

Working paper on Entry and exit of small and specialist stores

Introduction

1. This paper analyses changes in the structure and composition of the retail landscape in more than 1,000 shopping centre locations across the UK over the past eight years. We test for the effect of supermarket entry on the entry and exit rates of small specialist and convenience grocery retailers in these areas. We see considerable 'churn' in most sectors with substantial volumes of both entry and exit. Downward trends are identifiable in the total number of stores in a number of categories, including bakers, fishmongers, off-licences, butchers and greengrocers. However, convenience stores and health food shops show strong net entry overall.
2. Our analysis indicates that entry by a supermarket into an area results in an increased rate of net exit for greengrocers, markets and bookshops. In contrast, the net rate of exit for bakeries declines with local entry by new supermarkets.
3. The remainder of this paper is structured as follows. First, we describe the dataset on which this analysis is based. Second, we set out trends in small shop numbers over time and consider the effect of supermarket entry. Finally, we set out an econometric analysis of the effect of supermarket entry in which we control for fixed location effects and a time trend for each location.

The dataset

4. The analysis in this paper is based on a dataset compiled by Experian Goad.¹ Since 1965 Goad data has been collected on more than 1,000 shopping centres. At present, there are 1,300 surveyed shopping centres. The dataset we have used in our analysis covers 1,115 shopping centres across the UK for the period from 1999

¹Experian is a global analysis and information company that also provides data and analysis for leading grocery retailers in the UK (including [S&C]). Charles Goad started the Goad database in 1965 at the request of the Department of Trade and Industry.

to 2007. These locations are defined consistently throughout the dataset though they have no fixed size in geographic or demographic terms. A number of new locations appeared in the dataset over the course of this period; however, we have removed them from our analysis to maintain the consistency of the sample.

5. Experian's Goad data is collected in person by Experian's own team of surveyors on either an annual or biennial survey of specified shopping centre locations, in which the type of business conducted at each outlet within that location is recorded. The descriptions are based on three levels of aggregation: primary activity, category, and Goad class. The surveyors collect information on: primary activity; retail category; fascia; company details; address; estimated floorspace and Ordnance Survey coordinates. Each address is given a unique Goad number. This allows us to observe whether a store with certain characteristics remains at that address each time the survey is conducted.

Entry and exit trends

6. Figures 1 to 13 show the exit and entry rates, by sector, across all of the locations in our sample. We have defined entry as the appearance of a new store in a sector, but not a transfer of the ownership of a store within a sector (eg a change in the ownership of a butcher's shop). In the figures below, the scales on the y-axis has been standardized for ease of comparison (with the exception of the figures for convenience stores, since they exhibit a rate of churn² that far exceeds that of any other sector).
7. The sectors in decline are predominantly the specialist grocery retailers. Fishmongers, greengrocers, butchers, bakers and off-licences all show a consistent

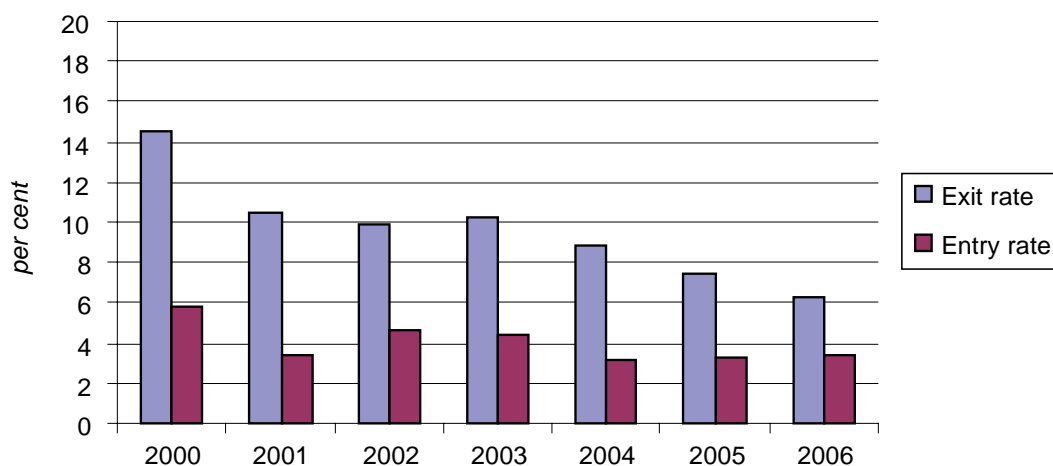
²We use the term 'churn' to denote the magnitude of exit and entry rates. This may be unobservable when examining the net entry rate since large rates of exit and entry may cancel each other out.

decline in each year. However, beyond this dramatic decline in the number of specialist grocery shops there are four additional points to note.

8. First, the declines are, in many cases, becoming proportionally smaller over time. This indicates that many specialists continue to survive despite the apparent pressures of increasing competition from supermarkets and national trends towards convenience shopping at the expense of speciality shops. Moreover, this evidence is not consistent with the argument that a decline in the high street is gathering pace; rather the decline appears to be slowing.
9. Second, even where exit rates are substantial and the sector appears to be in serious decline, entry continues to occur. This suggests a lack of prohibitive barriers to entry; it is evidently possible for new specialist grocery retailers to open where sufficient demand for such stores exists.

FIGURE 1

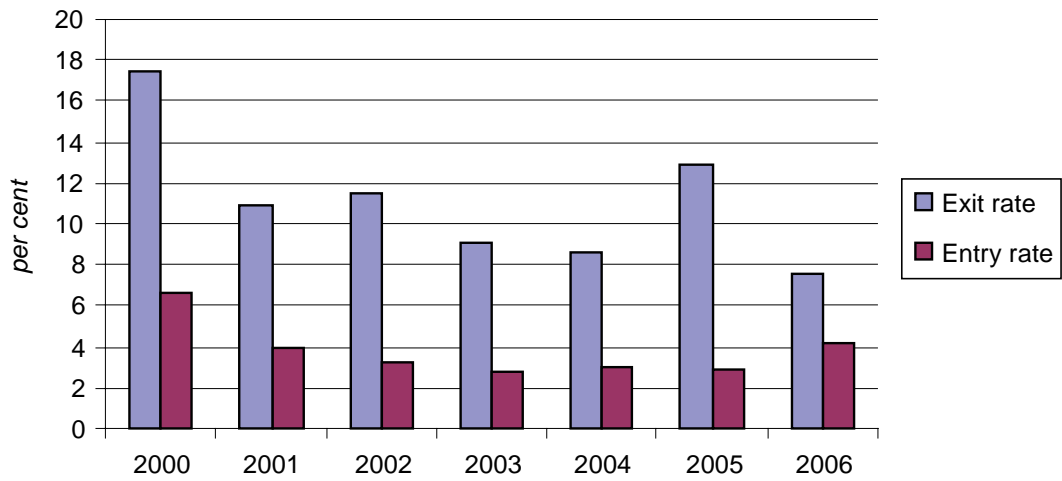
Fishmongers: exit and entry rates



Source: CC analysis of Goad data.

FIGURE 2

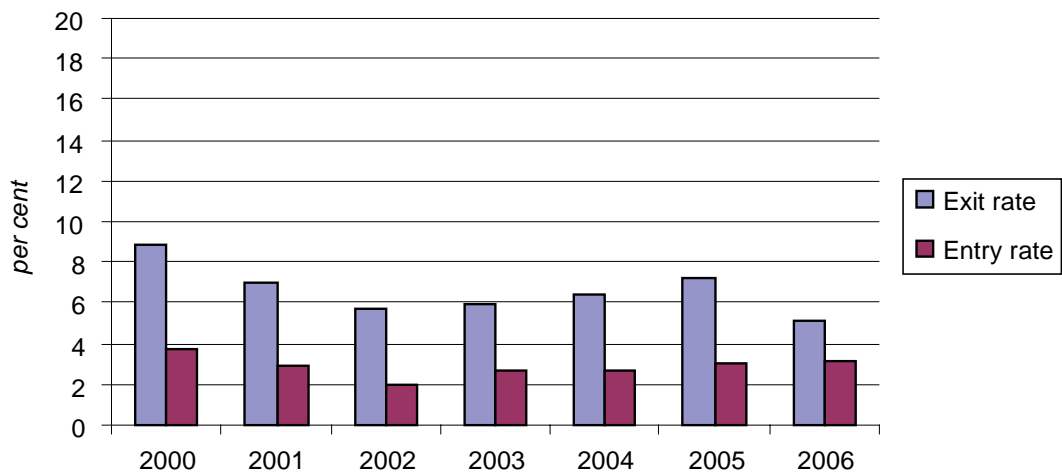
Greengrocers: exit and entry rates



Source: CC analysis of Goad data.

FIGURE 3

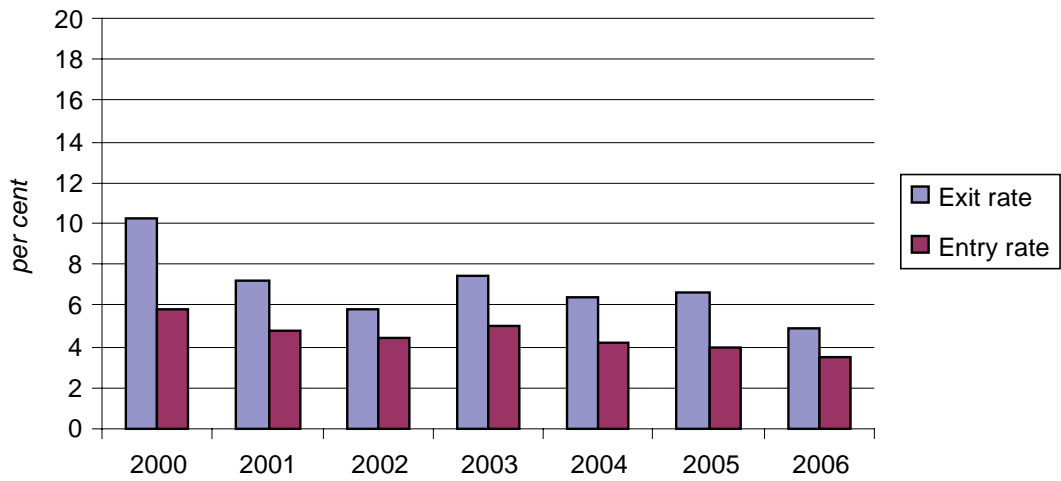
Butchers: exit and entry rates



Source: CC analysis of Goad data.

FIGURE 4

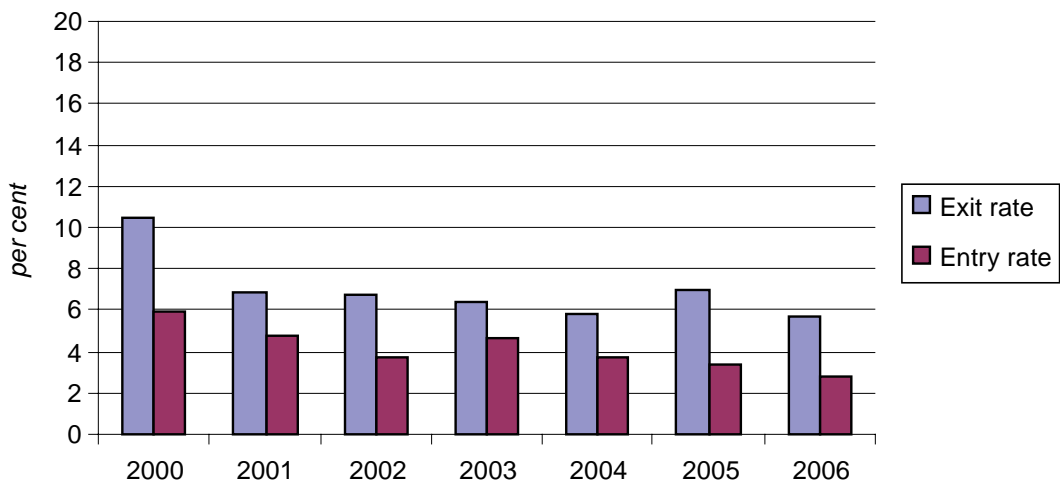
Bakers: exit and entry rates



Source: CC analysis of Goad data.

FIGURE 5

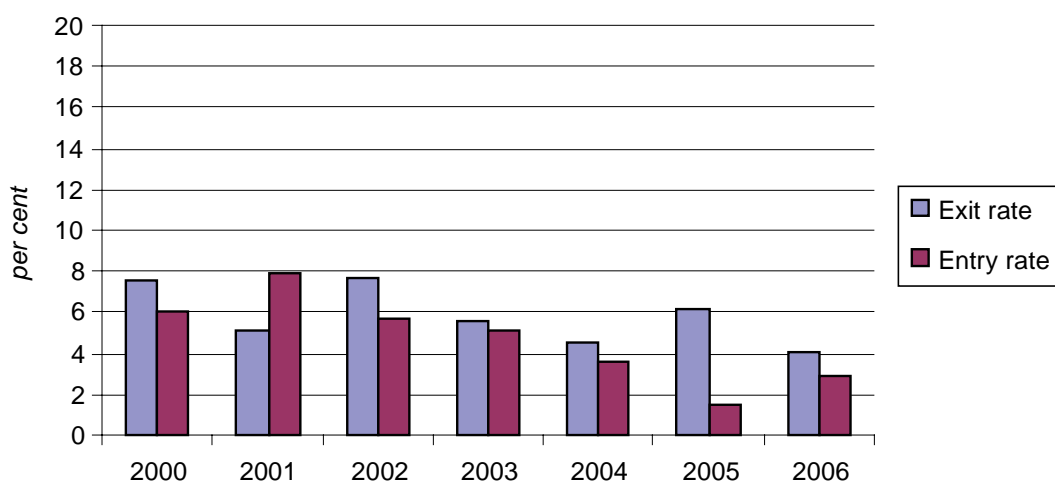
CTNs (confectionery, tobacco and news): exit and entry rates



Source: CC analysis of Goad data.

FIGURE 6

Markets (street and farmers markets): exit and entry rates

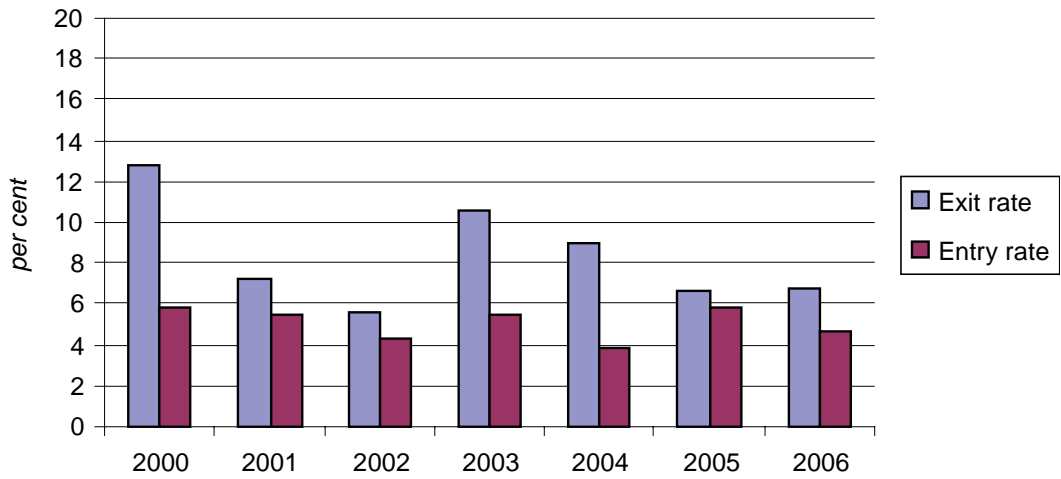


Source: CC analysis of Goad data.

