

# City Retailers' Perceptions of Competition: A Choice Experiment

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## Abstract

The increase and expansion of out-of-town shopping centres is often criticized for out-competing retail business within city centres. City retailers' own perceptions of competition within and between retail districts are here analyzed via choice experiments in the city of Gävle, Sweden. Choice experiments allow qualitative data to be transformed into quantitative data that can then be analyzed using statistical techniques. The results indicate that city retailers in general perceived a competitive threat *within* rather than between retail districts. Thus, city retailers do not seem to share policymakers' concerns that out-of-town shopping centres out-compete retail business within city centres. This implies that city retailers either are naive, or that policy makers tend to overestimate the competitive threat, from out-of-town shopping centres.

Keywords: retail district; location; retail store; distance; experiential shopping  
JEL Codes: C90, L13, L81

## **Introduction**

Retailers have one thing in common; they are all exposed to competition. In recent years a significant international trend is the increase in number and expansion of shopping centres outside city centres (Bergström et al. 2007). To a large extent, these out-of-town shopping centres are populated by large-scale national as well as international retail companies offering a wide assortment of goods. They are often criticized for undermining the retailers in the city centre (Thomas et al. 2006; Coca-Stefaniak et al. 2005; Gorter et al. 2003; Wilcox and O'Callaghan, 2001).

Out-of-town shopping centres are therefore often met with ambivalence since their market penetration might lead to a decrease in revenues for city retailers, which eventually force them to exit the market. Policymakers in a number of countries (e.g., United Kingdom) have therefore changed the retailing planning regulations, making it much harder building out-of-town shopping centres. However, re-regulating the market might also mean that the benefits of having out-of-town shopping centres are substantially reduced. For example, Haskel and Sadun (2011) showed that the slow productivity growth in U.K. retailing to a large extent can be explained by the regulatory change in 1996 that increased the costs of opening out-of-town shopping centres.

Swedish regulations changed in the end of 1980s to allow more out-of-town shopping centres (Swedish Planning- and Building Act, 1987:10). The subsequent development of many new centres led to a debate, among policymakers and city retailers, as to whether there were negative consequences for the latter. An official government investigation (SOU 2005:51) also suggested

that the Swedish Planning- and Building Act should be revised in order to make establishments of new out-of-town shopping centres more difficult.

The purpose of this paper is to study city retailer's perceptions of competitive threats in Gävle, Sweden, using Choice Experiments. More specifically, the competitive threat from: (i) a new store in the city centre, (ii) 10 new stores at out-of-town centres, (iii) investments in the "experience dimension" at out-of-town centre, and (iv) a new store at either city centre or out-of-town centre, were analyzed. Choice Experiments allow qualitative data (e.g., city retailers' perceptions of competitive threats) to be transformed into quantitative data that could be analyzed using statistical methods (Hanley et al. 2001). To my knowledge, this is the first study to apply Choice Experiments to measure retail owners' and managers' perceptions of competitive threats.

The next section presents previous studies covering effects of out-of-town shopping centres. Thereafter is method and study design presented. The choice scenarios, i.e., the dependent variables, are then presented followed by empirical method, independent variables (including descriptive statistics) and results. A final section summarizes and draws conclusions.

### **Previous studies**

There is quite a large literature investigating competitive effects of out-of-town shopping centres on city centres. However, a closer examination of undertaken studies reveal a distinction in whether focusing the impact of out-of-town shopping centre on city centre or if there are previous effects already observed, e.g., retail decline in the city centre, from which research questions are investigated. Studies concerning the latter are numerous and examples thereof are

Guy and Duckett, (2003), Thomas and Bromley, (2002), Hallsworth and Johnson, (2001), Hallsworth and Worthington, (2000), Bromley and Thomas, (1995) and Whysall, (1995).

Empirical studies focusing the impact of out-of-town shopping centres show both negative and positive effects on the city retail (Table 1). Haltiwanger et al. (2010) argues that the effect of out-of-town shopping centres on the city retail depends on whether out-of-town shopping centres are compliments or substitutes. If they are compliments then out-of-town shopping centres might attract consumers to the city, whereas they might out-compete city retailers if they are substitutes. Their results indicated that the establishment of out-of-town shopping centres shopping centres and other large format (big box) retailers in the Washington D.C. area had a negative impact on smaller stores, but the magnitude of the effect was dependent on the distance to the new establishment. Similar results were also found by Jones and Doucet (2000) when investigating establishment of out-of-town shopping centres in the Toronto area.

Davidson and Rummel (2000) investigated sales tax data before and after the arrival of a Wal-Mart, finding that local sales taxes were substantially increased after the entry of Wal-Mart. This indicates that large out-of-town shopping centres might attract consumers from other cities. However, even though the overall effect in the region is positive, out-of-town shopping centres might attract consumers away from the city centre. Peterson and McGee (2000), for example, presented survey evidence from Nebraska, USA, showing that small businesses reported a revenue loss of more than 10% following the entry of Wal-Mart.

