Anchors and Externalities

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Introduction

Since the days when merchants first traded and sold goods in the bazaars and markets of antiquity, it has been evident that the clustering of consumer service activities in particular locations conveys advantages. These advantages generate economic benefits, that in turn, explain such spatial concentrations. In some ways, the clustering of consumer services is counterintuitive, because it occurs with activities that are usually competitive with each other. Animal (including human) behaviour is frequently characterised by situations in which competitors carve out particular spheres of influence for themselves. But, with many economic activities, particularly consumer services, clustering within common markets is the norm.

One of the earliest theoretical analyses of clustering in the consumer service literature is that provided by Hotelling (1929) who indicated why it was that two or more competitive operators (in his model, ice cream vendors) might tend to cluster at a central location within a market, while two or more operators within the same chain (or franchise) would locate separately within distinct sub-markets. Ironically, the “monopolistic” situation implies shorter average customer travel distances (a more preferable social outcome) than the “perfect competition” case.

It has also long been recognised that positive external economies can yield

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spatial clustering because they generate a higher rate of return on capital to individual firms than they might otherwise have achieved. Conversely, negative externalities can generate a lower rate of return. Marshall (1920), for example, argued that individual firms can achieve positive external economy benefits from being located within large urban areas because of: large labour markets, which have within them people with a greater variety of labour skills than is available in smaller markets; a wide variety of specialised businesses that can provide inputs to other activities; and, the presence of many similar firms which can promote information exchange and technological advances. Thus, in the context of urban growth and development, external economies arising consequent to scale can generate a variety of spillovers that yield powerful forces of agglomeration (Fujita and Thisse 1996; Krugman 1995).

There is, therefore, renewed interest in regional science in the role of external economies as they relate, for example, to: the general matter of urban agglomeration and development (Fujita et al 1999); the growth of “technology districts”, or “technopoles” that are so characteristic of the new information economy (Storper 1992); the development of clusters of media activities (Oakey et al 2001); and, the future viability of malls in the face of challenges from large format (“big-box”) retailing (Simmons and Yeates 1998; Jones and Doucet 2000). Though there is considerable debate over the level of importance that should be placed on externalities in analyses of urban and regional development (Krugman 1998; Martin 1999a, 1999b), there is little doubt that, as far as “technology districts” and planned nucleations are concerned, externalities are paramount. For example, spillover effects from university-based research and training can be considerable, especially in the electronics sector (Anselin et al 2000a, 2000b). These externality effects may be manifested spatially in planned or unplanned high technology districts associated with (perhaps physically adjacent to) sources of research and technological innovation. Furthermore, firms within such districts may also generate, in a “Marshallian” way, externalities for each other.

The economic forces underlying the formation of technology districts are similar to those underlying the formation of planned or unplanned clusters, or nucleations, of consumer services. Hoover (1971), in particular, has emphasized the underlying importance of external economies in the creation of clusters of consumer service enterprises that may individually be competitive with each other. The clustering of stores has market-widening and consumer-attracting effects beyond those that could have been achieved by an individual business within the nucleation (Pashigian 1995: Chapter 13). Thus, an individual consumer service enterprise, whether it be an independent or part of a chain or franchise, has to weigh the advantages (i.e., externalities) that may be gained from locating within a cluster to the more evident benefits that might be gained from “free-standing” locations, such as arterial ribbons. As external economies, by definition, are difficult to estimate, while revenues that may be realised from “free-standing” locations are more calculable, location decisions in the consumer service sector have often been somewhat experientially based (Hernandez 2000).
The Clustering of Consumer Services

Commercial clusters, therefore, invariably involve enterprises that can serve larger markets in externality generating environments than in free-standing situations. Up until about 1960, unplanned clusters of stores characterised the urban landscape, most evidently in the downtown (the CBD, or central business district), and along neighbourhood streets and arterials concentrating around major transport foci, such as arterial intersections. In his classic study of the commercial structure of Chicago, Berry (1963) demonstrated that these unplanned clusters had evolved to form a hierarchical system of nucleations relating to a spatial envelope of neighbourhood, community and regional (or sub-metropolitan) markets. Transport and regulative environments (such as zoning) had evolved, frequently concurrently, to reinforce this inexorable tendency for commercial activities to cluster.