10. Third, in some cases, we see spikes in the exit rates. This might reflect the effect of below-cost selling by supermarkets of the products in which these shops specialize. For example, 2003 and 2004 saw an unusually large exit rate from the off-licence sector, 2003 and 2005 saw out-of-trend increases in the exit rate of booksellers, and finally, the exit of music and video stores was particularly high in 2005. However, this may also reflect the increased competition provided by supermarkets as well as Internet retailers.

FIGURE 7

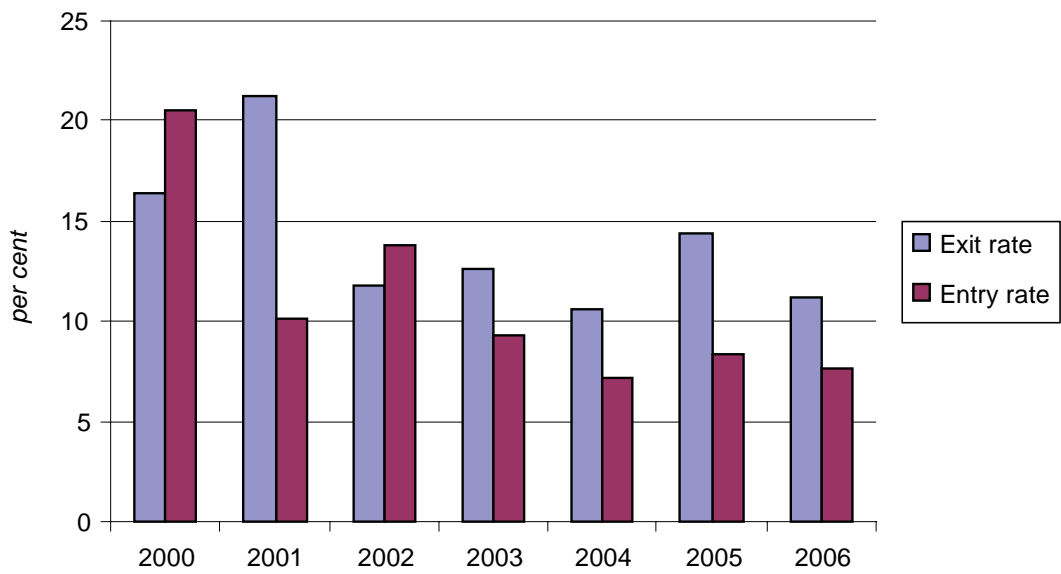
Off licences: exit and entry rates



Source: CC analysis of Goad data.

FIGURE 8

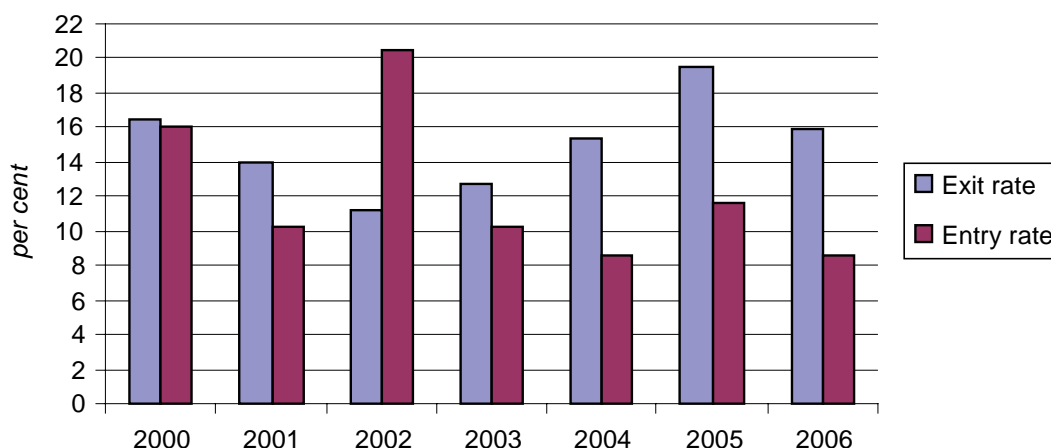
Unaffiliated independent booksellers



Source: CC analysis of Goad data.

FIGURE 9

Music and video recordings stores

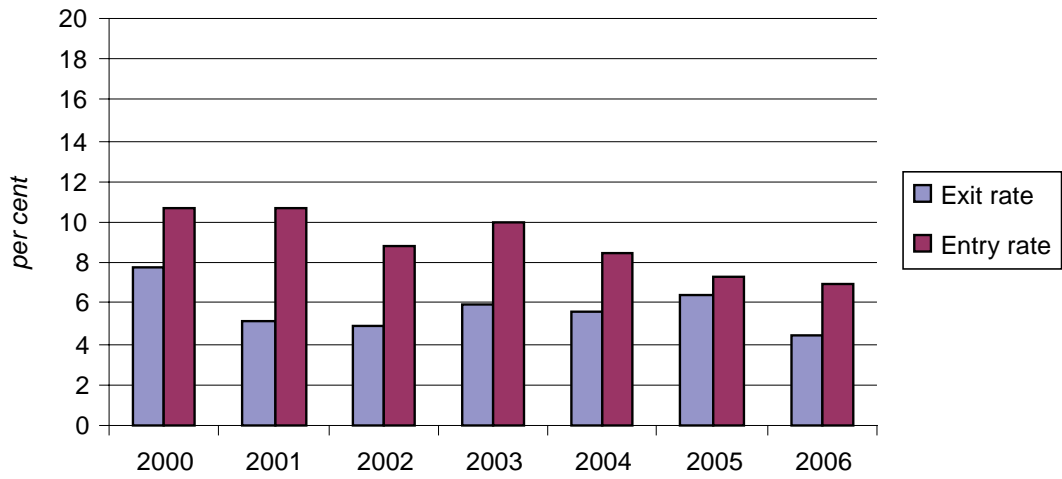


Source: CC analysis of Goad data.

11. Finally, a small number of retail categories (namely, non-affiliated and multiple convenience stores, delicatessens and health food stores) have seen net entry over the last eight years. This may reflect broad trends in consumer demand towards more convenience and healthier food, both of which are evident in the leading grocery retailers' move towards stocking healthy own-label ranges and fresh fruit and vegetables and 24-hour opening times. Notably, the growth seen in convenience stores owned by the major grocery retailers is mirrored by the growth of non-affiliated independent convenience stores.

FIGURE 10

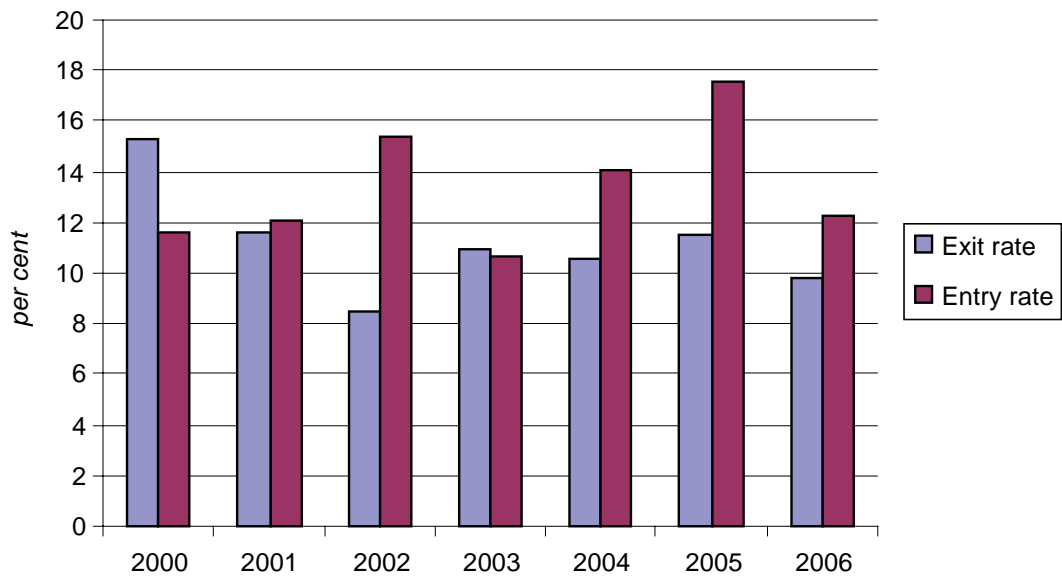
Health food shops: exit and entry rates



Source: CC analysis of Goad data.

FIGURE 11

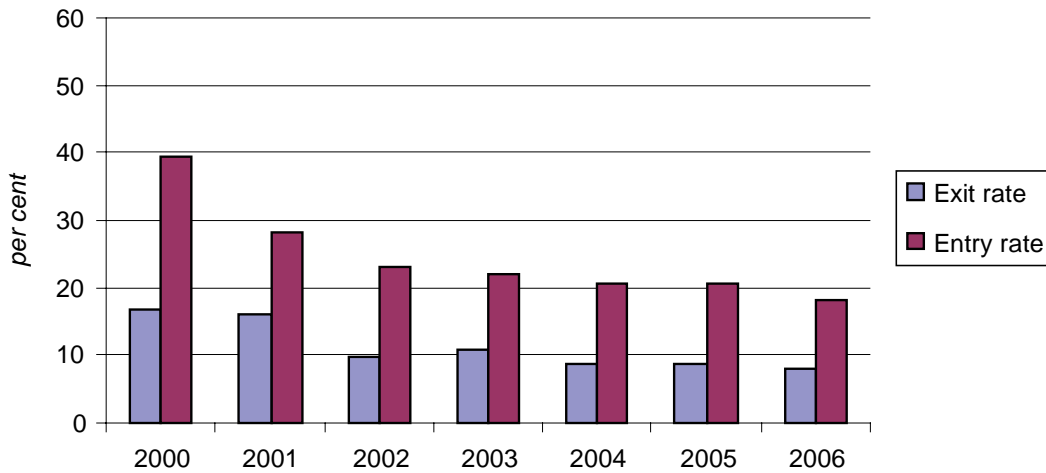
Delicatessens: exit and entry rates



Source: CC analysis of Goad data.

FIGURE 12

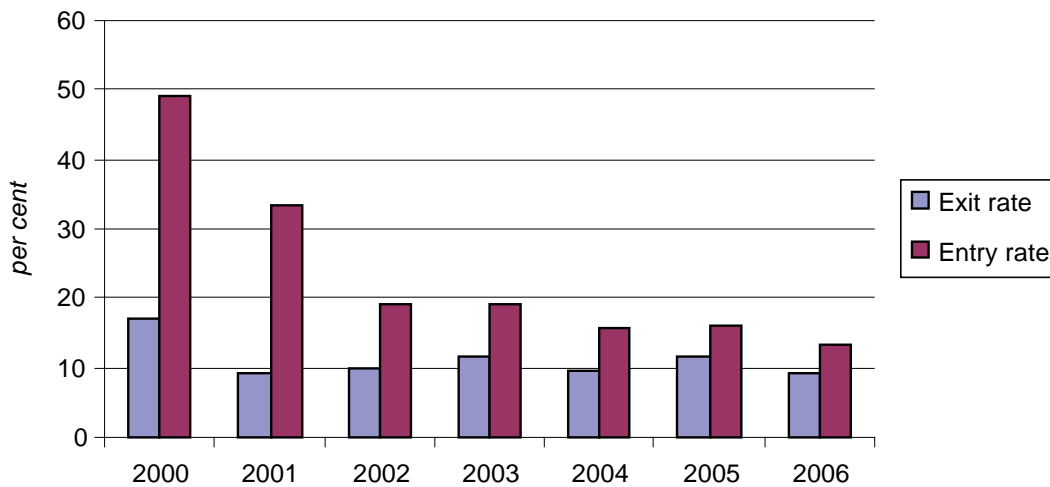
Non-affiliated independent convenience stores (< 280 sq metres): exit and entry rates



Source: CC analysis of Goad data.

FIGURE 13

Multiple convenience stores (< 280 sq metres): exit and entry rates



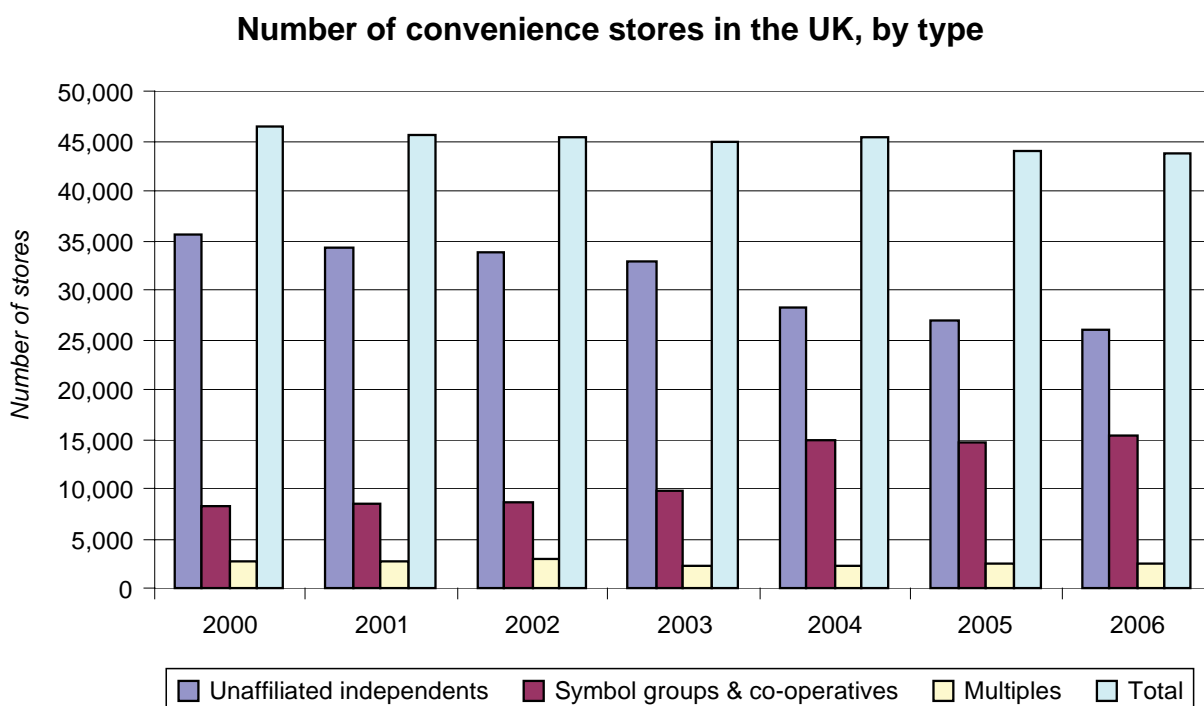
Source: CC analysis of Goad data.

- The growth in independent convenience stores that is seen in this dataset appears to conflict with the IGD figures on trends in the independent convenience store sector. IGD figures are based on a national list of convenience stores compiled by the publisher of *The Grocer*, William Reed (called the Knowledge Store). This list is compiled using a mixture of telephone interviews, volunteered information and

information obtained from third parties to characterize the stores on their circulation list.³

13. The Knowledge Store data on independent⁴ unaffiliated convenience store numbers since 2000, which is quoted by the IGD, is shown in Figure 14. This shows a decline in both the number of independent convenience stores in the UK and the total number of convenience stores since 2000.