Evidence also suggests that the effect of out-of-town shopping centres might depend on the size of the town. Arnold and Narang Luthra's (2000) study of the effects of a new large format (big box) retailer, on a small town with a market of less than 100,000 inhabitants, concludes that it led to a decrease in sales, profits and the number of central retailers. However, increased competition from out-of-town shopping centres can also spur greater store specialization in geographically concentrated areas in the city centre, whereas the peripheral city retailers experiences greater losses (Arnold and Narang Luthra, 2000; Bergström, 1999).

Thomas et al. (2006) suggested that the characteristics of the out-of-town shopping centres also affect whether it is a competitive threat to the city retail. Their results indicated that out-of-town shopping centres that were upgraded with "high street" functions became a stronger competitive threat to the city centres.

Note finally that most studies reported in Table 1 (which is not intended to be exhaustive but rather illustrative) are conducted from a consumer perspective; whereas only one emanates from the retailers' perceptions of competitive effects (Peterson and McGee, 2000).

(Table 1 about here)

### **Method and study design**

A method for measuring how individuals value a good, service, or event for which there is no actual market is "non-market valuation" (Alpizar et al, 2001). Competition is well known, something retailers experience as a consequence of other retailers' actions. Yet there is no market for competition, since it itself

cannot be purchased or sold. Via stated preferences in choice experiment (Alpízar et al. 2001; Hanley et al. 2001; Louviere et al. 2000), retailers were asked to evaluate competition in various hypothetical binary scenarios. A choice situation is fairly easy as long as it is binary, which is by no means unrealistic in a decision maker's every-day life, while more alternatives would add substantially to the cognitive burden on the respondent, (Harrison, 2007).

The questionnaire used in this study include four choice scenarios in each of which the retailer's task was to state which alternative would be the greater or lesser competitive threat to their own store. An opt-out alternative was also available, in case they did not perceive any competitive threat from either. Otherwise they choose arbitrarily or not respond.

The respondents were owners or managers of independent retail stores and chain-stores in the city centre in the municipality of Gävle, Sweden. With approximately 93,000 inhabitants, Gävle is a typical medium-sized municipality in Sweden, with many established retailers in the city centre as well as two out-of-town shopping centres. The older centre, Valbo Shopping Centre (VSC), is 11 Km. west of the city, while Hemlingby Shopping Centre (HSC), is located 5 Km. south. Retail trade is concentrated around Stortorget square, along the pedestrian street Drottninggatan, and on cross-streets and immediately parallel streets (Figure 1). The questionnaire was delivered to 159 owners or managers by mail or directly by hand (response-frequency = 60 %).

(Figure 1 about here)

## **Choice scenarios**

### ***Choice 1: Competitive threats within the city centre***

A new firm's location decision should affect incumbents' actions (Hotelling, 1929). In particular a new store close located to the incumbent's store should be perceived as a greater competitive threat than one located farther away. But other factors, such as longer opening hours, the possibility of Internet sales or being part of a chain-store might also provide competitive advantages. Choice 1, was between two alternative locations for a new store in the city centre either on Stortorget square or at Drottninggatan 24 (Table 2).

(Table 2 about here)

Ninety-one retailers responded to Choice 1 (Figure 2). A majority (54, or 59 %) saw a new store at Stortorget square as most competitive. This indicates that most city retailers perceive a higher competitive threat from an establishment in the city core, even though the alternative has other attributes that can be regarded as a competitive advantage. Only eight retailers did not perceive a competitive threat.

(Figure 2 about here)

### ***Choice 2: Competitive threats from out-of-town shopping centres***

It has been argued that competition in the retail industry to a large extent takes place between shopping districts/centres (Coca-Stefaniak et al., 2005; Gorter et al., 2003; Wilcox and O'Callaghan, 2001; Arnold and Narang Luthra, 2000; Bergström, 1999). Thomas et al. (2006) stressed possible negative consequences for city centres if out-of-town shopping centres increase their variety of size and type of stores.

In Choice 2, retailers in the city centre were asked to value the competitive threat from a hypothetical expansion at two out-of-town shopping centres, Valbo Shopping Centre (VSC) and Hemlingby Shopping Centre (HSC), with higher quality factory outlet products (Marjanen, 2000) to be sold at VSC than at HSC (Table 3). However, HSC is closer to the city. The opening hours of the new stores are assumed the same as the centre's current hours at the time of enquiry (May, 2007).

(Table 3 about here)

Ninety-two retailers responded to Choice 2 (Figure 3). A plurality (37, or 40 %) did not perceive a competitive threat from either establishment, while others split fairly evenly, slightly more fearing the closer HSC more, despite higher-quality goods at VSC. Thus, many city retailers do not seem to be concerned with new establishments at out-of-town shopping centres.

