple food grocer anchored centres.

4.2 Foot Count and Trading Density Data Analyses

- Delimiting the Investigation

Having established that there has been a noticeable long term increase in the incidence of dual and multiple food grocer anchored centres, the assessment was then focused on specific segments of the shopping centre hierarchy.

The focus on centres larger than 25 000m² is mainly because of data availability. Furthermore, certain shopping centre categories were deliberately omitted. Big box retailers, such as for instance Makro, are mostly located in standalone boxes and food grocer anchorage is neither clearly distinguishable, nor measurable. Also, the product range associated with a typical full-line grocer is
not on offer at bulk retail warehouse type outlets. These centres were therefore excluded from the analysis. Reliable foot count data is also not generally available for smaller convenience centres.

For purposes of the assessment, the quantitative analysis was focused on centres measuring approximately 25,000m² and 50,000m². On a national scale, the aspiration to dual/multiple food grocer anchorage appears to be most active in respect of centres within this size bracket, i.e. the large community and small regional centre. Refurbishment plans aimed at modernising and expanding centres typically involve centres of this size category. Legal proceedings in regard to exclusivity clauses also appear to have a higher frequency in these size segments of the market. Comparative and reliable shopping centre performance data is available for this market segment. The analysis of this range of centre sizes allows for practical spread of centre functionality, including the convenience elements associated with the larger community type centres and the gradually diminishing rate of perceived convenience to the consumer in small regional malls - consistent with food grocer trading density data analysed in the previous section.

Regardless of the fact that dual food grocer anchorage can be observed in convenience neighbourhood centres and small community centres, reliable performance data is not readily available - in particular foot count data, as too few centre owners in this segment of the market install foot counters. The significance of the trend on neighbourhood shopping centre level is not disputed. However, its prevalence is masked by the fact that developers can, for practical reasons (including food grocery store size and comparatively low rentals in relation total centre size and rental through-rates required), not always incorporate a second full-line food grocer anchor in the same centre, especially in smaller than ±10,000m² - which would allow for one full-line grocer of ±3,000m² and, at best, only a Woolworths Food store no larger than 500m² to 750m² (which would therefore not classify as a full-line grocer). These grocery anchors would account for ±40% of total centre lettable area. The remaining ±60% would be occupied by smaller line shops (paying higher rental rates). The earlier convenience centres developed in the late 1990s and early 2000’s followed this approach.

Incorporating two full-line grocers in a neighbourhood convenience centre can be challenging. Practical considerations and financial constraints are sometimes overcome by developing a second neighbourhood convenience centre in close proximity to the first, quite often on contiguous sites, but with a differentiated food grocer offering. Interviews with, inter alia, Johan Jacobs (Jacobs Trust), Jason McCormick (McCormick Properties) and Johan Visagie (Twin City) revealed that this is a carefully planned approach. Examples include inter alia Glen Acres (Spar) and Woodbridge (Woolworths Food) in Kempton Park, Glen Village North (Pick n Pay) and Glen Village South (Woolworths Food) in Pretoria, Bochum Plaza (Score) and Blouborg Mall (Shoprite) in Bochum (Limpopo Province) and Cycad Centre (Pick n Pay) and Platinum Park (Spar) in Polokwane. Respondents indicated that aspects such as consumer profiles, demand thresholds, site size and concomitant centre size, land and construction costs, as well as minimum rental through-rates required, influence the consideration.

It is beyond the scope of this paper to assess business sales impacts, with specific reference to the impact of a new food grocer - in a shopping centre with an established food grocer - on the sales of the latter. This does, nevertheless, remain a relevant consideration and could be investigated in future research papers. Interviews with aforesaid company representatives indicated that such business sales impacts are a function of inter alia:

1. the brand of the new grocer;
2. consumer profile, origin and spatial distribution;
3. store location, age, size and offering (including inter alia product range breadth and depth, pricing and service); and
4. centre age, layout and design.
Business sales impacts can furthermore be distinguished in terms of the magnitude and duration of such impacts. Jason McCormick (2014) and Visagie (2014) indicated that, based on rent roll and turnover clause sales data, the average impact associated with the introduction of a 2nd, 3rd or even 4th food grocer on an existing grocer within the same centre typically varies between 0% and 10%. The impact has, in instances where management was pro-active, been mitigated in full (i.e. around 0%). In instances where decisive mitigation measures were not implemented or where centres were dated and not timorously repositioned (i.e. refurbished and re-tenanted), impacts where greater (up to 17.6%) and recovery periods were extended (18 to 24 months, compared with average impacts that typically do not exceed 12 to 18 months – quite often even shorter). In certain instances, the existing food grocer retailer in a centre introduced periodic specials (discount sales) to compete against the new food grocer in the centre. Subsequent analyses revealed no discernible and sustained negative impact in the sales figures of the original food store – suggesting that impacts can be managed and mitigated.