FIGURE 14



Source: CC analysis of data from the Knowledge Store/IGD.

14. There would appear to be a degree of inconsistency between Experian's Goad data and the Knowledge Store data reported in IGD publications in relation to trends in convenience store numbers. The Goad data is showing growth in the number of convenience stores, including independent convenience stores, in the locations that it covers, while the Knowledge Store data is showing a decline in total convenience

³The full list of sources reads: (1) telemarketing/telechecking; (2) fax-outs; (3) registration cards and inbound calls; (4) web research; (5) returns; (6) data population companies, including Yell, 118118.com; (7) data purchases, including from Companies House, Mintel, and AC Nielsen.

⁴ie convenience stores that are not owned by a multiple retailer or affiliated with a symbol group.

store numbers (and, in particular, numbers of independent convenience stores) at a national level.

15. Given the data collection methodology employed by Goad, we are confident that its dataset is robust. One explanation for this apparent discrepancy could be that there is a different trend in the areas covered by the Goad data compared with the national level data compiled by the Knowledge Store. However, this does not seem to be a likely explanation of the differences in the two trends that can be observed. An alternative explanation could be that the data collection method employed by the Knowledge Store is missing a significant number of new entries into the convenience store sector. We will continue to explore possible explanations of these different trends in convenience store numbers.⁵

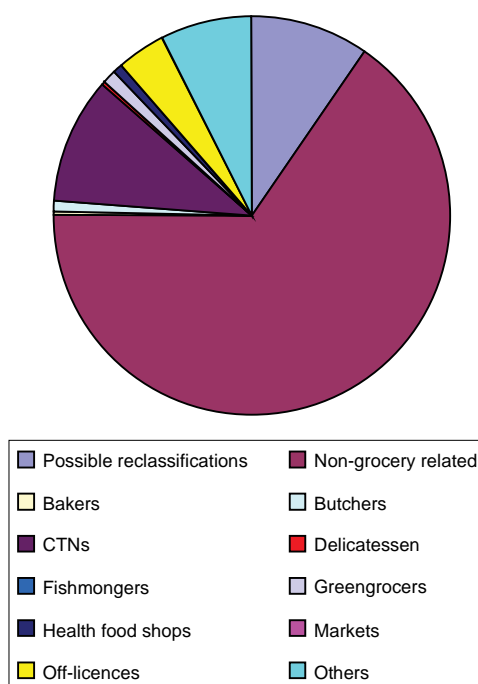
16. To examine the high level of convenience store entry shown in the Goad data, we looked at the previous recorded use of convenience stores to assess whether this growth represented a reclassification of existing stores or completely new entry. We found that around 10 per cent of new convenience stores represent reclassifications from other retailing categories (ie stores that retained the same fascia while changing sector). Nevertheless, 65 per cent of convenience store entry occurs on sites which were not previously involved in the groceries trade, or any subsection of it.⁶ A further 25 per cent of new entry by convenience stores reflected changes in ownership as well as category. As a result, we do not consider that the high level of entry in convenience stores in the Goad data can be explained by classification issues.

⁵The two data sources vary in other respects which taken in isolation we do not believe to be sufficient to explain the contradictory trends that emerge. In particular, they differ in their geographical coverage; the Goad data is explicitly targeted at shopping centres and high streets. As such, despite the fact that rural areas (eg Sheringham) are included in the data, isolated shops in villages or estates will not be picked up. The differences in the conclusions that we draw from the respective databases can therefore be taken to partially reflect differences in the trends that are observed in town centres and in more rural areas.

⁶These sectors were not in our dataset, therefore we do not know what these stores were used for, or who owned them, prior to them becoming a convenience store.

FIGURE 15

Previous site use for convenience store entrants

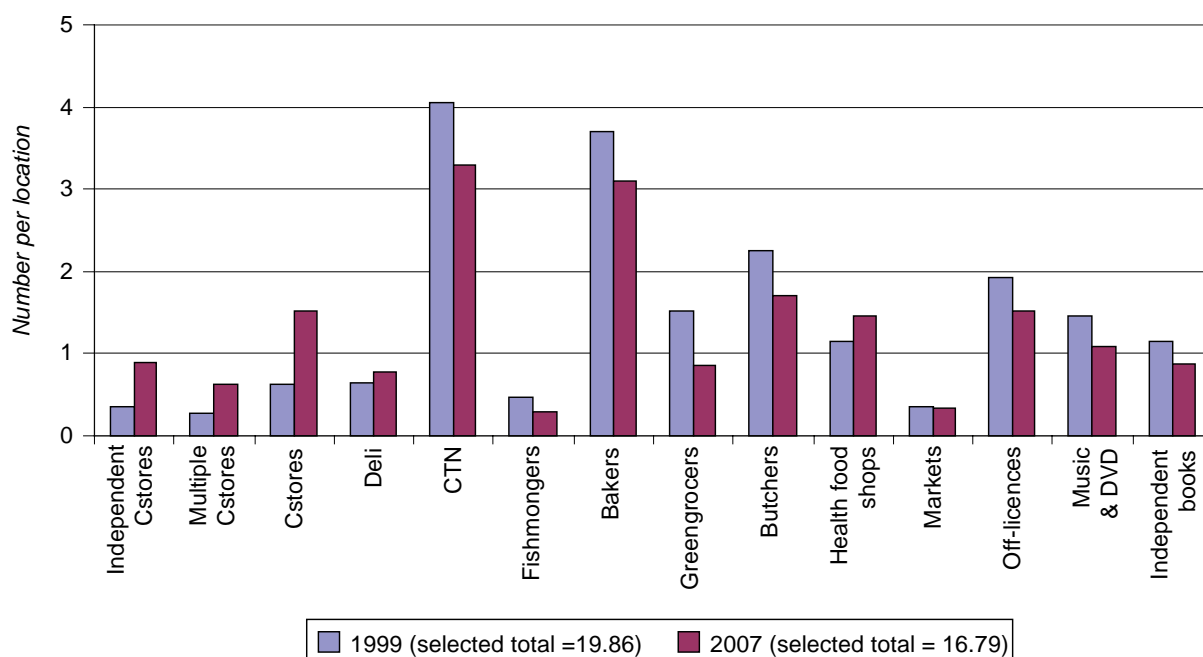


Source: CC analysis of Goad data.

17. Figure 16 shows a comparison of two snapshots that capture the developments in the small and specialist store sector over the last eight years. As previously discussed, we have seen increases in health food shops, delicatessens and convenience stores. However, in absolute terms the decline in the number of greengrocers, butchers, bakers, fishmongers, CTNs and off-licences has outweighed these, proportionally large, increases. As a result, for the selected sectors below, the average number per location has fallen by three stores or 15.5 per cent over the course of this period.

FIGURE 16

Average number of stores per location, by sector (1999 vs 2007)



Source: CC Analysis of Goad data.

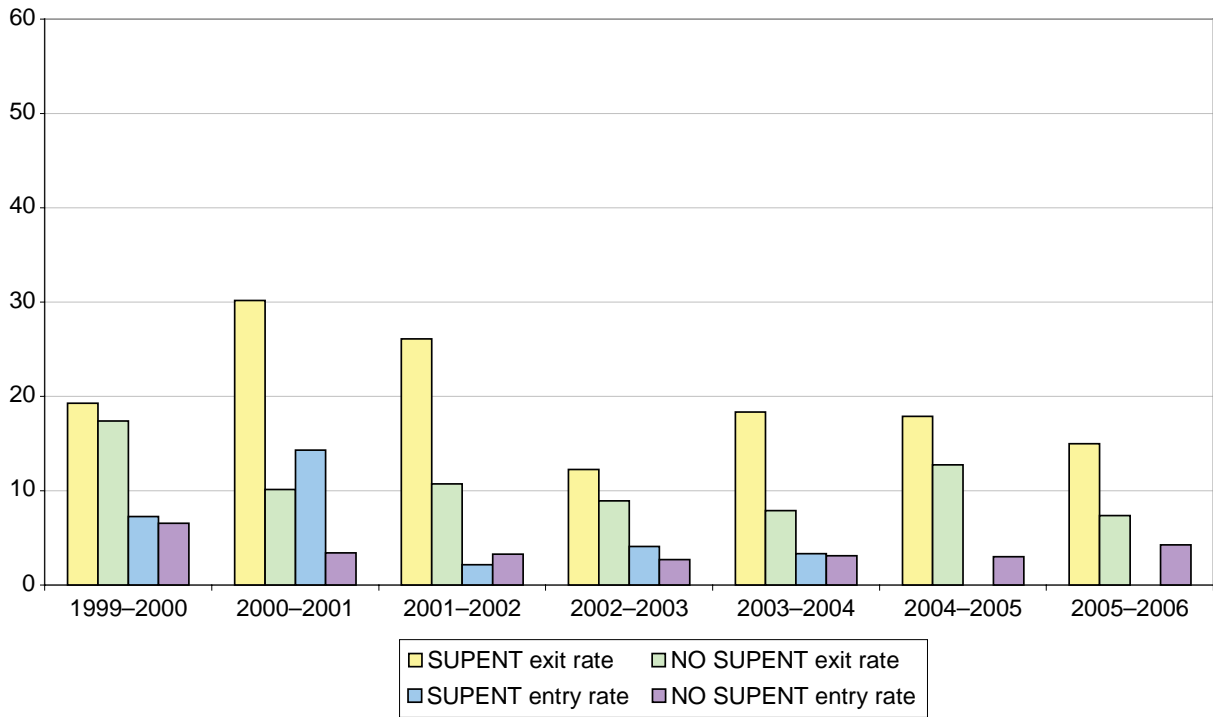
18. This indicates a reduction in the choice of store that consumers typically face in these areas. However, in itself, this does not tell us anything about the range of products that those consumers are offered. Moreover it is not clear what has caused these changes. In the next section we examine whether the changes in each sector can be attributed to the effect of a supermarket entering the surveyed area.

Conditional entry analysis

19. In this section we take the exit rate of locations in which a supermarket has entered (SUPENT), and compare it with a control group of locations in which entry has not occurred (No SUPENT). For example, Figure 17 illustrates that there was consistently higher rates of exit in SUPENT areas than No SUPENT areas in every year of the sample.

FIGURE 17

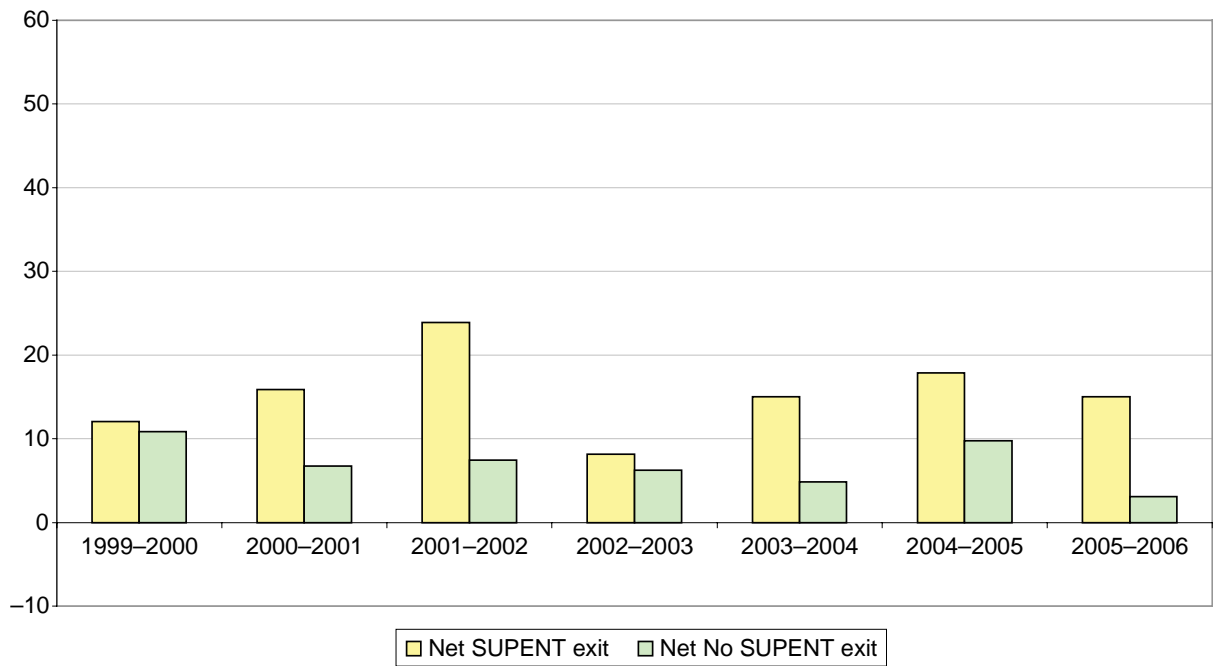
Greengrocer entry and exit rates, supermarket entry or no supermarket entry



Source: CC analysis of Goad data.

FIGURE 18

Greengrocers: net exit rates, supermarket entry or no supermarket entry

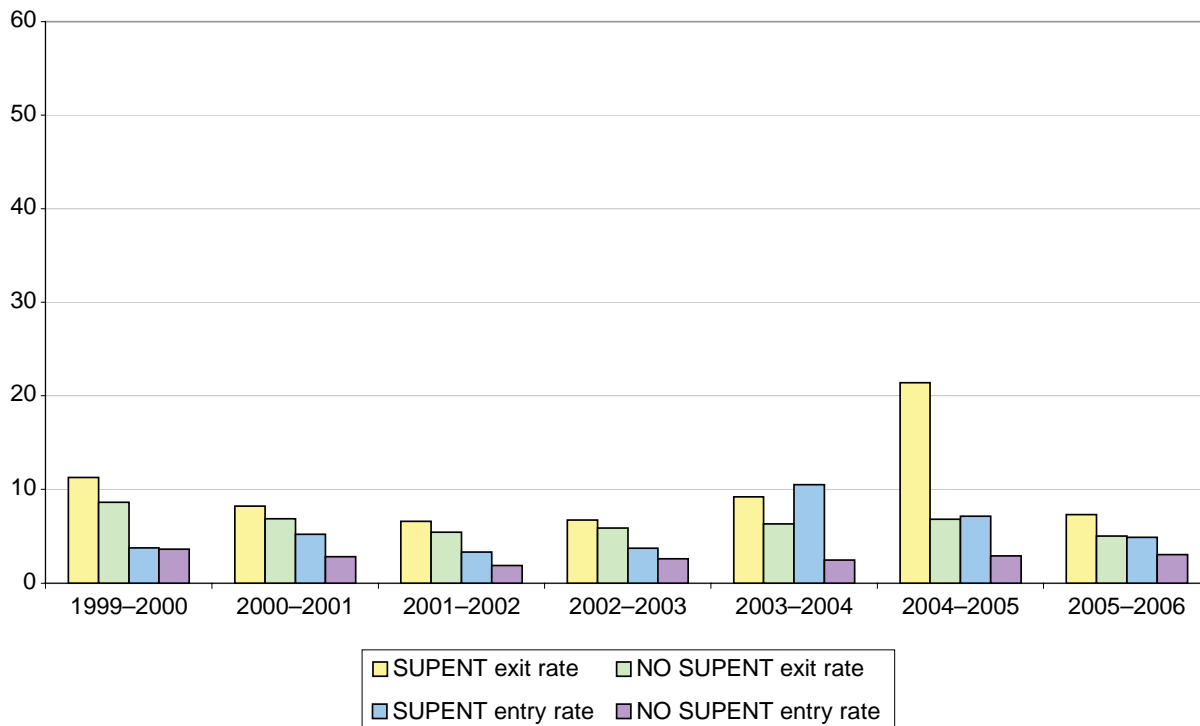


Source: CC analysis of Goad data.

