University of Southampton study of retail change 2000-2006 across 1092 UK shopping centres, using Experian Goad data, confirms increase in convenience store numbers reported by Competition Commission, and uses GIS and other techniques to refine the estimate of the increase in convenience store numbers and the proportion of that increase accounted for by non-affiliated independent retailers.

A submission to the Competition Commission Groceries Market Inquiry from the GeoData Institute, University of Southampton, advised by Professor Neil Wrigley (Univ. of Southampton) and Professor Graham Clarke (Univ of Leeds), August 2007.

Executive Summary

This University of Southampton study of retail change 2000-2006 across 1092 UK shopping centres based on the Experian Goad data sets.

- Corroborates the Competition Commission's somewhat unexpected findings of a significant growth in convenience store numbers within the Goad-surveyed UK shopping centres, as identified by the Commission in its *Working Paper on Entry and Exit of Small and Specialist Stores* of June, 2007.

- Significantly refines the estimates of the increase in convenience store numbers by ownership type provided in the Commission's *Working Paper* by incorporating three important methodological enhancements.

- Provides, uniquely, what can be termed **like-for-like** estimates of the increases/decreases in convenience store numbers in the Goad plan shopping centres by correcting initial 'raw' estimates to account for the expansion or contraction of the geographical boundaries of those centres over time, i.e. by correcting for increases/decreases of the physical area of the Goad plan shopping centres.

- Establishes that, on the like-for-like basis, convenience store numbers within a consistent set of 1092 UK shopping centres increased by 629 between October 2000 – October 2006, or 70.4% from an October 2000 base.

- Establishes that the majority (56.9%) of that like-for-like increase in convenience store numbers was accounted for by non-affiliated independent retailers.

- Establishes that significant *regional* variation has occurred within the patterns of overall growth in convenience store numbers, with the majority of the like-for-like growth (56%) occurring in London and the South East. Within London a large majority (78.5%) of that growth is accounted for by the increase in non-affiliated independent convenience stores.

- Establishes that 15% of the additional non-affiliated independent convenience stores observed within the Goad plan UK shopping centres by October 2006 had resulted from conversions of what in October 2000 had been *vacant* retail units within the Goad shopping centres, and provides evidence suggestive of considerable entrepreneurial dynamic in the process of retail space conversion by independent retailers.

Introduction

In May 2007 the GeoData Institute[1] at the University of Southampton was commissioned by Tesco plc to undertake an analysis of changes in the structure of the retail landscape within more than one thousand shopping centres across the UK using the annual/biennial shopping centre plans compiled by Experian Goad. The GeoData Institute research team was advised by Professor Neil Wrigley (University of Southampton) and Professor Graham Clarke (University of Leeds) – leading UK researchers on issues of retail geography and planning. The Southampton research team had no knowledge that the Competition Commission was simultaneously conducting a similar analysis, and had no sight of the Commission's analysis until the public release of the Commission's *Working Paper on Entry and Exit of Small and Specialist Stores* on 11th June 2007.

It is the intention of the University of Southampton research team to make available for academic/public policy debate (with the permission of the sponsors of the study) comprehensive findings of its investigations, when those investigations are completed. At this stage, however, the research team wishes simply to report to the Competition Commission its analysis of changes in convenience store numbers across the 1092 UK shopping centres which can be consistently defined in the Experian Goad data sets between October 2000 and October 2006.

In summary that analysis:

(a) Corroborates the Competition Commission's somewhat unexpected findings of a significant growth in convenience store numbers within the Goad-surveyed UK shopping centres, as identified by the Commission in its *Working Paper* of June, 2007.

(b) Significantly refines the estimates of the increase in convenience store numbers by ownership type provided in the Commission's *Working Paper*, using techniques which enable three important improvements to be made.

[1] The GeoData Institute is an applied research and consultancy group within the School of Geography, University of Southampton. GeoData specialises in spatial data analysis, GIS and database development.

The three important improvements introduced in the Univ of Southampton analysis are as follows:

1. Separation out of changes in convenience store numbers which may have arisen as a result of the fact that the Goad shopping centre plans have, as the Competition Commission's *Working Paper* (p.2) notes, 'no fixed size in geographic terms'. In this context, the Univ of Southampton team has used GIS (geographical information science) techniques to separate out the increases/declines in convenience store numbers which can be attributed to the fact that geographical boundaries of individual shopping centres in the Goad plans expand or contract over time, from what might be termed **like-for-like** increases/decreases in convenience store numbers *within* the *fixed* boundaries of the shopping centres defined by the Goad surveyors at the start of the analysis period (i.e. in October 2000).

2. Correction of a possible under-reporting of convenience store numbers which can occur (when using the technique we assume the Competition Commission adopted) if only convenience stores recorded at the Goad '*category*' level of aggregation are used in the analysis. In the Univ of Southampton study, in contrast, a store is designated as 'convenience store' if within the Goad data it has either a '*primary*' or '*secondary*' activity designated as 'convenience store'. This enables the Univ of Southampton analysis to record as 'convenience' dual-purpose stores (e.g. convenience stores linked to petrol stations) which may have a Goad '*category*' of 'filling station' but a '*secondary activity*' as 'convenience store'.