(Figure 3 about here)

### ***Choice 3: Competitive threats from new investments in out-of-town shopping centre***

Investment in the “experience dimension” related to shopping is often viewed as a competitive advantage (Arnold et al., 2005; Wilcox and O’Callaghan, 2001), for example a variety of nearby restaurants or entertainment including child care (Teller, 2008; Anselmsson, 2006; Wakefield and Baker, 1998), which may attract more customers and help to keep them in the area. Choice 3 was thus between a food-court or child-care facilities at the older and more established VSC (Table 4).

(Table 4 about here)

Ninety-four retailers responded to Choice 3 (Figure 4). A majority, (54, or 58%) saw neither of the investments as a competitive threat while the others split evenly. This result somewhat contradicts the view of Anselmsson (2006) and Wilcox and O’Callaghan (2001) of investments in this “experience dimension” as a competitive advantage.

(Figure 4 about here)

### ***Choice 4: Competition within or between retail districts***

To analyze whether city retailers perceive a competitive threat within or between retail districts, Choice 4 was between a new store similar to the respondent’s opening either at VSC or at Stortorget square (Table 5).

(Table 5 about here)

Ninety-five retailers responded to Choice 4 (Figure 5). A large majority (76 or 80 %) saw a new store like theirs in the city centre as a greater competitive threat than a new store like theirs at VSC. This indicates that city retailers are more concerned when a new store is located within the city centre than at a out-of-town shopping centre.

(Figure 5 about here)

## **Empirical method and independent variables**

### ***Empirical method***

To study what seems to have determined the choices made by the retailers, the collected data was analyzed in a two-step procedure using a binomial-logit technique to estimate the maximum likelihood, i.e., the probability, that respondents chose one alternative rather than the other. The estimated equation was

$$\begin{aligned} \Pr(D_i = 1) = & \alpha_0 + \alpha_1 AGE_i + \alpha_2 OWNER_i + \alpha_3 EMPLOYEES_k + \\ & + \alpha_4 TURNOVER_k + \alpha_5 YEARS_k + \alpha_6 DISTANCE_k + \varepsilon_i \end{aligned} \quad (1)$$

where  $D_i$  indicates that the dependent variable is a dummy. Respondent-specific characteristics are denoted with the index  $i$ , and firm-specific characteristics with  $k$ .  $AGE_i$ ,  $OWNER_i$ ,  $EMPLOYEES_k$ ,  $TURNOVER_k$ ,  $YEARS_k$  and  $DISTANCE_k$  are

independent variables with  $\alpha_0$  to  $\alpha_6$  the parameters to be estimated, and  $\varepsilon_i$  is a stochastic error-term.

In the first step, a regression was estimated for those who considered neither alternative as a competitive threat. In this case, the dependent variable took the value one if the respondent checked the Opt-out box in the questionnaire, otherwise zero. The number of observations was in this step reduced to 82 due to missing data.

In the second step, a regression was estimated for those who perceived a competitive threat. In this case, the dependent variable took the value one if the respondent chose alternative 1, or zero if they chose alternative 2. This procedure was repeated for each set of scenarios (1, 2, 3, 4).

### ***Independent variables***

Independent variables were chosen based on prior studies. To test the robustness of the variables, a three-estimation procedure was executed. Variables that were not statistically significant in any of the estimations are excluded. The excluded variables were level of education, sex, area, firm age (as distinguished from years at current location), and opening hours.

Entrepreneurial boldness and imagination can lead to profits as well losses for the market actors and this as a result of how they act on their interpretation of the market (Kirzner, 1997; 1992). The variable *AGE* (of the owner or manager) might correlate with experience in the market. Older retailers could have more experience from the market and therefore perceive competitive threat to a lesser extent.

The variable *OWNER* was included to see whether the perceived threat of competition was different between store owners and employed store managers. Store owners might perceive a greater competitive threat because of their greater financial risk.

Firm size could yield strategic advantages. Smaller firms could be better at filling market niches, whereas large firms might gain from economies of scale (Porter, 1985; 1998). The number of store *EMPLOYEES* was thus included to see if firm size is related to perceived competitive threats.

*TURNOVER* (gross annual revenues) was included as a measure of financial strength (Gripsrud and Grønhaug, 1985) which might be negatively related to the probability of perceiving a competitive threat. The retailers were requested to state the firm's turnover in one of six alternative classes (Table 6). Classification is in accordance with the Swedish Retail Institute, HUI (2006).

Retailers that have been established for many *YEARS* at the same location have obviously survived business cycles and have adapted to structural market changes, and might thus be less likely to perceive competitive threat so that variable was also included.