20. There is a greater net exit of greengrocers in locations where there is supermarket entry than where there is no supermarket entry. The difference varies from little more than one percentage point in 2000, to as much as 15 points in 2001–2002. In each of the last three years, exit has been greater in locations where supermarket entry has been observed.

FIGURE 19

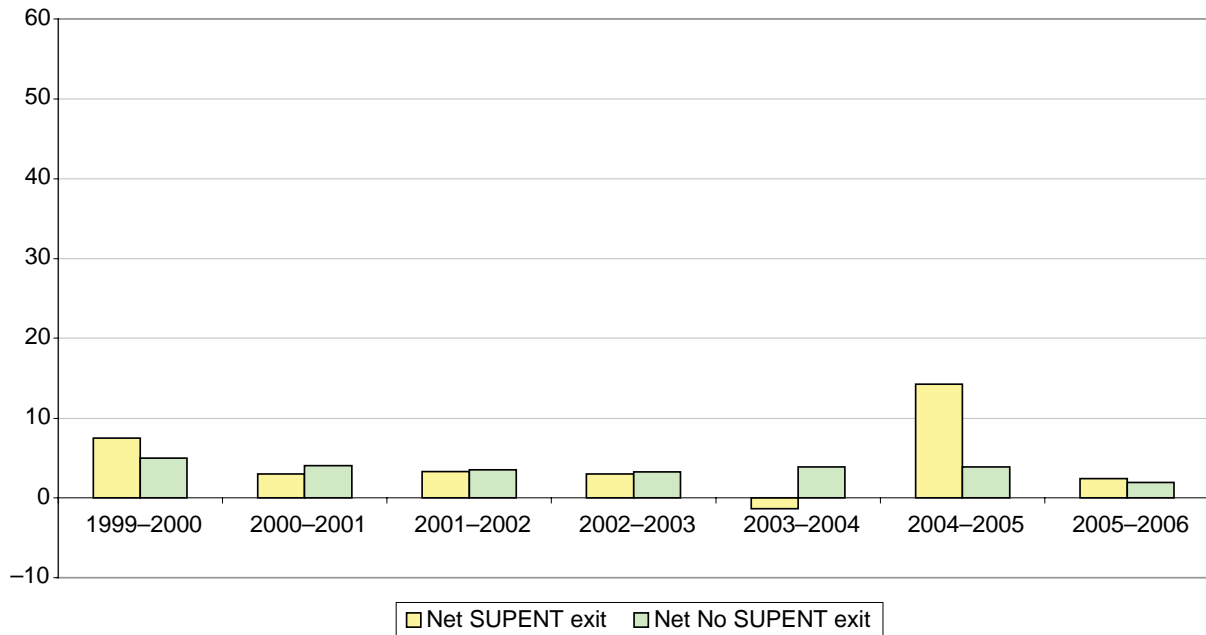
Butchers entry and exit rates, supermarket entry or no supermarket entry



Source: CC analysis of Goad data.

FIGURE 20

Butchers: net exit rates, supermarket entry or no supermarket entry

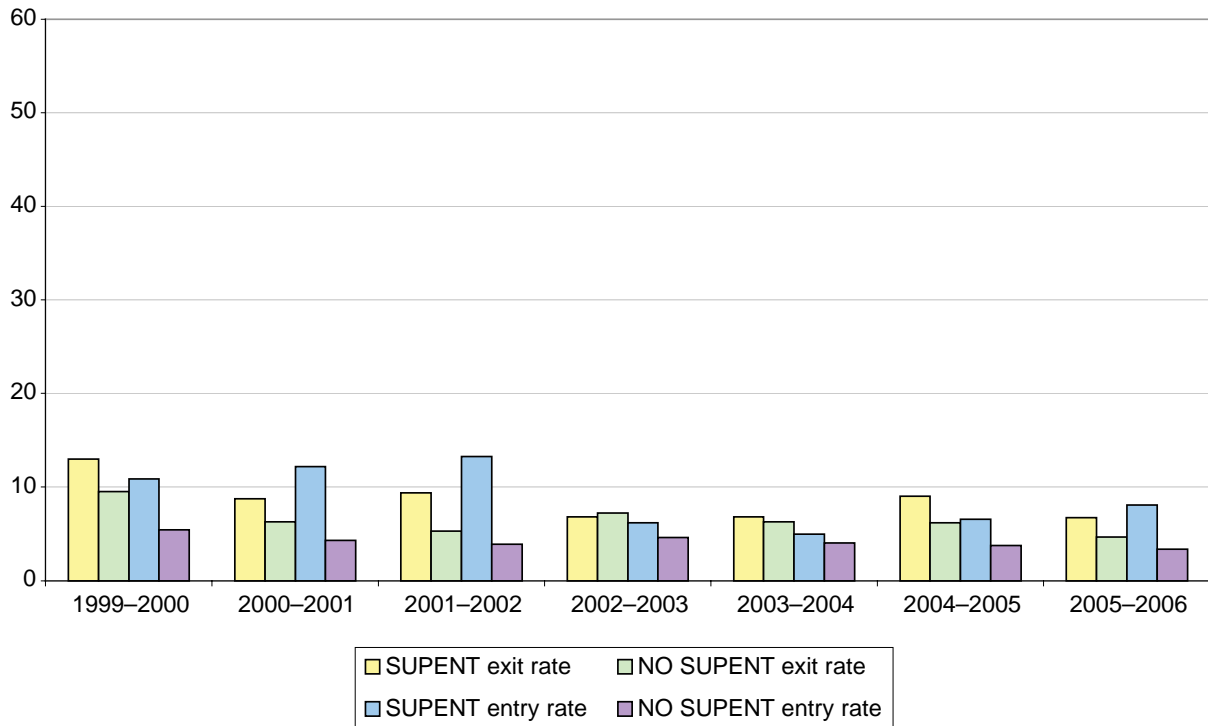


Source: CC analysis of Goad data.

21. There is a higher exit rate for butchers in locations where supermarket entry is observed. However, there is also a higher entry rate of butchers where there is supermarket entry. This results in a fairly comparable net exit rate for butchers regardless of whether there is supermarket entry or not (the exception being 2004–2005, where there is a much higher exit rate where there is supermarket entry and, conversely, in 2003–2004, where there is a small net entry where there is supermarket entry).

FIGURE 21

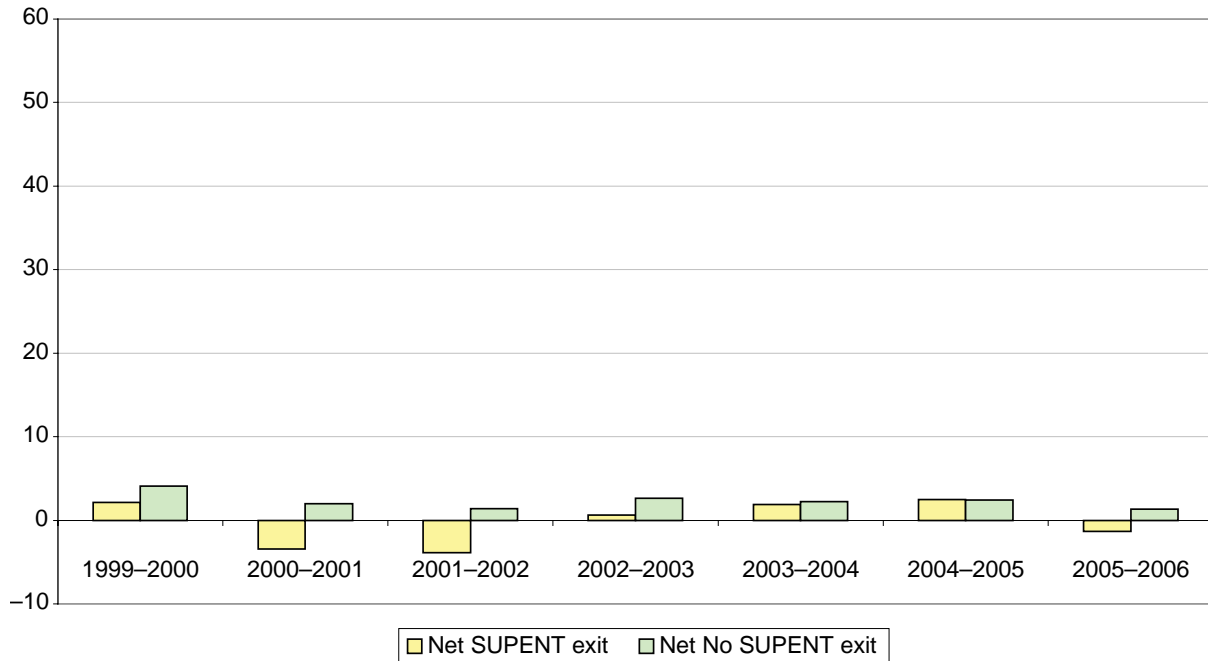
Bakers entry and exit rates, supermarket entry or no supermarket entry



Source: CC analysis of Goad data.

FIGURE 22

Bakers: net exit rates, supermarket entry or no supermarket entry

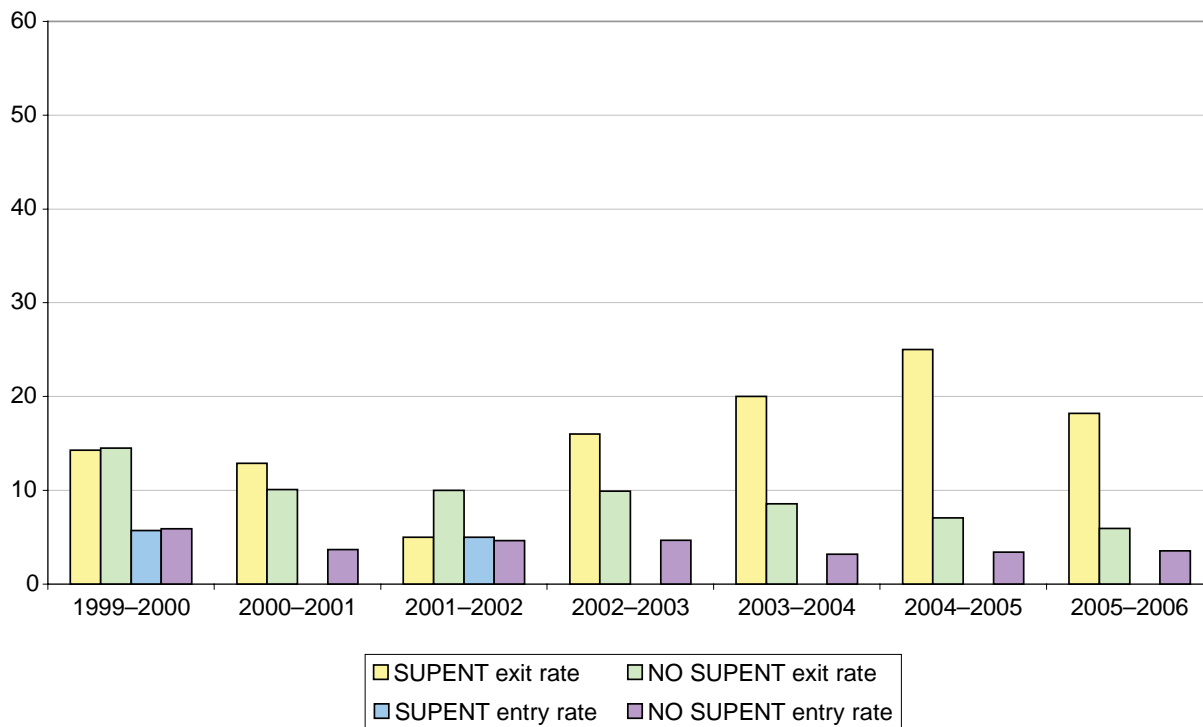


Source: CC analysis of Goad data.

22. In the bakery sector, supermarket entry results in high rates of exit and entry. However, where there is supermarket entry, the net exit rate is lower than in locations with no supermarket entry, and in some cases, is negative (ie displaying net entry).

FIGURE 23

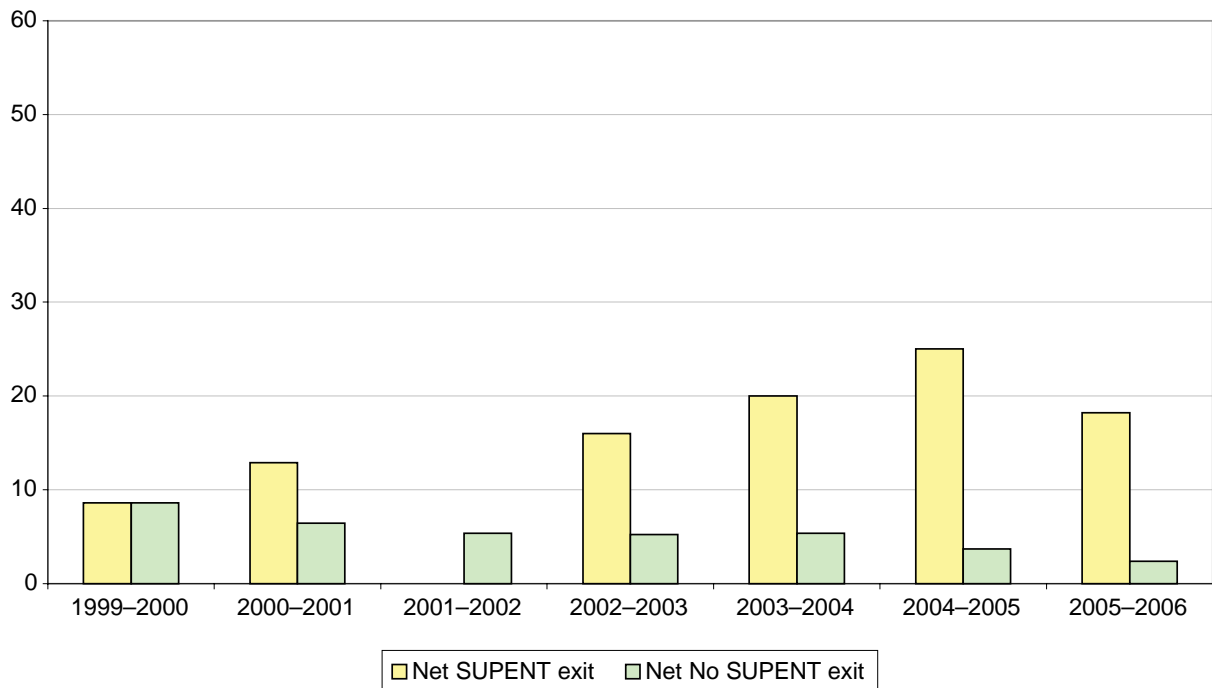
Fishmongers entry and exit rates, supermarket entry or no supermarket entry



Source: CC analysis of Goad data.