3. Correction of other minor classification disparities/inconsistencies in the Goad data sets. For example, sometimes *multiple* retailer stores that were acquired by another multiple retailer (holding company) during the period 2000-2006 inconsistently shifted Goad category – i.e. from 'grocers & delicatessens' in 2000 to 'convenience' in 2006[2], or from 'convenience' in 2000 to 'grocers & delicatessens' in 2006[3]. In the Univ of Southampton study this small number of stores has been consistently reclassified in both periods as 'convenience stores'.

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[2] This occurs in the case of 18 Adminstore units which were classified as 'grocers & delicatessens' in 2000 but, following acquisition by Tesco, were classified as 'convenience' in 2006.

[3] This occurs in the case of 17 Alldays units which were classified as 'convenience' in 2000 but, following acquisition by the Coop, were classified as 'grocers and delicatessens' or 'supermarkets' in 2006.

Results

1. We first present (Table 1) 'raw' estimates of the increase in convenience store numbers between October 2000 and October 2006 across 1092 consistent Goad-plan UK shopping centres using:

   (a) the technique (which we assume the Competition Commission used) of including as 'convenience stores' only those recorded as 'convenience' at the Goad '*category*' level of aggregation.

   (b) the technique of including as 'convenience stores' those stores with either a *primary* or *secondary* activity designated in the Goad data as 'convenience', and also correcting (as noted above) for minor surveyor classification inconsistencies.

Table 1 – *Convenience store numbers in 1092 consistent Goad plan UK shopping centres, October 2000 – October 2006, estimated by two methods but without correction for geographical boundary change (i.e. without correction for increase/decrease in physical area of shopping centres).*

	2000	2006	Increase	% increase over 2000 base
(a) If only stores recorded as 'convenience' at Goad *category* level of aggregation included	886	1676	790	89.2
(b) If stores with primary or secondary activity of 'convenience' included and corrected for minor surveyor inconsistencies	978	1811	833	85.2

Using either technique, the initial estimate of the percentage increase in convenience store numbers between October 2000 and October 2006 is in the upper 80% range. There is also evidence (see Table 2) within a pattern of considerable net entry into the sector, of a significant rate of 'churn'.

Table 2 – *Estimates based on Table 1(b) figures of entry/exit into the convenience store sector, and extent of churn.*

	No. of Stores
Stores classified as 'convenience' in both 2000 and 2006	659
Stores classified as 'convenience' in 2000 but not in 2006	319
Stores classified as 'convenience' in 2006 but not in 2000	1152

2. Next, we proceed to refine these initial estimates to take account of the fact that the geographical boundaries of the Goad plan shopping centres are not fixed over time. Some centres (indeed, one-third of the centres) had expanded their boundaries between October 2000 and October 2006 (i.e. had increased in physical area), whilst some had contracted their boundaries (reduced in physical area). Using this approach, 288 of the convenience stores in Table 1(b) are found to lie within expanded physical areas of the centres, i.e. outside the original October 2000 physical boundaries, and are therefore removed from the analysis. Vice versa, 84 of the original October 2000 convenience stores are also removed from the analysis as a result of the boundaries of some of the shopping centres contracting over time.[4]

   In this way, we separate out what we term the **like-for-like** increases/declines in convenience store numbers across the 1092 shopping centres, and report in Table 3 our corrected estimate of the overall *like-for-like increase in convenience store numbers* in our consistent set of 1092 Goad plan UK shopping centres between October 2000 and October 2006 – an increase of 629 stores or 70.4% from the October 2000 base.

Table 3 - *Like-for-like increase in convenience store numbers in 1092 consistent Goad plan UK shopping centres, October 2000 – October 2006.*

	2000	2006	Increase	% increase over 2000 base
Estimate in Table 1(b) corrected for boundary changes, i.e. increases/decreases in physical area of shopping centres	894	1523	629	70.4

[4] We also remove a small number of the original October 2000 convenience stores from the analysis, if that store has been demolished by 2006 or merged into an adjacent unit.

3. On the same like-for-like basis as reported in Table 3, we can next report (Table 4) the estimates of the like-for-like changes in convenience store numbers by *type of operator*. It can be seen that the majority (56.9%) of the increase in convenience store numbers overall is accounted for by non-affiliated independent retailers, with 23.8% of the increase being accounted for by 'symbol' group retailers, and 19.2% by multiple retailers and cooperatives.

Table 4 - *Like-for-like increases in convenience stores October 2000–October 2006 across 1092 consistent Goad plan UK shopping centres broken down by type of operator*

Overall increase	Increase in non-affiliated independents	%	Increase in symbol group retailers	%	Increase in multiple retailers & cooperatives	%
629	358	56.9	150	23.8	121	19.2

4. A *regional breakdown* of these like-for-like figures shows considerable variation (Table 5). The largest overall increases in convenience store numbers occur in London and the South East (these two regions together accounting for 56.1% of the overall increase across the 1092 shopping centres). Much smaller increases occur in the North East, Northern Ireland, Yorkshire & Humberside, and Wales (these four regions together accounting for just 8.7% of the overall increase across the 1092 shopping centres).