Of special interest with respect to the ensuing discussion were the major externality generating activities underpinning the CBD and most of the regional unplanned nucleations. These were department stores (a pre-eminent feature of the commercial landscape since 1900) that attracted customers from a far wider market for comparative shopping than smaller specialty and personal service stores located in the same nucleations. The major department stores in Canada included national chains, such as Eaton’s and Simpson’s, regional operations such as Woodward’s (British Columbia), and numerous locals (such as Morgan’s in Montreal). The department stores were invariably centrally located within nucleations (usually at major street intersections, along with retail banks), and generated considerable pedestrian traffic flow (often involved with comparative shopping) which could be siphoned by adjacent specialty and personal service stores to their businesses (Eaton and Lipsey 1979). Thus, the aggregate benefit realised by a store in these large nucleations tended to depend on its location *vis à vis* the department store(s) generating the greatest spillovers.

During the first half of the twentieth century, independent food, specialty and personal service stores, along with small branch banks, acted in concert within their own clusters to generate externalities for each other within community and neighbourhood level nucleations — for department stores invariably located in the higher order centres. However, by 1960, this dynamic was being severely tested by supermarkets, or groceterias (as they were commonly known in Canada in the 1950s). Not only did the scale economies achieved by supermarkets enable them to undercut, through lower prices, many of the independent stores in these lower level nucleations, the one stop auto-oriented shopping that they provided took customers off the sidewalks (Mulho and Waterson 1989). Thus, whereas department stores tended to attract people downtown, or to regional nucleations, for comparative shopping, thereby providing positive externality benefits, supermarkets frequently generated externality dis-benefits.

These two types of situations — one involving the generation of positive, and the other negative, externalities — have interesting implications with respect to the ensuing discussion concerning malls. Although big externality generators, such as department stores, were vital to the economic existence of other stores in the
unplanned nucleations in which they were located, the legal environment relating to property tax levies did not provide sufficient flexibility for this “externality generating role” to be properly recognised. Similarly, negative externality generators were not penalised for the market-reducing, and often blighting, effect that they frequently had on other establishments in nucleations within the vicinity of their trade areas. In essence, policies related to local government finance, particularly the taxation of commercial properties, has either ignored, or been fatally slow to recognise, the complex matter of externalities (Pashigian and Gould 1998a).

The Mall Marketing Mix

Shopping centre developers were, however, quick to grasp the implications of externalities. A mall is developed as a planned project consisting of commercial outlets oriented to one another as part of a contained, inward looking, landscape, that is served by free parking. Once built by a developer, a mall leaves little room for cheap correction of errors in judgement, so its location with respect to its market, and internal design, must be right. Space within a mall is not sold but leased (though a few condominium malls have been developed in recent years) to chains, franchises, or independents, usually on the basis of expected aggregate sales (Miceli and Sirmans 1995). Thus, whereas in unplanned nucleations commercial viability is determined at the level of the individual store, in malls it is determined in large part by aggregate mall sales, not the success or failure of individual stores (Benjamin et al 1990).

So, mall developers learned quickly that:

- malls needed strong anchors (as well as free parking) to attract customers from a wide market;
- stores within a mall must be placed in relation to others to encourage multipurpose and comparative shopping throughout the facility (Baker 1996);
- judicious store selection should be implemented to minimise “tragedy of the commons” possibilities, thus providing a level of market security for lessees (Pashigian and Gould 1998b); and,
- chains (and franchises) provided more consistent standards, and superior marketing, than local independents (West 1992).