Respondents furthermore indicated that business sales impacts on an existing food grocer tend to be more pronounced when the centre and/or retailer are older than 10 years and no efforts to refurbish (modernise) the centre and rival store have been made. Mitigation measures may include a centre refurbishment, store refurbishment (and a possible expansion), as well as adjusted pricing strategy – which may include periodic sales offered by the rival food grocer. It was the view of aforementioned interviewees, that the ultimate perceived benefits to the centre outweighed the short term impacts.

- Foot Count and Trading Density Data Analysis for Centres measuring 25 000m² to 50 000m²

Figure 1 illustrates the prevalence of single versus dual/multiple grocer anchored centres in the 25 000 – 50 000m² size range. The graph furthermore illustrates the functional differentiation of centres within this size range, as per SACSC database (2014).

In terms of the data set analysed, 30.8% of centres between 25 000m² and 50 000m² are anchored by dual/multiple food grocers. In this size range, dual/multiple food grocer anchorage is most prevalent among centres classified as minor regional's (65.8%). Dual/multiple food grocer anchorage is deployed to inter alia strengthen a centre’s competitive edge against, respectively, the food and grocer offering at smaller, convenience orientated neighbourhood centres on the one hand and, on the other, the destination orientated comparative offering of larger regional and super-regional centres.

Source: Calculations based on SACSC data, 2014
Figure 1: Dual and Multiple Food Grocer Distribution by Centre Type for centres measuring 25 000m² to 50 000m²
4.3 Analysis of foot counts in relation to food grocer anchorage (centres between 25 000m² and 50 000m²)

The aforesaid dataset was subsequently analysed in terms of the two most readily available, widely used and comparable performance indicators, namely foot counts and trading densities. Results are plotted respectively on Figures 2 and 3. The relationship between foot count and centre size, respectively for single and dual/multiple grocer anchored centres, is graphically illustrated in Figure 2. Figure 3, in turn, illustrates the relationship between foot counts and the total number of shops in the centre.

These type of regression lines do not represent a so-called viability line – as suggested by Rode that centres above the line would be viable and those below the line, not (Pick ’n Pay versus Pietersburg Development Company trading as Savannah Mall, 2013/2014). The purpose of the analysis is to test the relationship and correlation between variables, to establish whether a trend is discernible and then to determine whether the data is positively or negatively correlated.

The following observations can be made from these figures:

- A positive relationship exists between centre size and foot counts (regardless of single, dual or multiple food grocer anchorage) – these two variables are therefore positively correlated;
- R² values reflect on the best fit regression line, as well as the spread of data points around this line. In this respect, the best fit correlation was found to be linear. The R² values are low due...
to the natural aspiration of data around the regression line. As such, it is a product of the spread of data and does not detract from the positive slope of the best fit regression line - and neither from the positive nature of the correlation between foot count and centre size. Given the unique nature of *inter alia* shopping centre assets, vocational idiosyncrasies and associated market dynamics, a perfect spread (i.e. $R^2 = 1$) is, in any event, improbable. In short, the correlation is positive, but neither perfect nor absolute.

![Foot Count vs. Number of Shops](image)

**Figure 3:** Foot Count and Number of Shops*  
*Source: Calculations based on SACSC data, 2014(b)  
*Note: reflects centres with available foot count data

In respect of Figure 3, the following can be noted:

- A positive relationship can similarly be observed between the total number of shops in a shopping centre and foot counts (regardless of single, dual or multiple food grocer anchorage) - these two variables are therefore also positively correlated;
- Patronage is therefore positively correlated with both centre size and total number of shops in the centre;
Both regression lines – respectively for single and dual/multiple grocer anchored centres – reveal a positively sloping trajectory, which is consistent with the principles outlined in the work of Huff and Luce’s Choice Axiom (Section 3);

The regression line for dual/multiple grocer anchored centres does, however, reveal a steeper slope, compared to that of single grocer anchored centres (considering that the y-axis is measured in millions, the difference in slope is appreciable);

These findings indicate that dual/multiple food grocer anchored centres exert a greater power of attraction and consequently yield higher foot counts, compared with their single food grocer anchored counterparts.