FIGURE 24

Fishmongers: net exit rates, supermarket entry or no supermarket entry

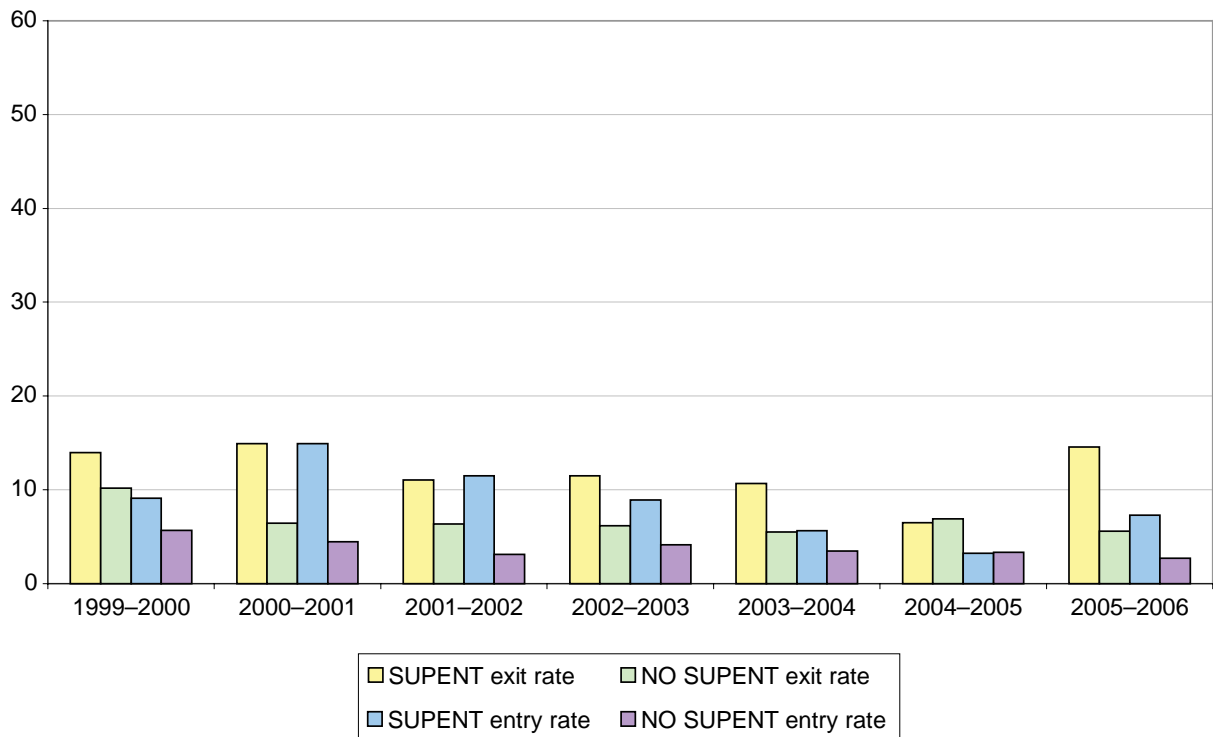


Source: CC analysis of Goad data.

23. For fishmongers, in all but two of the observed years, supermarket entry is linked to higher exit rates; in 2004-2005, the difference was 20 percentage points. The net fishmonger exit over the last four observed years is an average of 15 percentage points higher where there is supermarket entry.

FIGURE 25

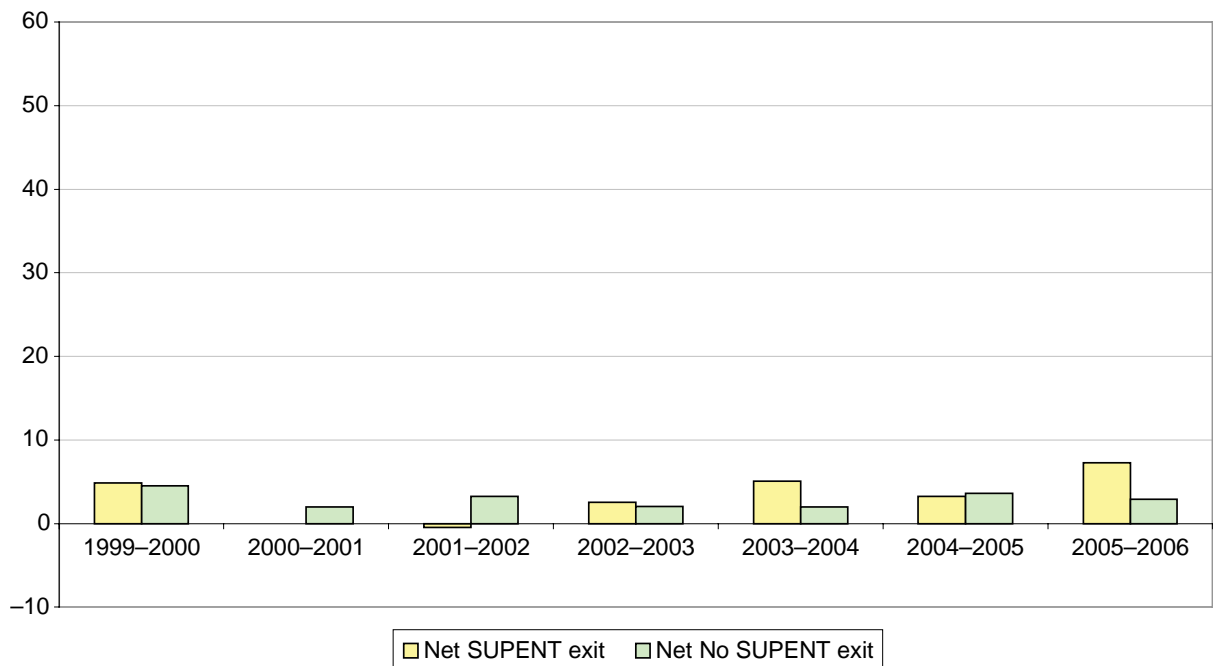
CTN entry and exit rates, supermarket entry or no supermarket entry



Source: CC analysis of Goad data.

FIGURE 26

CTN: net exit rates, supermarket entry or no supermarket entry

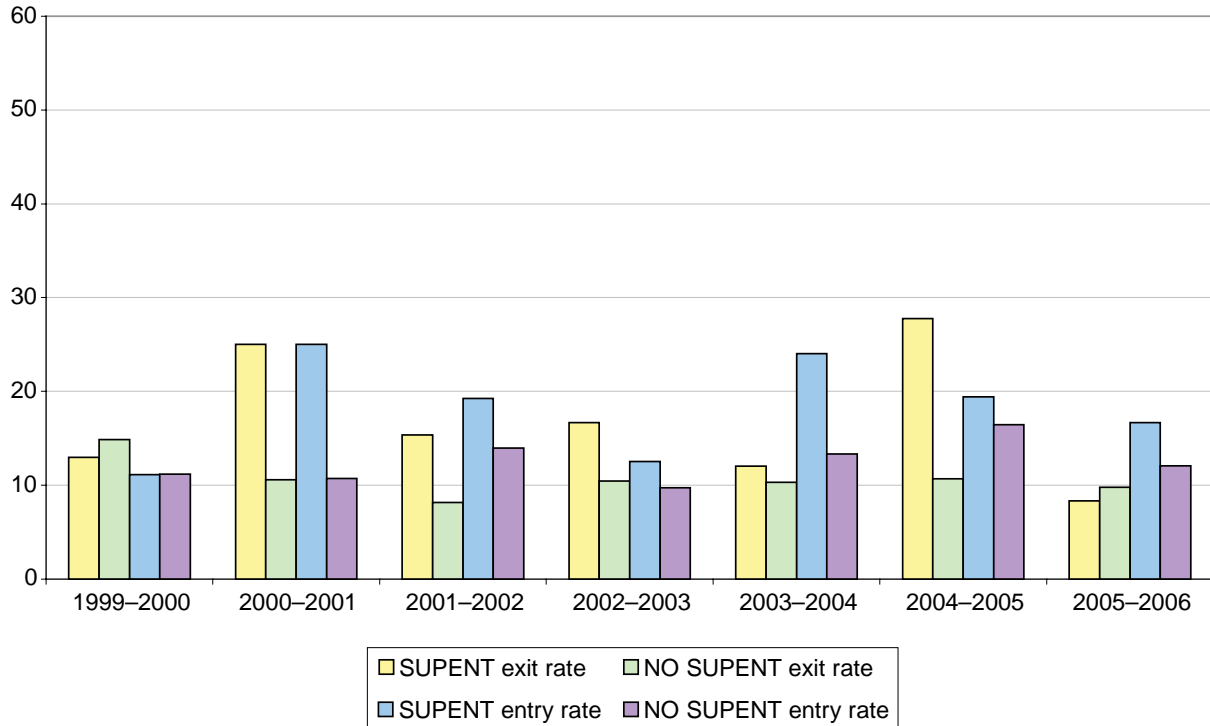


Source: CC analysis of Goad data.

24. The CTN figures show supermarket entry going hand in hand with higher exit and entry rates. However, there does not seem to be a marked pattern in the net exit rates between locations with supermarket entry and no supermarket entry.

FIGURE 27

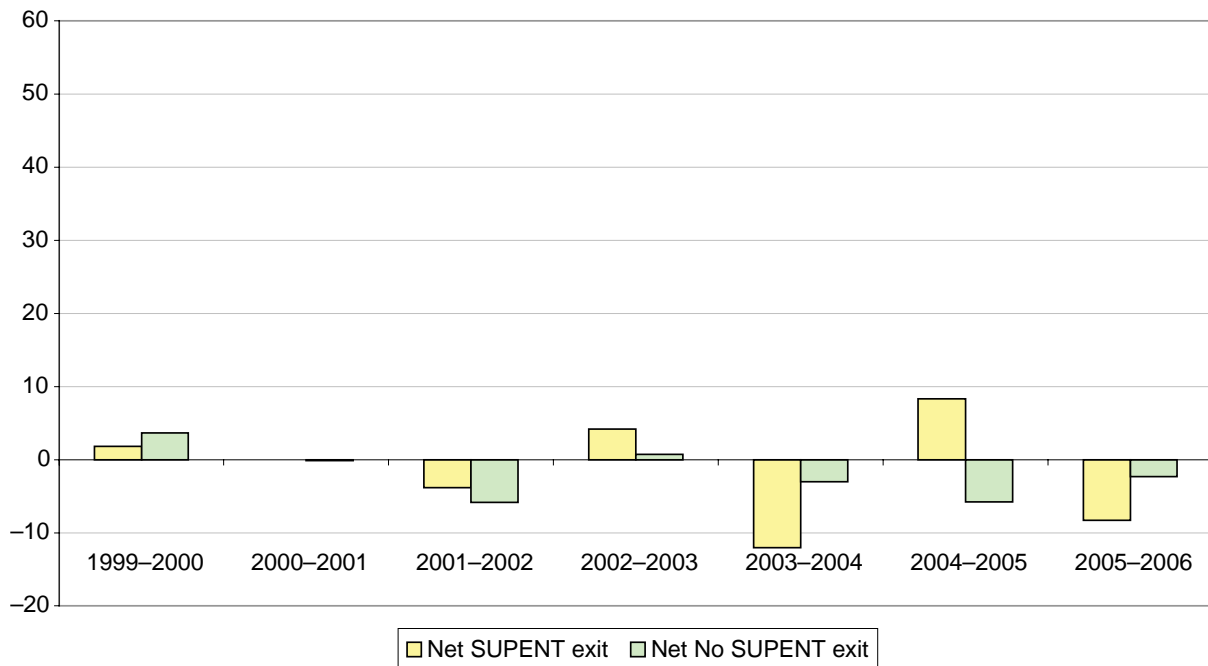
Delicatessen entry and exit rates, supermarket entry or no supermarket entry



Source: CC analysis of Goad data.

FIGURE 28

Delicatessens: net exit rates, supermarket entry or no supermarket entry

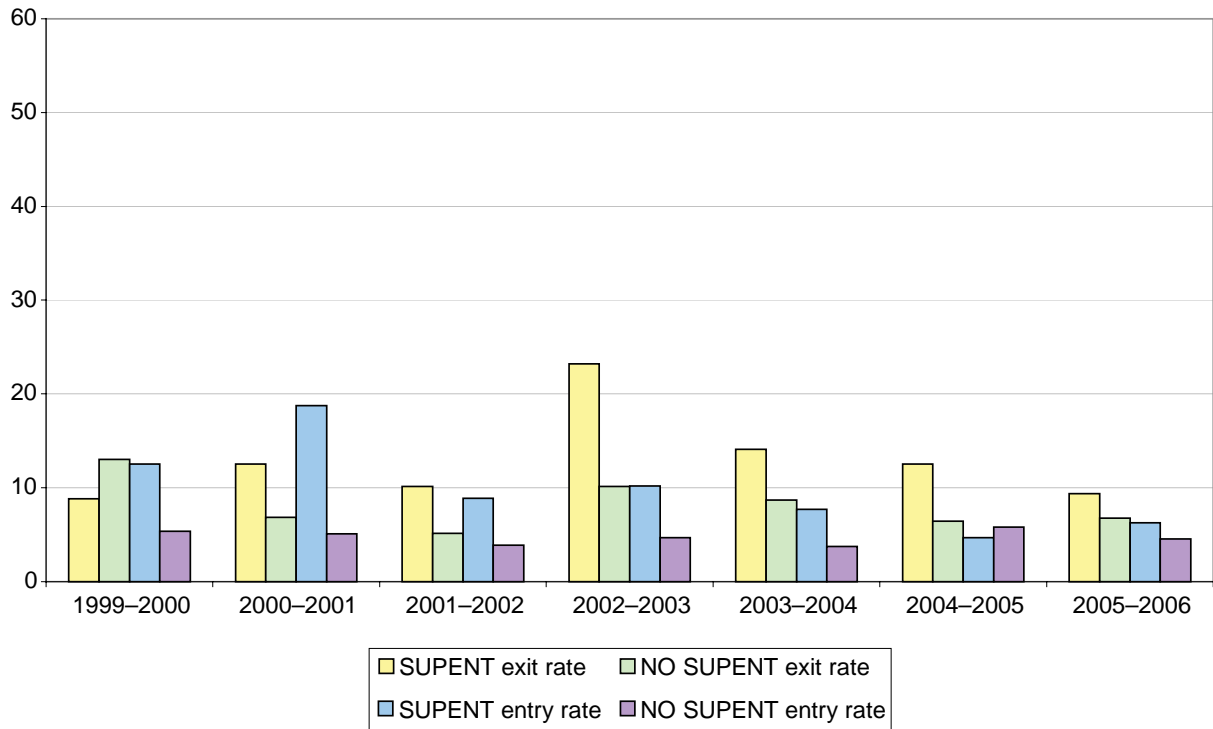


Source: CC analysis of Goad data.

25. Delicatessens display high exit and entry rates compared with most other sectors. In relation to both exit and entry, locations with supermarket entry see higher rates than those with no supermarket entry. However, this level of churn is not obvious in the net exit rate of delicatessens which displays no clear pattern over the reviewed period, with both positive and negative net exit rates for locations with supermarket entry and no supermarket entry.