The variable *DISTANCE* in metres between the respondent's store and the McDonald's restaurant at Stortorget square was included to see whether distance matters (Hotelling, 1929). The distance on the map was recalculated from millimetres to meters and the shortest walking distance estimated.

(Table 6 about here)

The respondent; ages ranged from 22 to 69 with mean 42 and normal distribution. A majority (61, or 64 %) were store owners. In total, 93 retailers had 300 employees, but just six stores had almost a third of them, while most stores had 6 or less. Though the mean was almost twelve years, a majority of the stores (70 %) had been located at their current location for less than ten years, suggesting a high degree of entry (and exit).

## **Results**

### *Neither alternative was perceived as a competitive threat*

In the first choice, city centre retailers were asked which of two locations for establishment of a new similar store in the city centre would present the greater competitive risk. A rough marginal effect was calculated by multiplying each estimate by 0.25 (Studenmund, 2006), to indicate the impact of each independent variable on the likelihood of the dependent variable being one.

Those with higher turnover were less likely to perceive a competitive threat (Table 7, panel 1), with this probability increasing about 27% for each higher turnover-class. On the other hand, number of employees, reduced the probability of perceiving no competitive threat by about 10% for each added employee. This result could indicate that smaller firms in Gävle operate in market niches, as proposed by Porter (1985; 1998), and thus perceive less competitive threat.

*TURNOVER* increased the probability of perceiving no competitive threat from establishment of a new similar store in the city centre or at VSC (Table 7,

panel 4). *YEARS* at the same location also increased the probability of perceiving no competitive threat by about 0.5% per year. *DISTANCE* from one new store location at Stortorget square also increased the probability of perceiving no competitive threat, thus indicating differences in perception within the same shopping district. Note however, the economic significance of this effect is small in size.

(Table 7 about here)

The probability that owners would perceive expansion at either out-of-town shopping centre as a competitive threat was 41% less than for managers (Table 7, panel 2). *AGE* of the owner or manager increased the probability of perceiving neither food-court nor childcare at VSC as a competitive threat (Table 7, panel 3).

### ***Alternative 1 was perceived as a competitive threat***

The retailer's *DISTANCE* from Stortorget square reduced the probability of their choosing Alternative 1, more competitive threat from a new similar store established at Stortorget than at Drottninggatan 24 (Table 8, panel 1). This is in accord with Hotelling's (1929) location theory. Owners were 54% likely than managers to perceive ten new stores at VSC as a greater competitive threat than ten new stores at HSC (Table 8, panel 2). *AGE* of the owner or manager reduced that probability, however.

(Table 8 about here)

*DISTANCE* of the retailer's store from Stortorget square reduced the probability of their perceiving a new food-court at VSC as a greater competitive threat than new child-care facilities (Table 8, panel 3). Higher *TURNOVER* and *EMPLOYEES* also reduced this probability while *YEARS* at their current location increased it.

## **Discussion and Conclusion**

City retailers' perceptions of competitive threats both within and between shopping districts were recorded via Choice Experiment. This method allows qualitative data to be transformed into quantitative data that can then be analyzed using statistical techniques. Choice experiments have not been used previously to measure perceptions of competitive threats.

Contrary to what might have been expected, retailers seemed to perceive competitive threats more *within* rather than between shopping districts. Somewhat surprisingly, most city retailers' did not perceive a competitive threat from investments in the "experience dimension" (food-court or child care facilities) at out-of-town shopping centres. Many also did not seem to perceive expansion of out-of-town shopping centres as competitive threats. This might indicate that previous studies have overemphasized the importance of investments in the experience dimension to gain competitive advantage, or that city retailers do not recognize the competitive threat from investments in the experience dimension.

A new entry of a similar store was also clearly perceived as a greater threat when it occurred within the retailers' shopping district, implying that prior

research and policymakers may have overemphasized the competitive threat from out-of-town shopping centres.

As expected, distance from the retailer seemed influence perceptions of competitive threats within the same shopping district. However, distance of the retailer from the city centre also seemed to influence their perceptions of competitive threats between shopping districts.

City retailers' views of competitive threats, both within and between shopping districts, have direct implications for how the city retailing is organized. For example, activities arranged around the city square to attract customers from out-of-town shopping centres might be perceived as a competitive threat by more peripherally located city retailers, since it might also attract customers away from them.

An interesting question is whether the retailers' stated perceptions of competitive threats are correct. Has competition from out-of-town shopping centres, including from their investments in the "experience dimension" been overestimated in the literature? Or, do retailers naively not realize the actual competitive threats? Future research in this area should therefore try to discriminate between the experiences of the store owners to analyze if this matters how they perceive competitive threats from out-of-town shopping centres.