Further statistical analysis of the above data, segmented into arbitrary 5 000m$^2$ intervals, reveal an interesting phenomenon (Table 3). It appears to be particularly centres between 30 000m$^2$ and 35 000m$^2$ and again those between 45 000m$^2$ and 50 000m$^2$ that derive proportionally the greatest benefit from dual/multiple food grocer anchorage. This may not be pure coincidence. Insight offered by development companies may add meaning to these apparent arbitrary figures.

<table>
<thead>
<tr>
<th>Centre Size (m$^2$)</th>
<th>Single Grocer Anchored (Avg foot count/annum)</th>
<th>Dual Grocer Anchored (Avg foot count/annum)</th>
<th>Difference (feet per annum)</th>
<th>% Difference (per annum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 000 to 30 000</td>
<td>4 689 754</td>
<td>4 115 890</td>
<td>-573 864</td>
<td>-12.2</td>
</tr>
<tr>
<td>30 000 to 35 000</td>
<td>3 157 020</td>
<td>6 087 170</td>
<td>2 930 150</td>
<td>92.8</td>
</tr>
<tr>
<td>35 000 to 40 000</td>
<td>7 283 881</td>
<td>6 178 212</td>
<td>-1 105 669</td>
<td>-15.2</td>
</tr>
<tr>
<td>40 000 to 45 000</td>
<td>10 032 140</td>
<td>9 834 595</td>
<td>-197 546</td>
<td>-2.0</td>
</tr>
<tr>
<td>45 000 to 50 000</td>
<td>7 473 166</td>
<td>10 155 202</td>
<td>2 682 035</td>
<td>35.9</td>
</tr>
<tr>
<td>Net gain/loss</td>
<td>3 735 107</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Foot Count Comparisons – Net gain/loss

Anastasi (2013), Flanagan (2013), Kriek (2014) and McCormick (2014) respectively indicated that the first phase aspiration for a destination mall (in instances where site constraints prevail (including aspects such as immediately available site size, town planning regulations and market size constraints) is typically a minimum 30 000m$^2$ to 35 000m$^2$, with a second phase expansion that would take the centre up to regional scale and significance, i.e. around 45 000m$^2$ to 60 000m$^2$.

Dual/multiple food grocer anchored shopping centres attracted, on aggregate, 3.7 million more customers per annum, compared with their single food grocer anchored counterparts.

4.4 Analysis of trading density data in relation to foot counts and grocer anchorage

Subsequent data sets illustrate the correlation between foot counts and centre trading densities, respectively for single and dual/multiple food grocery anchored centres. The availability of trading density data is more constrained than foot count data. The data utilised in this assessment differs from the assessments under section 4.2 and 4.3 in that trading densities were not readily available for all centres with foot count data. Subsequent analyses are based on a dataset of 31 malls, of which ten (i.e. 32.26%) are anchored by dual/multiple food grocer anchors and 21 (i.e. 67.74%) are anchored by single food grocer anchors. The sample includes centres than range from 12 000m$^2$ to 160 000m$^2$. This sample profile is consistent with the national frequency distribution of dual/multiple food grocer anchored centres versus single food grocer anchored centres and is regarded as representative.

Aforementioned list of 31 centres was first analysed to ensure data consistency and integrity. Certain centres were then isolated from the list analysed. The authors motivate these omissions on account of the following:
super-regional malls – the one super-regional mall in the dataset was omitted on account of
the diminishing significance of food grocer anchorage in super regional malls (section 3);
specialised tourist centres – the tourist orientated centre in the sample has a is situated in the Western Cape Province and given the distinct international tourism patronage bias and, given, coupled with the rare occurrence of such centres and associated outlier foot counts,
this centre was omitted from the sample;
commuter based centres – a dominant commuter based centre was omitted, on account of the fact that a subterranean intermodal facility reportedly funnels an estimated 700 000 commuters through the centre on a daily basis, which significantly distorts foot counts in relation to sales.
student centres – a prominent student centre was omitted on account of the fact that the centre generally reflects disproportionally high daily foot counts in relation to lower sales and also because the centre operates on a counter-cyclical basis, with unusually low trade during the extended student holiday months (which affects up to 4-5 months of a year).

With these four centres omitted, the list of centres analysed totalled 27. The foot count and trading density datasets for these centres were subsequently analysed utilising two techniques, namely:
1. statistical correlations; and
2. a comparison of weighted averages.

Table 4 summarises the analysis of foot counts and trading densities for all centres across the size spectrum in the sample. Table 4 indicates that, in terms of the sample, dual and multiple food grocer anchored centres recorded 22.9% higher foot counts, but trading densities were, on aggregate, 5% lower. The effects are influenced by inclusion of centres in the 50 000m² to 100 000m² size bracket, i.e. full-fledged regional malls that are known (Table 1) to have comparatively low food and grocer trading densities on account of a diminishing perceived convenience value to the consumer in regards to, specifically food and grocery shopping. On account of this reality, a further refinement of the dataset was made and only centres between 25 000m² and 50 000m² were analysed, i.e. large community and small regional malls.