Externalities, therefore, lie at the heart of the mall marketing mix formula, as well as the overall design of the facility and the location of particular stores within it (Mejia and Eppli 1999). Thus, whereas unplanned nucleations invariably have anchor stores located centrally surrounded by specialty outlets, planned nucleations have them located at their peripheries to generate internal pedestrian traffic flow for specialty stores that lie between (Ingene and Ghosh 1990; Brueckner 1993).

As malls came on the consumer service scene at a time when department stores were the prime force in retailing, it is not surprising that these were regarded
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by developers as the vital component in a mall marketing mix -- particularly for regional level malls. And, mall developers soon realised that supermarkets could also perform a similar function in the marketing mix of neighbourhood and community level malls. But, how could department stores, which were invariably well established in their own buildings on their own sites, and supermarkets, which had gained (by 1960) a strong foot-hold in traffic-facing, off-street, arterial locations, be lured into malls?

The answer was to provide these anchors with highly preferable long-term lease rates which, in effect, recognised their externality generating role in commercial clusters (Benjamin et al 1992). Planned nucleations could do this because the mall property (plus parking) was assessed (for tax purposes) as a whole, whereas in unplanned nucleations assessments had to be undertaken lot-by-lot. In consequence, it is not unknown for anchors to be charged lease rates per square foot as little as 5 to 10 % of those of non-anchors. Pashigian and Gould (1998a) suggest that it was these low, long term lease rates that helped lure department stores across North America in the 1960s from downtowns and regional unplanned nucleations to suburban malls -- thus contributing mightily to the collapse of retailing in many of these traditional commercial nucleations. In a similar fashion, supermarkets were also lured (though it did not take as much luring) into neighbourhood, community, and, often, regional malls.

But, are such large differential lease rates (and other “price” mechanisms) used to attract anchors to malls justified by the positive externalities they generate? More generally, what is the order of magnitude of the increment to return on capital in stores in clusters generated by externalities? Positive externalities are invariably inferred -- they are, by definition, virtually impossible to estimate because unplanned nucleations develop through accretion, and planned nucleations (malls) usually open as fully-developed facilities with anchors already in place. Perhaps, then, the order of magnitude can be estimated from the inverse -- if an anchor is removed from a nucleation (such as a mall), what is the impact on sales per square foot in non-anchor stores within the nucleation? And, by implication, if the externality generating impact of an anchor diminishes, what should be the impact on mall tenant rents (Gtazlaff et al 1994)?

Rusting Anchors and “Greyfield” Shopping Centres

During the 1990s, the traditional mall marketing mix in Canada (and North America) has become open to question primarily because department stores have been undermined by the rapid growth of large format retailing, particularly “category killers” (such as Home Depot, Future Shop, Indigo, IKEA) and discount department stores (such as Wal-Mart); and, perhaps, growing B2C e-commerce. Large formats tend to operate in either free-standing locations, or in power centres -- which involve a number of big-boxes sharing the same parking lot. With the drawing power, and hence the externality generating benefits, of anchors weakening, a larger number of malls than usual across North America appear to be under-
performing and/or in decline -- these have been referred to as “greyfield” shopping centres (PWC 2001). In the Greater Toronto Area, while median mall vacancy rates (the proportion of unoccupied stores in a mall) have declined in good economic times from 10 % in 1997 (for 419 malls) to 9 % in 2000 (for 446 malls), the range of vacancy rates has increased -- indicating that relatively more malls in 2000 are vulnerable (Gomez-Insausti et al 2000).

The most dramatic (in Canada) example of a declining department store chain in the 1990s was the T. Eaton Co. Ltd. This family-owned company, which established its first large store in downtown Toronto in 1883, was originally reluctant to establish outlets in shopping centre locations because it had expanded nationally to own good properties on well located sites in the downtowns of most large Canadian cities. However, by the early 1960s, it was clear to the Company that shopping centres in suburban locations could not be ignored. In response, Eaton’s began to open stores in regional level malls, sometimes as joint mall owners, but more usually with preferential long-term leases. The largest mall in this era, which opened in 1964 with 94,000 sq. metres (one million sq. ft.) of floor space, was the Yorkdale Shopping Centre located in what was then the suburban municipality of North York in the Toronto metropolitan area. This mall, with its two department store anchors (Eaton’s at one end and Simpson’s at the other), and supermarket, set the tone and pattern for rapid growth of regional malls (regional malls average 50,000 sq. metres of floor space) across the country.