FIGURE 29

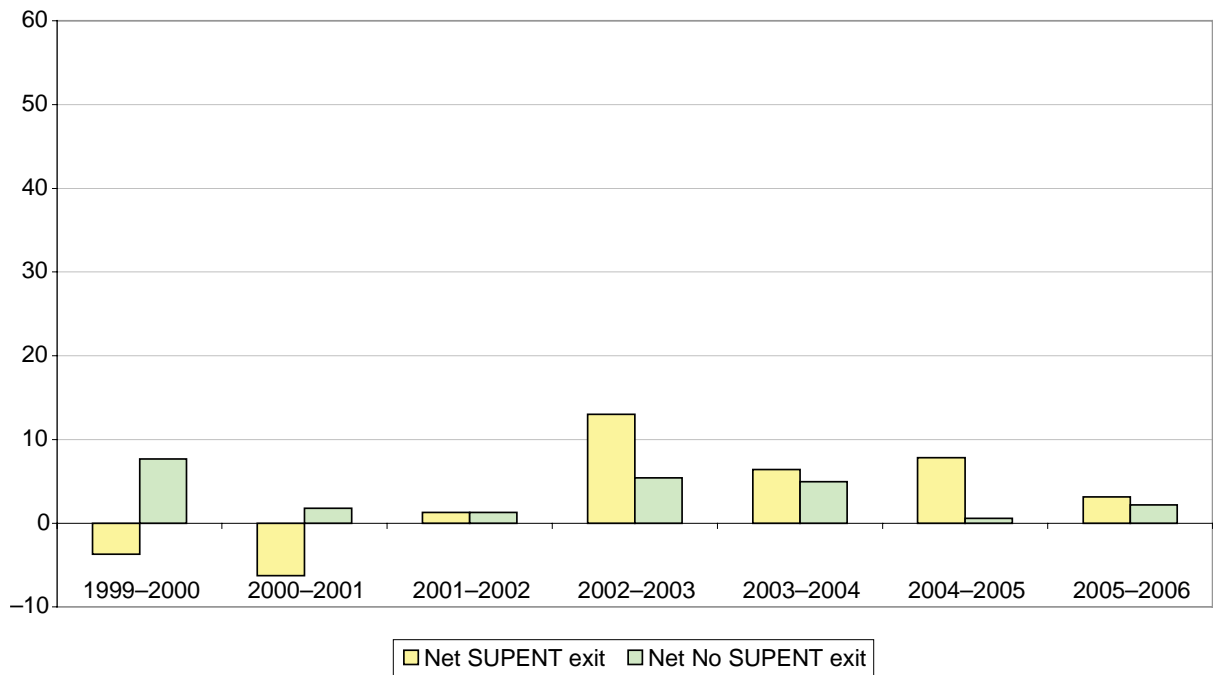
Off-licence entry and exit rates, supermarket entry or no supermarket entry



Source: CC analysis of Goad data.

FIGURE 30

Off-licences: net exit rates, supermarket entry or no supermarket entry

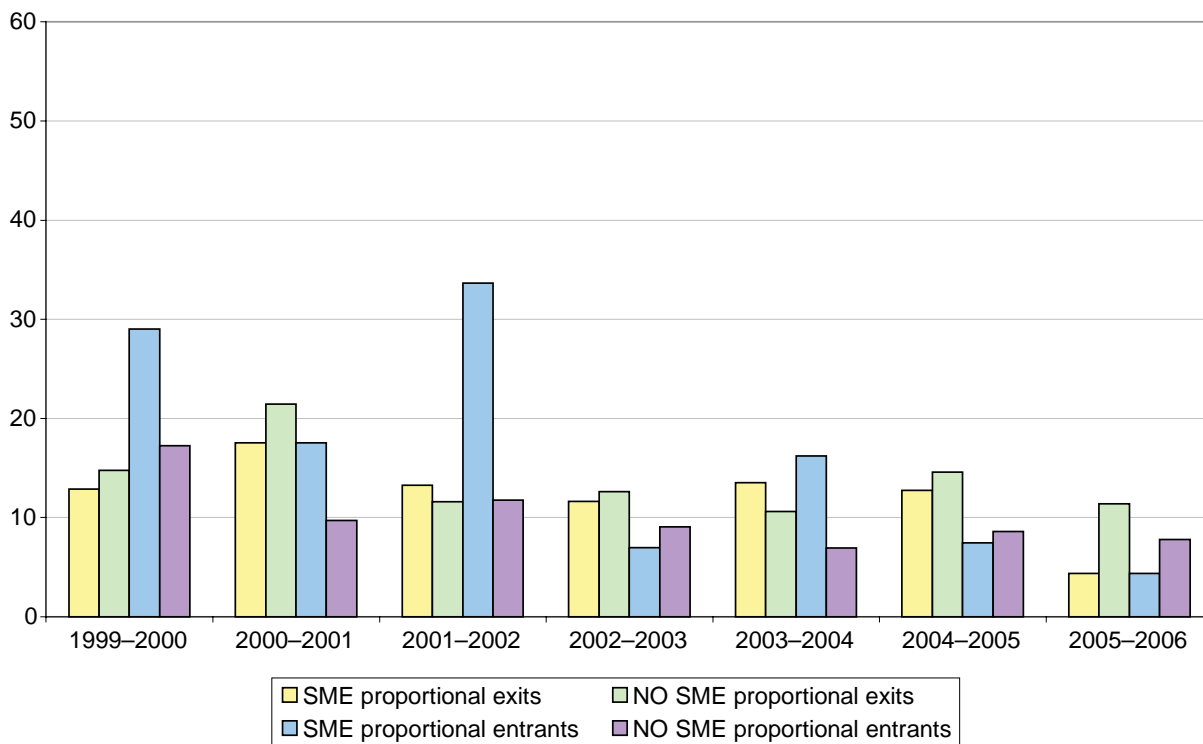


Source: CC analysis of Goad data.

26. For off-licences, where supermarket entry is observed there is generally a greater exit and a greater entry rate. Since 2002, the net exit is higher with supermarket entry than with no supermarket entry.

FIGURE 31

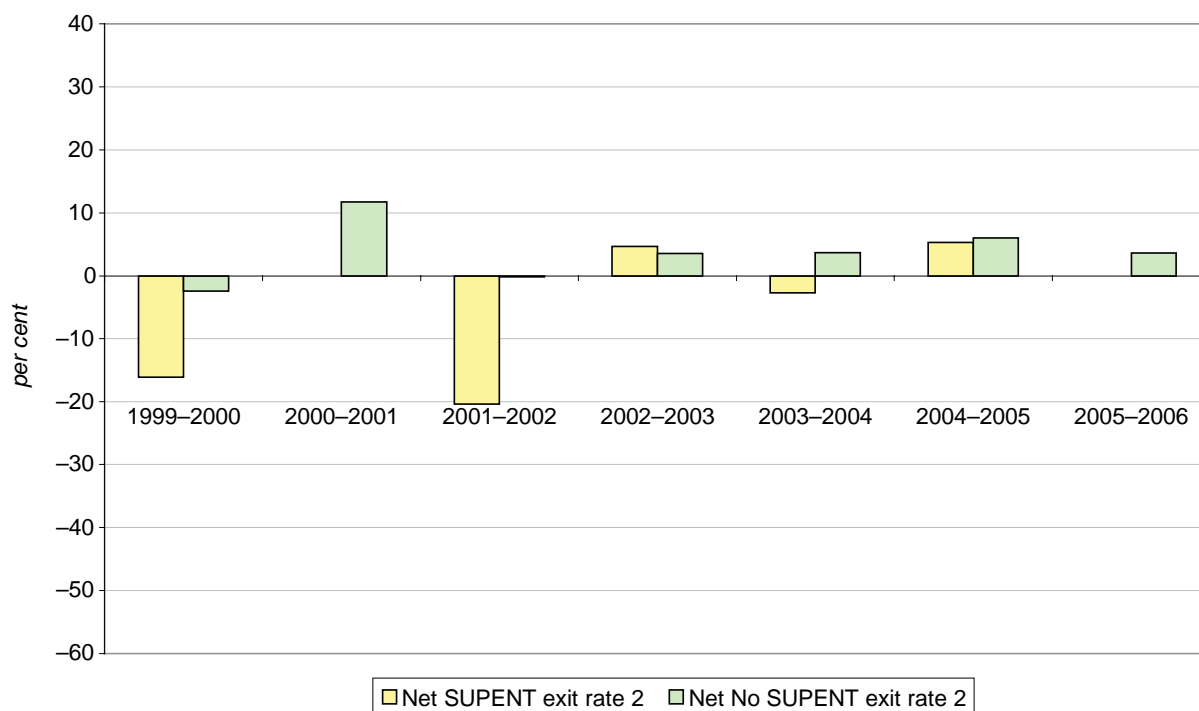
Independent booksellers: entry and exit rates, supermarket entry or no supermarket entry



Source: CC analysis of Goad data.

FIGURE 32

Independent booksellers: net exit rates, supermarket entry or no supermarket entry

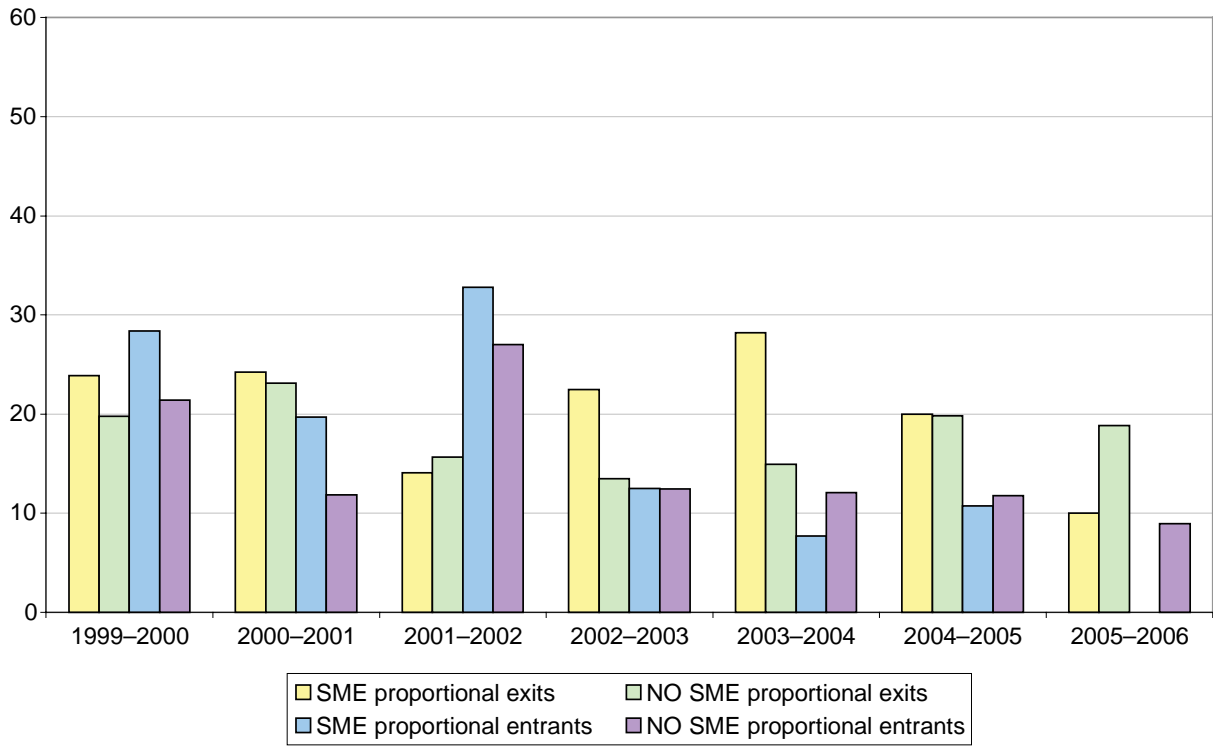


Source: CC analysis of Goad data.

27. There is no clear pattern in the figures for independent booksellers. Net entry is observed in 1999-2000 and 2001-2002 alongside supermarket entry events.

FIGURE 33

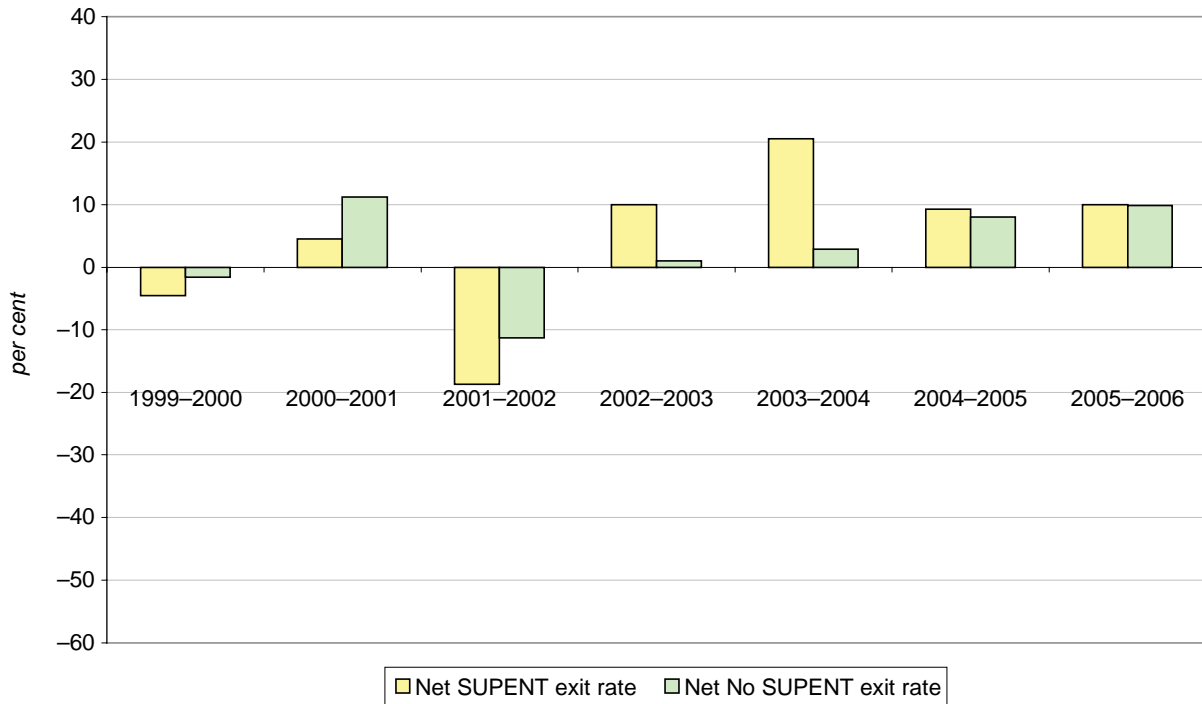
Independent music and video recordings stores: entry and exit rates, supermarket entry or no supermarket entry



Source: CC analysis of Goad data.

FIGURE 34

Independent music and video recordings stores: net exit rates, supermarket entry or no supermarket entry

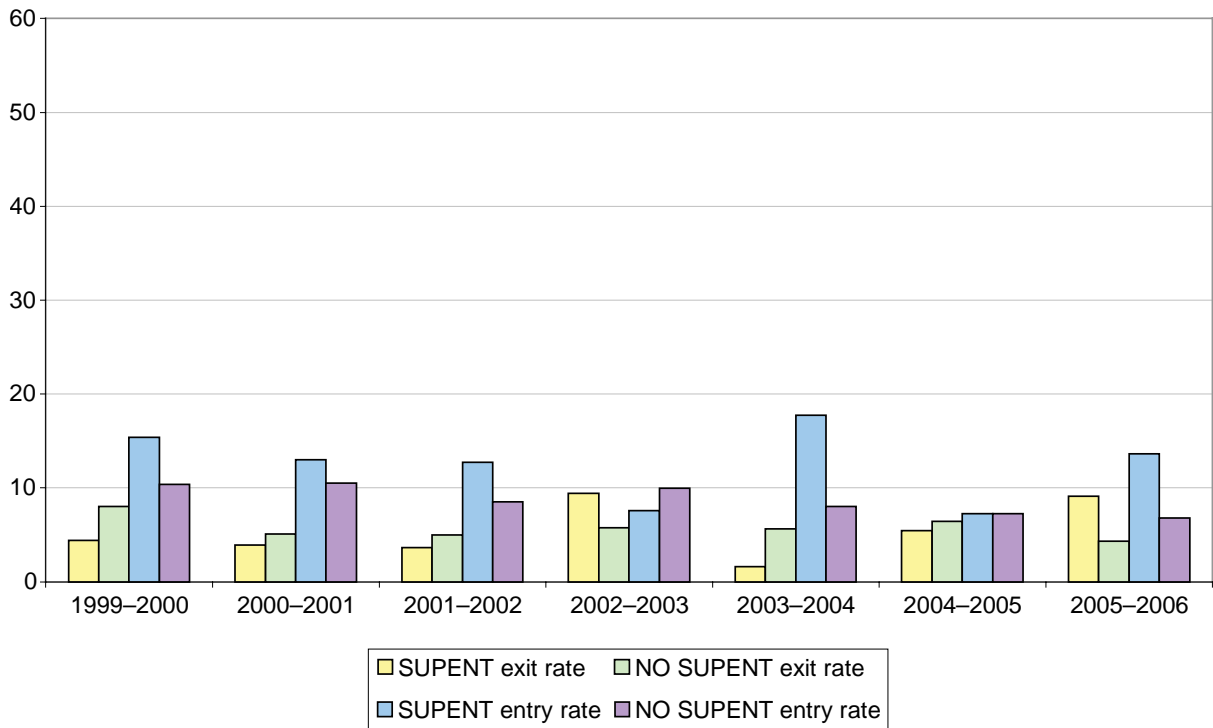


Source: CC analysis of Goad data.