<table>
<thead>
<tr>
<th>Average Weighted Figures</th>
<th>Single</th>
<th>Dual/Multiple</th>
<th>Net Gain/ Loss</th>
<th>% Gain/ Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foot Counts</td>
<td>11 542 408.17</td>
<td>14 189 889.20</td>
<td>2 647 481.03</td>
<td>22.9</td>
</tr>
<tr>
<td>Trading Densities (R/m²/annum)</td>
<td>27 844.80</td>
<td>26 440.23</td>
<td>-1 404.58</td>
<td>-5.0</td>
</tr>
</tbody>
</table>

Table 4: Weighted Average Foot Counts and Trading Density (Full Sample) Source: Calculations based on DEMACON Shopping Centre Database, 2014(b)

Tables 4and 5 summarise findings of the analyses for centres within the 25 000m² to 50 000m² size range - respectively based on the weighted average technique (which accounts for the actual proportional representation of the centre size frequency distribution, i.e. it accounts for the unique structure of the market) and statistical correlations. In applying the actual market structure (i.e. proportions), the weighted calculation correctly accounts for the varying contribution of differentiated centre sizes across this size spectrum.

<table>
<thead>
<tr>
<th>Average Weighted Figures</th>
<th>Single</th>
<th>Dual</th>
<th>Net Gain/ Loss</th>
<th>% Gain/ Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foot Counts</td>
<td>6 454 362.78</td>
<td>7 705 081.57</td>
<td>1 250 718.79</td>
<td>19.4</td>
</tr>
<tr>
<td>Trading Densities (R/m²/annum)</td>
<td>28 003.62</td>
<td>31 506.67</td>
<td>3 503.05</td>
<td>12.5</td>
</tr>
</tbody>
</table>
Table 5: Weighted Average Foot Counts and Trading Density (Centres of 25 000m$^2$ to 50 000m$^2$) Source: Calculations based on DEMACO Shopping Centre Database, 2014

Based on the weighted average technique, centres within the 25 000m$^2$ to 50 000m$^2$ size bracket reveal notably higher foot count and trading density results for dual/multiple food grocer anchored centres: centres in this size range recorded an average of 1.25 million more feet per annum and trading densities of R3 503.05/m$^2$/annum higher, compared with data for single food grocer anchored centres. In terms of the data, foot counts are 19.4% higher for dual/multiple food grocer anchored centres and trading densities are 12.5% higher, compared with their single food grocer anchored counterparts.

When different segments of the market contribute disproportionally to market composition, a calculation that reflects actual market structure (i.e. a proportionally weighted calculation) is superior to one that assumes a perfectly equal distribution across the size spectrum (i.e. a so-called straight mathematical calculation and average). Rosenbloom (1976, p. 64 – 65) in the 1970’s already made use of weighting trade area data – this is one of the first retail-specific research studies that refers to the weighting of data. Weighted calculations are, however, an everyday practice in accounting (Gitman, 1998, pp. 443 – 445) and business calculations (Zidel, 2001, pp. 112 – 114). Gitman (1998, p. 445) distinguishes three types of weights, namely:

1. book value or market value weights, that uses accounting values and may be future estimates;
2. historic weights, that use actual market structure proportions; and
3. target weights, that use a desired or aspirational weight.

In terms of statistical correlations (Table 6), the actual (i.e. true proportional) structure of the market is not accounted for.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Correlation (Single to Dual/multiple)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foot Counts</td>
<td>-0.99882</td>
</tr>
<tr>
<td>Trading Densities (R/m$^2$/annum)</td>
<td>-0.84352</td>
</tr>
</tbody>
</table>

Table 6: Foot Count and Trading Density Correlations for single against dual/multiple food grocer anchored centres (25 000m$^2$ to 50 000m$^2$) Source: Calculations based on DEMACO Shopping Centre Database, 2014

Statistical correlations, nonetheless, demonstrate 15.65% higher trading densities for dual/multiple food grocer anchored centres, compared with their single food grocer anchored counterparts. The difference in foot count data, in terms of this less sophisticated technique, appears to be less pronounced.

Having regard to the differentiated and unique structure of the market, it is the authors’ considered opinion that the weighted technique – which accounts for actual market structure – reveals the true market inclination on account of benefits (real and perceived) offered by dual/multiple food grocer anchored centres over their single food grocer anchored counterparts. In short, the benefits appear to be within a range of **12.5% to 15.65% higher trading densities** and up to **19.4% higher foot counts** – when all other factors are held constant.