#### Acknowledgements

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Table 1. Research studies of out-of-town shopping centres' impact on city centres

Study	Country/area	Unit of analysis	Research method	Results
Haltiwanger et al. (2010)	US/Washington DC metro area	Single firms with fewer than 10 employees. Small chain stores operating in 1-14 states. Large chain stores operating in more than 15 states	Regression, change in employment growth	Entry and growth of Big-Box stores has significant negative impact on employment growth and survival of single firms and smaller chain stores, in the immediate area and in the same detailed industry. The negative effects attenuate with greater distance.
Thomas et al. (2006)	UK/ the Greater Swansea area	Consumers	Survey questionnaire Chi <sup>2</sup> -test 2003 (n=643) 2004 (n=913)	Retail parks upgraded with "high street" functions become stronger competitive threats to city centres.
Gorter et al. (2003)	Netherlands/ the Greater Rotterdam area	Consumers	Survey questionnaire Logit regression (n=130)	Out-of-town shopping centre attracts consumers from longer distances with "run-shopping" purposes rather than from the inner-city and "fun-shopping" purposes.
Arnold and Narang Luthra (2000)	Canada	Developers, urban planners, economic development officers, retail executives and store managers	Research review Stakeholder analysis	Negative effects: decline in sales in other commercial sectors, in no. of stores, in nearby markets' economy. Loss of jobs. Positive effects: growth in other commercial sectors and in jobs. Economic growth in the market of entry.
Brennan and Lundsten (2000)	US/Minneapolis-St Paul metropolitan area	Consumers	Telephone survey (n=300)	Arrival of large discount stores increased exit of incumbent stores in small towns. Consumer shop for general merchandise in towns within close proximity but choose large discounters for low prices and broad assortment.
Peterson and McGee (2000)	US/States of Nebraska and Kansas	Small retail firms	Survey questionnaire Chi <sup>2</sup> -test impact (n=100) no or positive impact (n=91) Exploratory common factor analysis Telephone survey (n=26)	50 percent of all small retail firms (less than \$1 million in sales) reports negative impact after entry of Wal-Mart with effect most negative in the central business district.

Seiders and Tigert (2000)	US/States of Ohio, Nebraska, Texas and Georgia	Consumers	Telephone survey Ohio (n=1000) Nebraska (n=800) Texas and Georgia (n=600)	Impact of entry of supercentres show a 15 to 20 percentage gain in primary shoppers leading to increased competitive pressure for incumbent food retailers
Davidson and Rummel (2000)	US/State of Maine	Retail industry sales	Comparisons of sales tax records before and after arrival of Wal-Mart	Wal-Mart towns reported substantially higher increased retail sales in comparison to other towns in the state while neighbouring towns experienced declining or very low levels of increased sales
Bergström (1999)	Sweden/28 municipalities	Convenience- and non-food goods	Regression, change in volume of high street, out-of-town and peripheral shopping 1989-1997 (n=200)	Out-of-town shopping centres attracts consumer from surrounding municipalities. Crowding-out effect is weakly negative for high street shopping.
McGoldrick and Thompson (1998)	UK/Newcastle area	Consumers	Survey questionnaire (n=420) Factor analysis Regression of image factors upon overall image	Out-of-town centre received better perceptions on image attributes such as recreational experience and quality of environment than the city centre
Alzubaidi et al. (1997)	UK/Preston area	Consumers	Survey questionnaire Chi <sup>2</sup> -test 1994 (n=160, n=183) 1995 (n=76, n=98)	Consumers visited the out-of-town shopping centre with purposeful shopping intentions whereas town centre shopping intentions served a variety of functions

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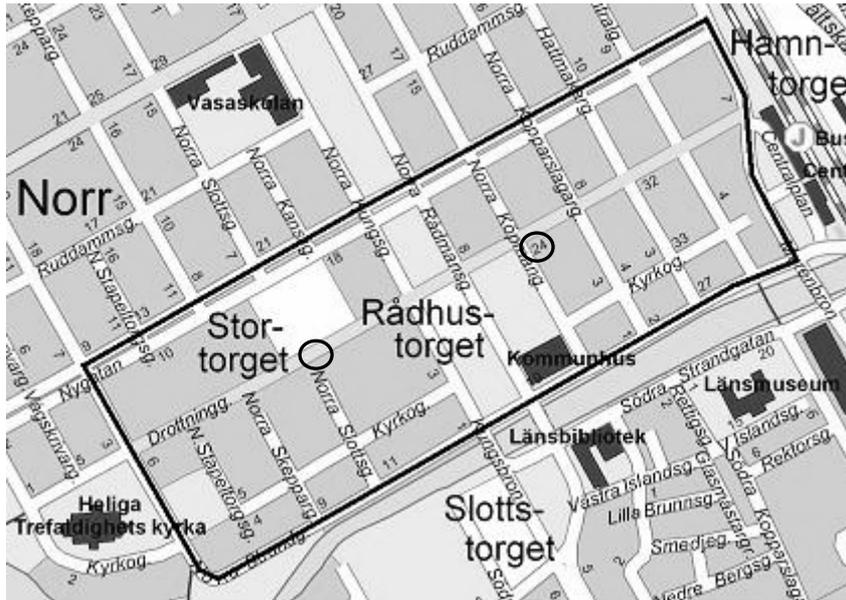