Table 5 - *A regional breakdown of the like-for-like increases/declines in convenience store numbers October 2000 – October 2006 across 1092 consistent Goad plan UK shopping centres*

Region	No of Goad shopping centres within analysis	Overall convenience store change 2000-2006	Change in non-affiliated independents	Change in symbol group retailers	Change in multiple retailers & cooperatives
East Midlands	58	+ 22	+ 13	+ 7	+ 2
Eastern	98	+ 52	+ 28	+ 9	+ 15
London	176	+275	+216	+ 33	+ 26
North East	44	+ 9	+ 3	+ 7	- 1
North West	119	+ 27	+ 19	+ 4	+ 4
N. Ireland	14	+ 9	- 1	+ 8	+ 2
Scotland	87	+ 42	+ 9	+ 27	+ 6
South East	168	+ 78	+ 41	+ 21	+ 16
South West	112	+ 47	+ 7	+ 9	+ 31
Wales	56	+ 19	+ 2	+ 16	+ 1
West Midlands	94	+ 31	+ 12	+ 8	+ 11
Yorkshire & Humber	66	+ 18	+ 9	+ 1	+ 8
Totals	1092	+629	+358	+150	+121

When the regions with the largest percentage like-for-like increases in convenience store numbers amongst: (a) non-affiliated independent retailers, (b) symbol group retailers, and (c) multiple retailers & cooperatives are considered (Table 6), London and the North West stand out in terms of the percentage increase in convenience stores accounted for by non-affiliated independent retailers (both above 70%) whereas in Northern Ireland, Wales and the South West less than 15% of the increase in convenience stores across the Goad shopping centres in those regions is accounted for by non-affiliated independent retailers. In contrast, the highest percentage like-for-like increase in symbol group convenience store retailers is observed in Northern Ireland and Wales, and the highest percentage like-for-like increases in multiple retailers and cooperative convenience stores occurs within the Goad shopping centres in the South West.

Table 6 - *Regions with highest percentage like-for-like increases October 2000 – October 2006 in convenience stores of particular operator type within Goad shopping centres.*

Non-affiliated independent retailers	%	Symbol group retailers	%	Multiple retailers & cooperatives	%
London	78.5	Northern Ireland	88.9	South West	66.9
North West	70.4	Wales	84.2		

Taking sample size issues into consideration, given the large total number (+275) of additional convenience stores observed on a like-for-like basis in the London region Goad shopping centres, the high percentage contribution (78.5%) of non-affiliated retailers to that increase appears to the Univ of Southampton research team to be a particularly robust finding from which to extrapolate.

5. Finally, we consider where the additional non-affiliated convenience stores observed on a like-for-like basis in 2006 had been drawn from within the retail landscape. As Table 7 shows, 15.1% of the additional independent convenience stores had resulted from conversions of what in October 2000 were *vacant* retail units within the Goad shopping centres. A further 13.4% result from the reclassification by Goad surveyors of previous CTN stores (presumably as a result of 'range extension' within those stores) into convenience stores, and 12.8% result from the reclassification by Goad surveyor of previous 'grocers and delicatessens' into the convenience store category. There then follows a very long tail (just part of which is shown in Table 7) which involves the conversion of a further 70 categories of retail/service units in October 2000 (from off-licences to florists) into convenience stores by October 2006. We take this to illustrate a considerable entrepreneurial/innovative dynamic in the process of retail space conversion by non-affiliated independent retailers.

Table 7 *Where the additional non-affiliated independent, and multiple retailer & cooperative convenience stores observed in the Goad shopping centres in 2006 have been drawn from – (% of 2000 retail/service units on a like-for-like basis).*

	Additional non-affiliated independent convenience stores in 2006	Additional multiple retailer & cooperative convenience stores in 2006
Retail/service category of same physical unit in 2000 (%)		
Vacant Retail/Service	15.1	7.2
Confectionary, Tobacco & News	13.4	14.4
Grocers & Delicatessens	12.8	6.3
Off-Licences	4.3	6.3
Newsagents & Stationers	3.4	1.9
Health & Beauty	2.6	-
Hardware & Household	2.1	1.4
Charity Shops	2.1	-
Filling Stations	1.9	26.9
Travel Agents	1.9	1.0
Electrical & Durable	1.9	1.0
Ladies Wear & Accessories	1.9	2.4
Greengrocers	1.7	-
Sports, Camping & Leisure	1.7	-
Butchers	1.3	-
Fast Food & Take Away	1.3	0.5
Crafts, Gifts & China	1.3	0.5
Number of other retail/service categories involved	56	27

For comparison purposes, Table 7 also shows where the additional multiple retailer & cooperative convenience stores in 2006 had been drawn from in the retail landscape. In contrast to the case of non-affiliated independent retailers, the additional multiple retailer & cooperative convenience stores within the Goad shopping centres had been heavily drawn (26.9%) from what were previously 'filling stations' in 2000, and the 'tail' of conversions from other types of retail/service units is much shorter – involving conversions from only half the number of retail/service unit categories in 2000 as compared to non-affiliated independent retailers.

Summary

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