28. For independent music and video stores, we observe higher net exit rates in areas of supermarket entry since 2002, although the sharp difference in 2002-2004 is no longer evident.

FIGURE 35

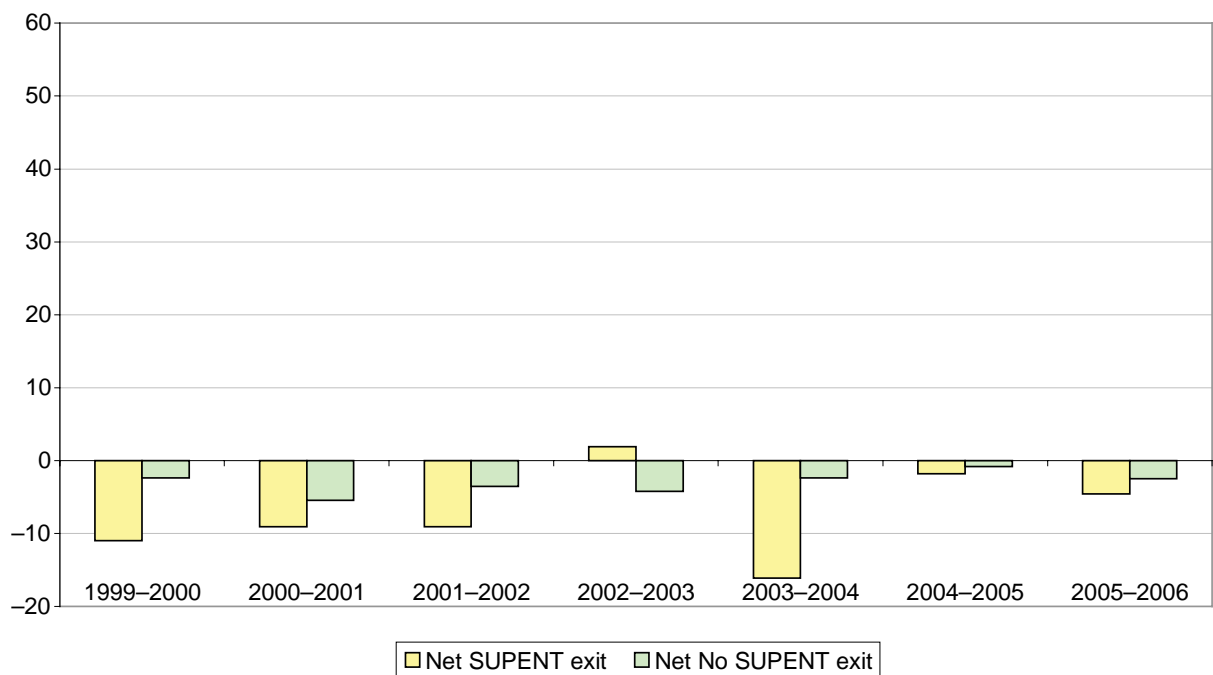
Health food shops entry and exit rates, supermarket entry or no supermarket entry



Source: CC analysis of Goad data.

FIGURE 36

Health food shops: net exit rates, supermarket entry or no supermarket entry

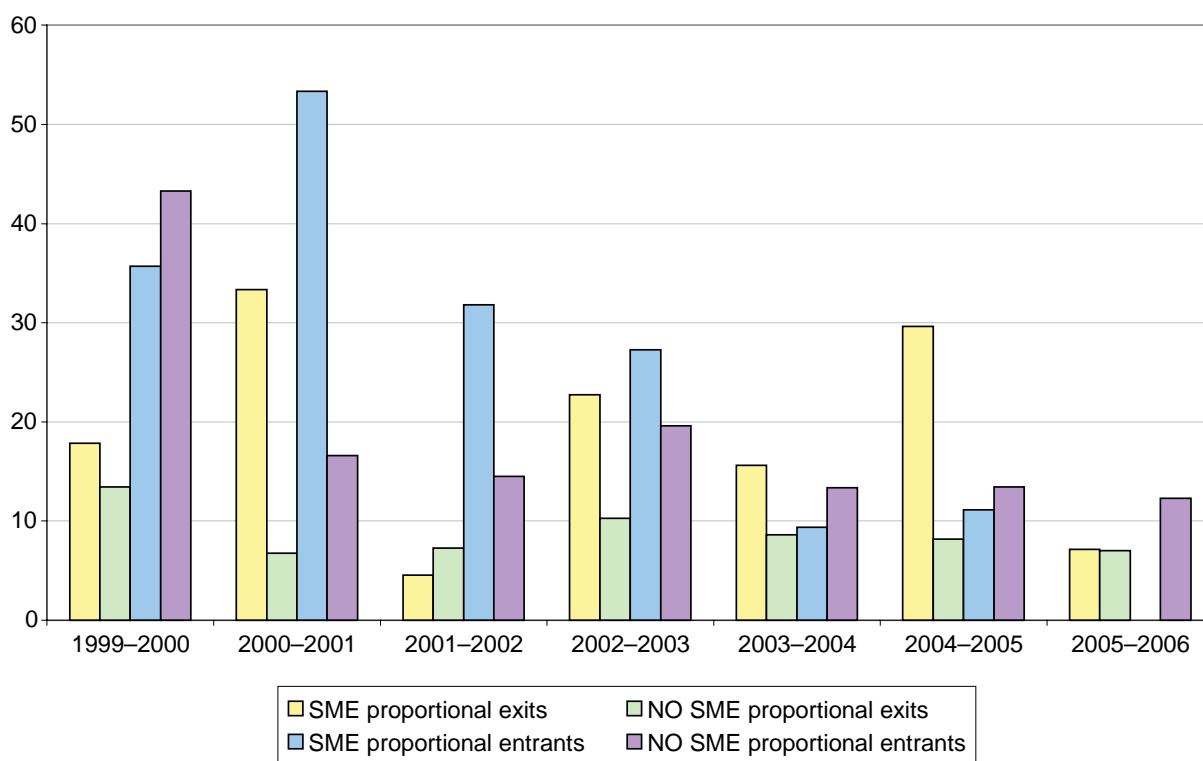


Source: CC analysis of Goad data.

29. Health food shops, a category which has been expanding since 1999 (see Figure 10), displays a different trend from most sectors. Higher exit rates are associated with no supermarket entry, whereas supermarket entry appears related to lower exit rates. Supermarket entry also generally displays a higher entry rate than no supermarket entry. This combination leads to negative net exit (ie net entry), overall; the rate of net entry is more pronounced where there is supermarket entry.

FIGURE 37

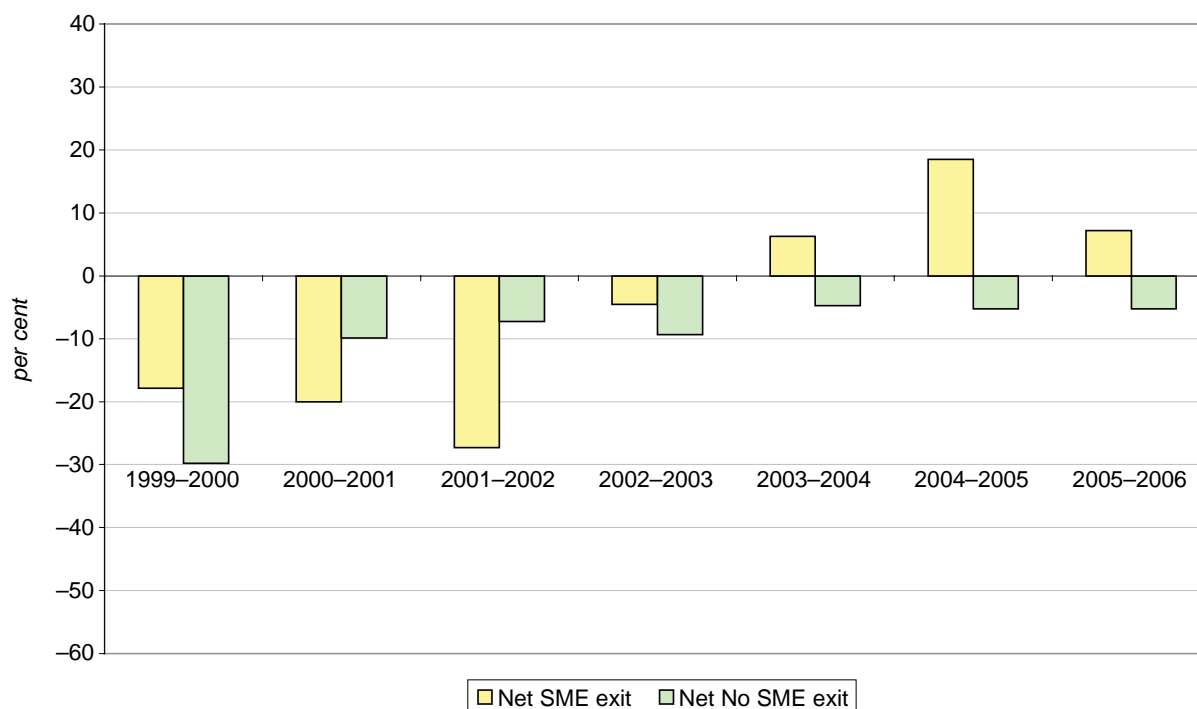
Multiple convenience stores (<280 sq metres) entry and exit rates, supermarket entry or no supermarket entry



Source: CC analysis of Goad data.

FIGURE 38

Multiple convenience stores (<280 sq metres): net exit rates, supermarket entry or no supermarket entry



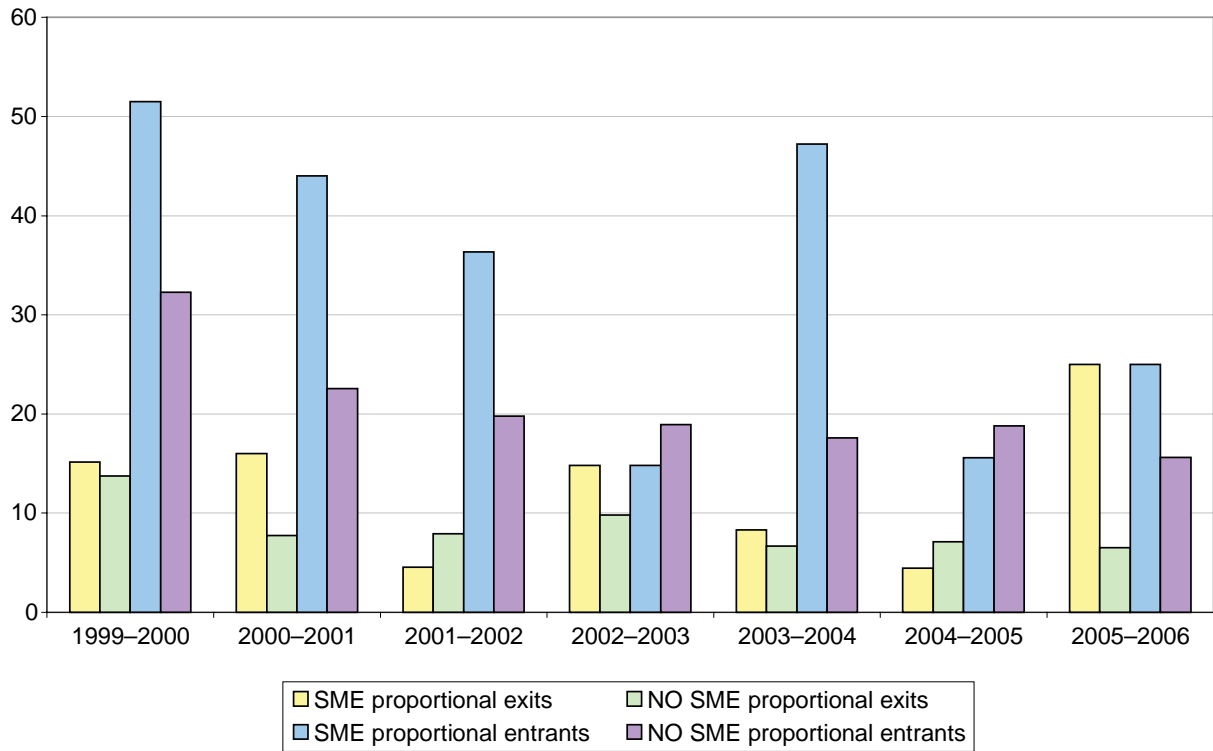
Source: CC analysis of Goad data.

30. The number of multiple convenience stores⁷ in the shopping centres included in the dataset increased between 1999 and 2006. Supermarket entry appears generally to be associated with higher exit and higher entry rates (ie more churn). However, the entry rates are higher than the exit rates, leading to negative net exit rates. In each year, we observe net entry in areas without supermarket entry. In contrast, since 2003-2004, areas witnessing supermarket entry have seen positive net exit rates. This would suggest a strengthening inverse relationship between the two sectors in recent years.

⁷ie convenience stores owned by multiple retailers (eg Sainsbury's or Tesco) or affiliated with symbol groups.