Figure 1. Sample area in the centre of the city of Gävle, Sweden. Hypothetical location Choices are circled

Table 2. Description of Choice 1, a new store in the city centre similar to the respondent's

Attributes	Alternative 1	Alternative 2
Location	At Stortorget square (next to McDonald's restaurant)	Pedestrian shopping street (at Drottninggatan 24)
Opening hours	Identical with the retailer's store	Longer than the retailer's store
Type of goods/sales	Sells substitute and complementary goods	Sells substitute and complementary goods and offers Internet sales
Owner	Private proprietorship	Part of a chain-store company

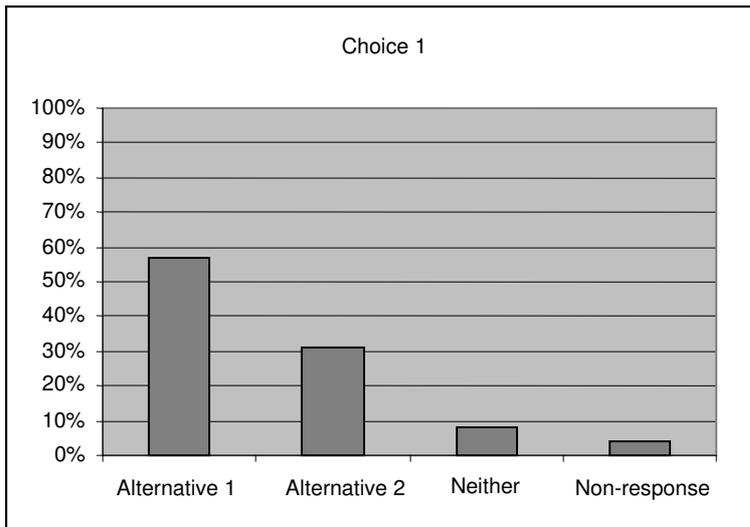


Figure 2. Retailers perceiving alternatives as a competitive threat in Choice 1

Table 3. Description of Choice 2, ten new stores in out-of-town shopping centres

Attributes	Alternative 1	Alternative 2
Location	10 new stores at Valbo Shopping Centre (VSC)	10 new stores at Hemlingby Shopping Centre (HSC)
Opening hours	Weekdays 10-20 Saturdays 10-18 Sundays 11-18	Monday-Sunday 9-21
Type of goods/sales	Factory outlets for brand-name products	Standardized type of stores
Owner	Part of a chain-store company	Part of a chain-store company

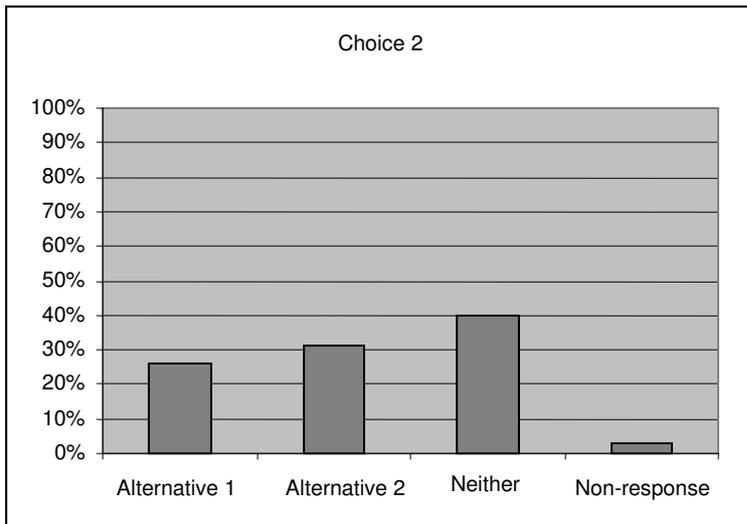


Figure 3. Retailers perceiving alternatives as a competitive threat in Choice 2

Table 4. Description of Choice 3, investment at Valbo Shopping Centre (VSC)

Attributes	Alternative 1	Alternative 2
Investment	Food-court	Child care facility
Extension	10 new small restaurants and/or coffeehouses	Indoor play area
Type of goods/sales	International foods	Staffed by professional childcare workers
Facilities	250 seats	Climbing frame, mini-cinema, and a sea of balls for children to jump in