The South African consumer market has become progressively more integrated since 1994. Retailer product brands have similarly been adapted and expanded to cater to the full racial spectrum. This investigation analysed centres across varying income and geographic market segments. Although consumer market characteristics in respect of, inter alia, mode of transport may differ, the phenomenon of dual/multiple food grocer anchorage was not found to be limited to a particular market segment, be it low in high income, urban or rural.
5. Conclusions

Quantitative research was conducted to establish whether there are identifiable differences in the performance of single food grocer anchored centres versus their dual food grocer anchored counterparts. Various techniques, including regression modelling, weighted average calculations and correlations revealed consistent results. These results indicate that dual and multiple food grocer anchored centres outperform their single food grocer peers with, on average, 12.5% to 15.65% higher trading densities and up to 19.4% higher foot counts.

6. Research limitations and direction for further research

The research was based upon data for shopping centres in South Africa. As a limited number of national food grocers exist in South Africa, conclusions may be different in countries where a larger number of food anchors exist. In addition, the research was limited to shopping centres with Gross Lettable Areas between 25 000 m$^2$ and 50 000 m$^2$; conclusions may differ for smaller or larger centres.

It is suggested that similar investigations be undertaken in other countries to determine whether the requirement of national food anchors that they be the only grocer in a centre is to the benefit of the consumer.

In respect of localised market impacts, informal observations were made concerning the effects of shopping centre development on communities. On the one hand, in previously disenfranchised market areas (townships) a distinct sense of community pride can be observed. New development brings about capital investment, stimulates growth, creates jobs and potentially invigorates older urban environments. In a developing economy, new business development tends to gravitate towards these centres, creating new nodes and hives of activity. However, some of the unintended consequences of shopping centre development can easily go unnoticed. The NEF (2005, pp. 2 - 22) articulates the effects of what it terms bland shopping centre rollout across the United Kingdom, bringing about a Latte-Chino blandness (p. 5) to the urban landscape. The NEF survey analysed what it terms homogenisation of retail environments and the death of diversity caused by the cloning effect of shopping centre development on Britain’s small towns. Shopping centre development may bring measurable benefits to the retailer and community. However, the often unintended consequences of shopping centre development, including the displacement and ultimate disappearance of unique local small business enterprises that have served communities for years, could potentially go unnoticed. Small retail enterprises may be viable in their own right, but cannot afford the high rentals and escalations in modern shopping centres. These phenomena could be investigated in more detail.

References


**Legal Proceedings**


**Personal Communication**

Anastasi, K. (2013)[Correspondence with Mr Kiriakou Anastasi, Owner, Anaprop, regarding the importance of dual and multiple food grocer anchorage in the Anaprop shopping centre portfolio] Centurion, 4 February 2013.

Flanagan, P. (2013)[Correspondence with Mr Patrick Flanagan, Director, Flanagan & Gerard, regarding the importance of dual and multiple food grocer anchorage in Middelburg Mall and Highveld Mall] eMalahleni, 25 January 2013.

Gomes, G. (2014)[Correspondence with Mr Gilbert Gomes, Senior Property Development Manager, ShopriteCheckers Properties, regarding the food grocer retailer’s view on exclusivity clauses] Midrand, 13 March 2014.

Jacobs, J. (2015)[Correspondence with Mr Johan Jacobs, Jacobs Trust, regarding the value of differentiated food grocer anchors in contiguous Neighbourhood Convenience centres] Kempton Park, 1 April 2015.

Kriek, J. (2014)[Correspondence with Mr Johann Kriek, Director, Resilient Properties, regarding the importance of dual and multiple food grocer anchorage in the Resillient shopping centre portfolio] Pretoria, 29 August 2014.

McCormick, J. (2014)[Correspondence with Mr Jason McCormick, Managing Director, McCormick Properties, regarding the importance of dual and multiple food grocer anchorage in the McCormick Properties shopping centre portfolio] Centurion, 22 May 2014.

Muller, M. (2015) [Correspondence with Mr Marius Muller, Chief Executive Officer, Pareto Limited, regarding the importance of dual and multiple food grocer anchorage in the Pareto shopping centre portfolio] Pretoria, 31 August 2015.

Visagie, J. (2014) [Correspondence with Mr Johan Visagie, Managing Director, Twin City Development, regarding the importance of dual and multiple food grocer anchorage in the Twin City shopping centre portfolio] Pretoria, 7 April 2014.