FIGURE 39

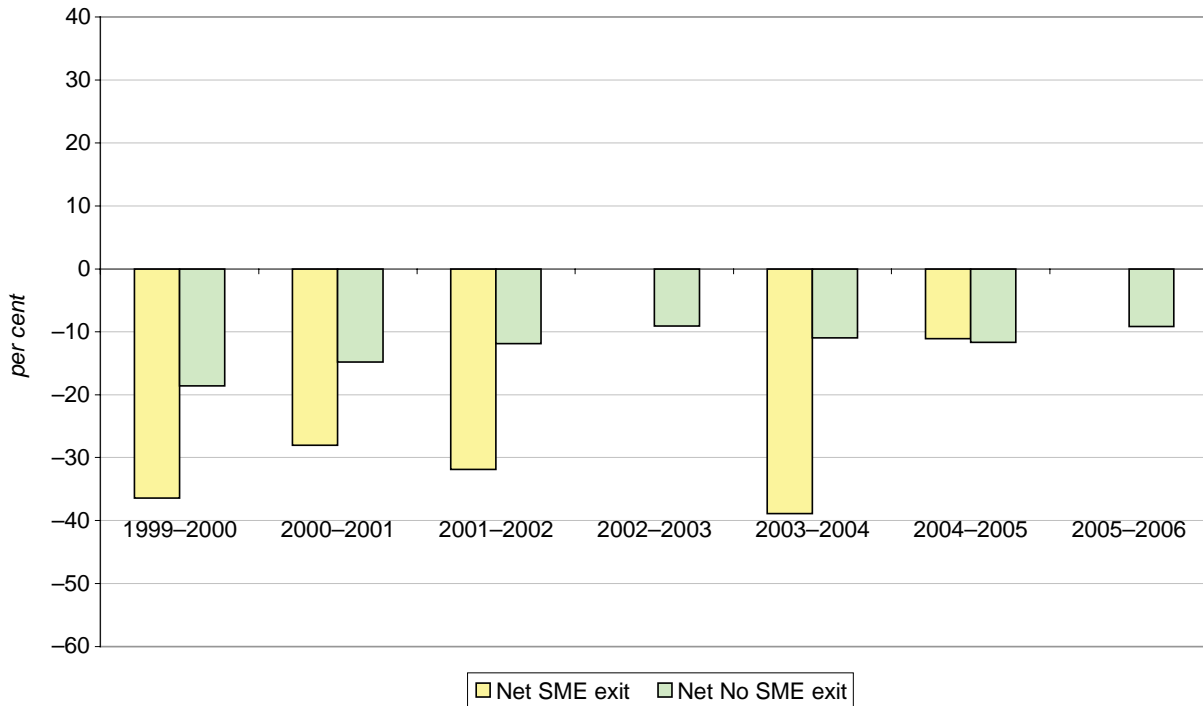
Independent convenience stores (<280 sq metres) entry and exit rates, supermarket entry or no supermarket entry



Source: CC analysis of Goad data.

FIGURE 40

Independent convenience stores (<280 sq metres): net exit rates, supermarket entry or no supermarket entry

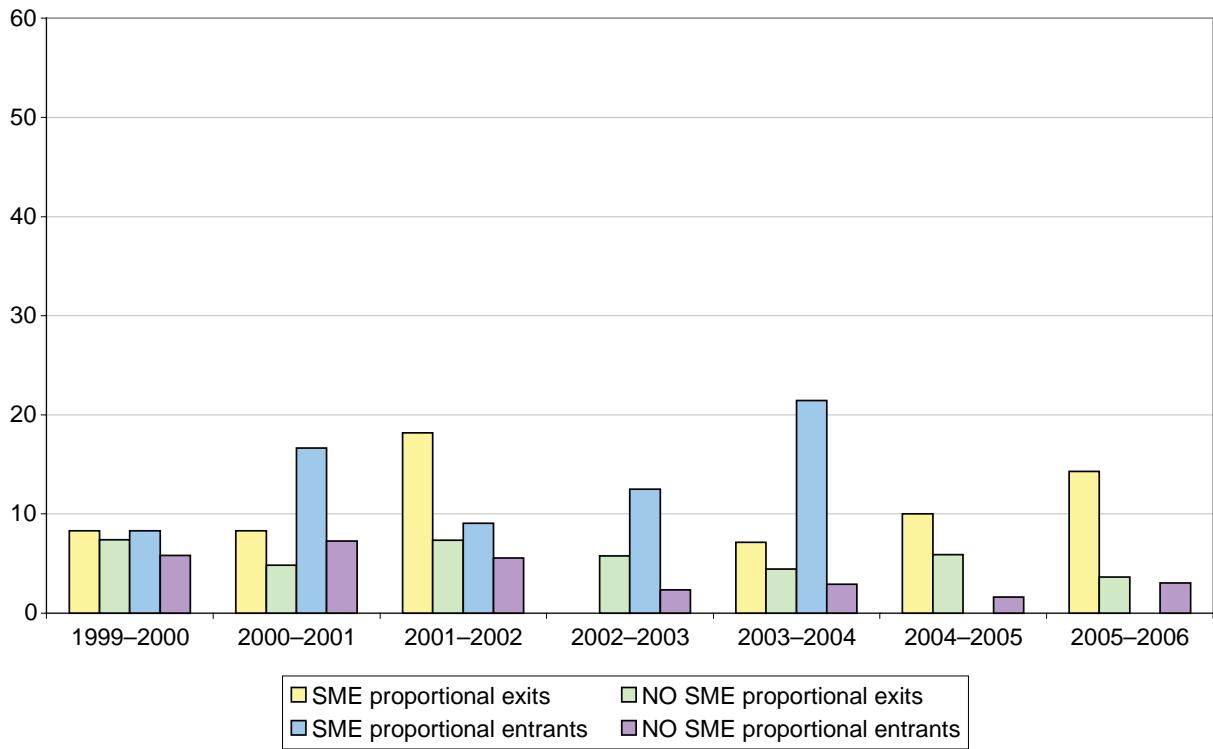


Source: CC analysis of Goad data.

31. The independent convenience store sector also experienced growth in the reviewed locations between 1999 and 2006. Noticeably, net entry rates are more pronounced than in the multiple convenience store sector. Furthermore, in the majority of years there is a clear increase in net entry when a supermarket enters.

FIGURE 41

Markets: entry and exit rates, supermarket entry or no supermarket entry



Source: CC analysis of Goad data.

FIGURE 42

Markets: net exit rates, supermarket entry or no supermarket entry



Source: CC analysis of Goad data.

32. From this descriptive analysis there appear to be no clear trends in the markets sector.

Econometric analysis

33. In this empirical analysis we estimate the effect of local entry by supermarkets on the retail composition of shopping centres. We evaluate this effect on the net exit rate of various categories of retailers. We use a difference-in-difference estimator to evaluate such an impact.

34. Using panel data we specify a simple empirical model as follows:

$$(1) \text{NEx}\%_{it} = A_i + \delta AT_{it} + \beta_1 \text{SUPENT}_{it} + \beta_2 \text{TMS}_{it} + \varepsilon_{it}$$

35. In this model $\text{NEx}\%_{it}$ represents the net exit rate of a specific category of retailer in location i at time t . A_i is the fixed effect for each location and T is a time trend, therefore AT_{it} is the time trend for each location. SUPENT_{it} represents the entry of supermarket in location i at time t . The variable TMS_{it} represents the opening of a small convenience store bearing the fascia of Tesco, M&S or Sainsbury's in the surveyed area.⁸ We vary the SUPENT_i variable to focus our analysis on entry by the leading four retailers or on the location of entry (town centre, edge of centre or out of centre). The model can be specified as follows:⁹

$$(2) \text{NEx}\%_{it} = A_i + \delta AT_{it} + \beta_1^{TC} \text{SUPENT}(TC)_{it} + \beta_2^{EOC} \text{SUPENT}(EOC)_{it} + \beta_3 \text{TMS}_{it} + \varepsilon_{it}$$

$$(3) \text{NEx}\%_{it} = A_i + \delta AT_{it} + \beta_1^{TC} \text{SUPENT}(TC)^{\text{big4}}_{it} + \beta_2^{EOC} \text{SUPENT}(EOC)^{\text{big4}}_{it} + \beta_3 \text{TMS}_{it} + \varepsilon_{it}$$

⁸It has been submitted that such stores compete using advantageous purchasing terms and thereby force the exit of competing small and specialist retailers.

⁹We also tried the regression with lagged dependent variables to see if the response to entry was delayed by a year. The results were generally insignificant.

TABLE 1 Results of regression (1)

	Net exit rates		
	Convenience stores	Independent convenience stores	Multiple convenience stores
SUPENT	6.39 (1.26)	1.14 (0.16)	-6.94 (-1.24)
TMS	18.27** (3.12)	13.3 (1.32)	18.14*** (3.36)
Location fixed effect	Yes	Yes	Yes
Location fixed effect × time	Yes	Yes	Yes
Observations	3848	2329	2517
R2	0.433	0.464	0.546

Source: CC analysis of Goad data.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

Note: t statistics in parentheses.

TABLE 2 Results of regression (2)

	Net exit rates		
	Convenience stores	Independent convenience stores	Multiple convenience stores
SUPENT(TC)	1.26 (0.12)	8.22 (0.57)	-0.926 (-0.08)
SUPENT(EOC)	-9.55 (-0.57)	-26.72 (-0.94)	-3.28 (-0.18)
TMS	18.33** (3.13)	13.46 (1.34)	17.96*** (3.33)
Location fixed effect	Yes	Yes	Yes
Location fixed effect × time	Yes	Yes	Yes
Observations	3848	2329	2517
R2	0.433	0.464	0.545

Source: CC analysis of Goad data.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

Note: t statistics in parentheses.

TABLE 3 Results of regression (1)

	<i>Net exit rates</i>				
	<i>Greengrocers</i>	<i>Bakers</i>	<i>Butchers</i>	<i>Fishmongers</i>	<i>Delicatessens</i>
SUPENT	5.535** (2.42)	-5.162** (-3.21)	-0.0354 (-0.02)	3.493 (1.23)	-4.591 (-1.17)
TMS	2.538 (0.67)	3.909 (1.49)	-3.824 (-1.39)	4.429 (0.92)	-1.931 (-0.34)
Location fixed effect	Yes	Yes	Yes	Yes	Yes
Location fixed effect × time	Yes	Yes	Yes	Yes	Yes
Observations	5259	7481	6550	2307	3214
R ²	0.515	0.308	0.439	0.659	0.529

Source: CC analysis of Goad data.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

Note: t statistics in parentheses.

TABLE 4 Results of regression (2)

	<i>Net exit rates</i>				
	<i>Greengrocers</i>	<i>Bakers</i>	<i>Butchers</i>	<i>Fishmongers</i>	<i>Delicatessens</i>
SUPENT(TC)	5.440 (1.06)	-7.502* (-2.22)	-1.083 (-0.32)	12.72 (1.58)	-12.21 (-1.41)
SUPENT(EOC)	-2.316 (-0.43)	1.133 (0.30)	-7.052 (-1.87)	12.36 (1.71)	12.74 (1.41)
TMS	2.526 (0.67)	3.923 (1.49)	-3.835 (-1.40)	4.301 (0.89)	-2.100 (-0.37)
Location fixed effect	Yes	Yes	Yes	Yes	Yes
Location fixed effect × time	Yes	Yes	Yes	Yes	Yes
Observations	5259	7481	6550	2307	3214
R ²	0.514	0.308	0.439	0.660	0.529

Source: CC analysis of Goad data.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

Note: t statistics in parentheses.

TABLE 5 Results of regression (1)

	<i>Net exit rates</i>				
	<i>Health foods</i>	<i>Off-licences</i>	<i>Off-licences</i>	<i>Markets</i>	<i>CTNs</i>
SUPENT	-3.319 (-1.43)	0.880 (0.42)		0.205 (0.08)	0.415 (0.26)
SUPENT(big4)			2.814 (1.12)		
TMS	8.890* (2.41)	-3.861 (-1.24)	-3.894 (-1.25)	3.003 (0.64)	1.568 (0.61)
Location fixed effect	Yes	Yes	Yes	Yes	Yes
Location fixed effect × time	Yes	Yes	Yes	Yes	Yes
Observations	5378	6322	6322	2109	7447
R ²	0.366	0.424	0.424	0.598	0.342

Source: CC analysis of Goad data.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

Note: t statistics in parentheses.

TABLE 6 Results of regression (2 and 3)

	<i>Net exit rates</i>				
	<i>Health foods</i>	<i>Off-licences</i>	<i>Off-licences</i>	<i>Markets</i>	<i>CTNs</i>
SUPENT(TC)	-6.455 (-1.34)	-0.884 (-0.20)		12.80** (2.63)	-4.428 (-1.35)
SUPENT(EOC)	8.244 (1.60)	-1.781 (-0.35)		-4.564 (-0.84)	1.024 (0.27)
TMS	8.936* (2.42)	-3.839 (-1.23)	-3.872 (-1.24)	2.463 (0.53)	1.600 (0.62)
SUPENT(TC)big4			3.508 (0.77)		
SUPENT(EOC)big4			-0.323 (-0.05)		
Location fixed effect	Yes	Yes	Yes	Yes	Yes
Location fixed effect × time	Yes	Yes	Yes	Yes	Yes
Observations	5378	6322	6322	2109	7447
R ²	0.366	0.424	0.424	0.600	0.342

Source: CC analysis of Goad data.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

Note: t statistics in parentheses.

TABLE 7 Results of regression (1)

	Net exit rates			
	Music & DVD shops	Music & DVD shops	Independent bookshops	Independent bookshops
SUPENT	-0.911 (-0.27)		7.70* (2.05)	
SUPENT(big4)		-0.204 (-0.05)		8.83* (1.97)
TMS	14.0** (2.69)	14.0** (2.69)	-8.78 (-1.68)	-8.76 (-1.68)
Location fixed effect	Yes	Yes	Yes	Yes
Location fixed effect × time	Yes	Yes	Yes	Yes
Observations	4211	4211	3962	3962
R ²	0.449	0.449	0.499	0.498

Source: CC analysis of Goad data.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

Note: t statistics in parentheses.

TABLE 8 Results of regression (2 and 3)

	Net exit rates			
	Music & DVD shops	Music & DVD shops	Independent bookshops	Independent bookshops
SUPENT(TC)	6.12 (0.86)		8.40 (1.03)	
SUPENT(EOC)	-3.41 (-0.44)		10.4 (1.25)	
TMS	13.95** (2.68)	13.9** (2.68)	-8.68 (-1.66)	-8.65 (-1.66)
SUPENT(TC)big4		7.38 (1.00)		8.73 (1.01)
SUPENT(EOC)big4		-1.85 (-0.22)		15.8 (1.64)
Location fixed effect	Yes	Yes	Yes	Yes
Location fixed effect × time	Yes	Yes	Yes	Yes
Observations	4211	4211	3962	3962
R ²	0.449	0.449	0.498	0.498

Source: CC analysis of Goad data.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$.

Note: t statistics in parentheses.

36. In interpreting the results, we note that the dependent variable is the net exit of stores. Therefore we take positive coefficient estimates to indicate a factor that discourages entry or encourages exit.

37. The entry of a new supermarket into a location is shown to increase the net exit rate of greengrocers, markets and independent booksellers. In particular, it is the opening of new supermarkets located within the town centre that adversely affects the number of markets. In contrast, new supermarket entry into any site within the area affects the net exit rate of greengrocers and independent bookstores.
38. In contrast, the net exit rate of bakers is reduced when a new supermarket enters the area. This might therefore be comparable with the results identified by Tesco in Professor Neil Wrigley's work on the effect of entry by a Tesco Express into a town.¹⁰ In this study the increased footfall created by the new supermarket drawing customers into the town centre increased the opportunities for further entry by other retailers. However, we note that only bakers enjoy this beneficial effect. Some sectors appear unaffected by the entry whilst, as noted, some decline in the face of competition from the new supermarket.
39. The coefficients on the TMS variable are generally insignificant with the exception of health food shops, convenience stores and music stores. The net exit rate of health food shops is sharply increased when a convenience store with a Tesco, Sainsbury's or M&S fascia appears in the area. This might be taken to reflect the strength of these stores in health-based product categories.

¹⁰Wrigley, N: *The effects of corporate foodstores on the high street: Rebalancing the debates?* www.competition-commission.org.uk/inquiries/ref2006/grocery/pdf/third_party_submissions_other_org_prof_neil_wrigley.pdf; and *Relocalising Food Shopping*: www.competition-commission.org.uk/inquiries/ref2006/grocery/pdf/third_party_submissions_other_org_prof_neil_wrigley_no2.pdf.