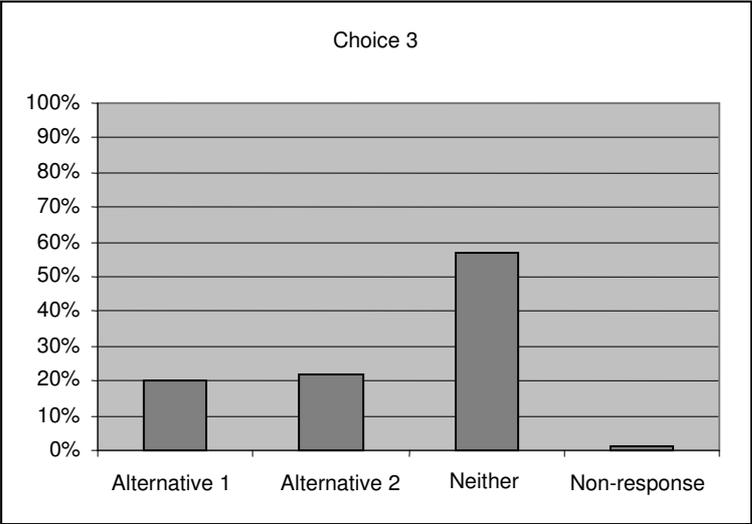


Figure 4. Retailers perceiving alternatives as a competitive threat in Choice 3

Table 5. Description of Choice 4, new store similar to the respondent's

Attributes	Alternative 1	Alternative 2
Location	At Valbo Shopping Centre (VSC)	At Stortorget square (next to McDonald's restaurant)
Opening hours	Weekdays 10-20 Saturdays 10-18 Sundays 11-18	Identical with the retailer's store
Type of goods/sales	Same as the retailer's store	Same as the retailer's store
Availability	Parking <i>free</i> of charge	Parking <i>subject</i> to charge

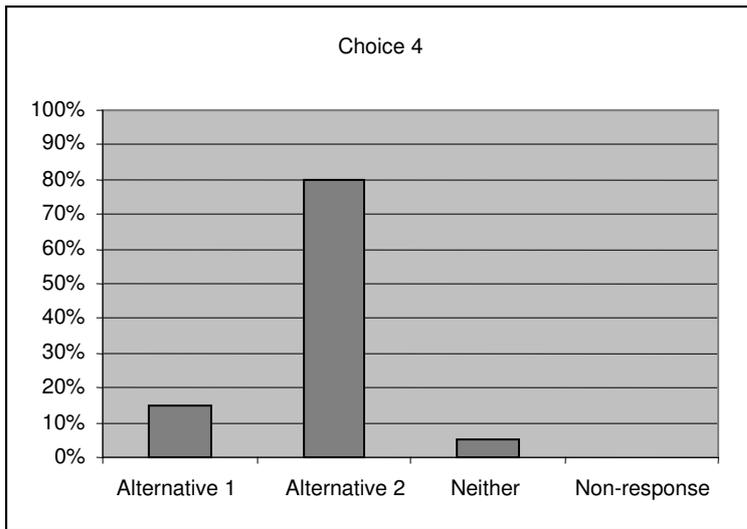


Figure 5. Retailers perceiving alternatives as a competitive threat in Choice 4

Table 6. Summary statistics and definitions of independent variables

Variable	N	Min	Max	Mean	S.D.	Definition
$AGE_i$	95	22	69	41.87	11.53	Age of respondent $i$
$OWNER_i$	95	0	1	0.64	0.48	A dummy variable that is 1 if the respondent $i$ is the store owner, otherwise 0
$EMPLOYEES_k$	93	0	31	3.17	4.34	Number of employees at store $k$
$TURNOVER_k$	88	1	6	3.15	1.25	Annual turnover for store $k$ , where 1 = 0-500 000 2 = 500 001-2 000 000 3 = 2 000 001-5 000 000 4 = 5 000 000-10 000 000 5 = 10 000 001-25 000 000 6 = 25 000 001- $\infty$ All amounts in Swedish kronor (SEK) excluding VAT, (1 EUR=9.15 SEK, 1 May, 2007)
$YEARS_k$	90	0	114	11.84	18.98	Number of years of store $k$ at current location
$DISTANCE_k$	94	22	578	198.31	160.17	Distance in metres between the retailer's store $k$ and the McDonald's restaurant at Stortorget square

Table 7. Estimation results for retailers who perceived **no** alternative as a competitive threat

Variable	Estimate	t-value	Marginal effect
<i>Choice 1, neither new store in the city centre is perceived as a competitive threat</i>			
Constant	-6.0652	-2.70	-1.5163
AGE of respondent	0.0349	1.24	0.0087
OWNER (dummy)	0.5001	0.51	0.125
EMPLOYEES	-0.4246*	-1.84	-0.1062
TURNOVER	1.0728**	2.31	0.2682
YEARS at current location	-0.0058	-0.38	-0.0015
DISTANCE to Stortorget	-0.003	-1.35	-0.0008
<i>N=82, R<sup>2</sup>=0.1356</i>			
<i>Choice 2, expansion at neither suburban shopping centre is perceived as a competitive threat</i>			
Constant	-2.666	-2.15	-0.6665
AGE of respondent	0.0296	1.13	0.0074
OWNER (dummy)	1.638**	2.08	0.4095
EMPLOYEES	-0.0683	-0.82	-0.0171
TURNOVER	-0.07	-0.22	-0.0175
YEARS at current location	-0.0105	-0.75	-0.0027
DISTANCE to Stortorget	0.0019	0.98	0.0005
<i>N=82, R<sup>2</sup>=0.1885</i>			
<i>Choice 3, neither investment at Valbo Shopping Centre is perceived as a competitive threat</i>			
Constant	-0.8122	-0.57	-0.2031
AGE of respondent	0.0442*	1.88	0.0111
OWNER (dummy)	0.0012	0.00	0.0003
EMPLOYEES	-0.4118*	-1.85	-0.103
TURNOVER	0.1052	0.23	0.0263
YEARS at current location	-0.0058	-0.5	-0.0015
DISTANCE to Stortorget	0.0011	0.56	0.0003
<i>N=82, R<sup>2</sup>=0.1645</i>			
<i>Choice 4, new establishments in the city centre or at Valbo Shopping Centre are not perceived as competitive threats</i>			
Constant	-7.1874	-2.34	-1.7969
AGE of respondent	-0.1734	-0.43	-0.0434
OWNER (dummy)	-0.0666	-0.05	-0.0167
EMPLOYEES	-0.0665	-0.8	-0.0166
TURNOVER	0.944*	1.87	0.236
YEARS at current location	0.0204*	1.71	0.0051
DISTANCE to Stortorget	0.0071**	2.55	0.0018
<i>N=82, R<sup>2</sup>=0.2757</i>			

\* 10% level of significance

\*\* 5% level of significance

Table 8. Estimation results for retailers who perceived Alternative 1 as a competitive threat

Variable	Estimate	t-value	Marginal effect
<i>Choice 1, new store establishment at Stortorget square is perceived as a greater competitive threat than a new store at Drottninggatan 24</i>			
Constant	-0.8341	-0.56	-0.2085
AGE of respondent	0.0336	1.08	0.0084
OWNER (dummy)	0.5115	0.72	0.1279
EMPLOYEES	-0.1011	-1.33	-0.0253
TURNOVER	0.4598	1.21	0.115
YEARS at current location	-0.0162	-1.06	-0.0041
DISTANCE to Stortorget	-0.0069**	-2.56	-0.0017
<i>N=75, R<sup>2</sup>=0.1682</i>			
<i>Choice 2, ten new stores at Valbo Shopping Centre are perceived as a greater competitive threat than ten new stores at Hemlingby Shopping Centre</i>			
Constant	1.5849	0.62	0.3872
AGE of respondent	-0.1191**	-2.27	-0.0298
OWNER (dummy)	2.1478**	2.26	0.5369
EMPLOYEES	-0.0978	-1.01	-0.0245
TURNOVER	0.6526	1.14	0.1632
YEARS at current location	-0.0359	-0.94	-0.009
DISTANCE to Stortorget	0.0009	0.25	0.0002
<i>N=48, R<sup>2</sup>=0.2173</i>			
<i>Choice 3, investment in a food-court at Valbo Shopping Centre is perceived as a greater competitive threat than investments in child care facilities</i>			
Constant	3.7885	1.3	0.9471
AGE of respondent	0.0335	0.74	0.0084
OWNER (dummy)	1.5953	1.51	0.3988
EMPLOYEES	-0.2709**	2.22	0.0677
TURNOVER	-1.8574*	-1.80	-0.4644
YEARS at current location	0.5287**	2.23	0.1322
DISTANCE to Stortorget	-0.0113**	-2.49	-0.0028
<i>N=34, R<sup>2</sup>=0.3349</i>			
<i>Choice 4, a new store (similar to the respondent's) at Valbo Shopping Centre is perceived as a greater competitive threat than a new similar store at Stortorget square</i>			
Constant	-1.7984	-0.91	-0.4496
AGE of respondent	0.0205	0.56	0.0051
OWNER (dummy)	-0.9852	-1.19	-0.2463
EMPLOYEES	-0.1179	-0.94	-0.0295
TURNOVER	-0.015	-0.04	-0.0038
YEARS at current location	-0.0459	-1.6	-0.0115
DISTANCE to Stortorget	0.0032	1.33	0.0008
<i>N=77, R<sup>2</sup>=0.0838</i>			

\* 10% level of significance

\*\* 5% level of significance

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