By the early 1990s, however, when Eaton’s was operating 66 stores across the country, many located in downtown malls in smaller urban areas, the company was in severe financial trouble. The company should have been closing unprofitable stores (perhaps 40 stores) for a decade or so -- the reason why it did not is another story. The extended recession in the early 1990s, and the proliferation of large format retailing, exacerbated the situation, and in May 1997, the company announced it was seeking creditor relief (under the Companies’ Creditors Arrangement Act, Canada) for restructuring purposes. In short, the restructuring plan did not work, and the Company filed a Notice of Intention under the Bankruptcy and Insolvency Act on August 20, 1999. It moved into a phase of liquidation sales and final store closures on August 25, 1999, and all stores were closed by mid-October -- well before the retail industry’s annual December period of peak sales.

On September 20, 1999, Sears Canada announced it had come to an agreement to purchase the T. Eaton Co. Ltd. and its long-term lease arrangements (in some cases through to 2040) with 18 of the former Eaton’s stores, and the purchase was finalised on December 30. Subsequently, Sears Canada decided to open six of the stores, that were in good metropolitan locations, under an “eaton” banner, and 12 were re-opened under the Sears banner. The six “eaton” stores are located in Victoria, Vancouver, Winnipeg, Toronto (2), and Ottawa. Re-openings occurred during the Summer/Fall of 2000, with, for example, the largest store (in the Toronto Eaton Centre -- which is owned by the Cadillac-Fairview Corporation, which is, in turn, owned by the Ontario Teachers Pension Plan Board) not opening until late November, 2000. The former large Eaton’s department store (and mall) in downtown Montréal was purchased by Ivanhoe (the principal shareholder being
the pension fund Caisse de dépôt et placement du Québec).

This paper explores and quantifies the negative externality effects on in-mall tenants that are associated with the closure of a major department store anchor in large regional shopping centres. From a practical perspective, the analysis is one of the first attempts to measure the concept of externalities empirically. This is accomplished by tracing and linking the spillover effect on monthly sales performance of nearby specialty stores with the closure of a major department store anchor. In this way, one can measure, in reverse, the externality effects that are associated with a department store anchor in a major mall. On an operational level, the research has the additional benefit of providing insights into the importance of a major anchor tenant as a major sales generator. More specifically, does the aggregate sales performance of retailers in close proximity to the anchor reflect the performance of the anchor tenant? In addition, the analysis provides a means of assessing the optimisation of the tenant mix in a planned shopping environment. What permits this form of detailed spatial analysis is access to longitudinal monthly sales data for a set of shopping centre mall tenants, in close proximity to a major department store, in a sample of eighteen regional malls over a two-year period.

The Data

In this analysis, the recent closure of Eaton’s department stores provides a real-life situation for addressing the following questions:

- Does the removal of a mall anchor incur a negative externality impact on other stores within a mall?;
- If so, how much?;
- Are the stores closest to the closed anchor affected more than those more distant?;
- Which types of stores are most affected?; and
- What are the strategies that shopping centres can use to minimise the impact of declining anchors, and avoid becoming “greyfield” operations?

Answers to these types of questions require monthly sales information for stores that is usually unavailable due to the confidential nature of contractual arrangements that mall owner/operators have with lessees.

However, monthly sales data have been obtained, from one major Canadian development company (which requires anonymity), in various aggregated forms that does make it possible to address these questions. The information has been compiled by the company in ways suggested by the researchers, the only real difficulty being that it has not been possible to re-visit the company’s databases to test alternative aggregations. The data relate to eighteen regional and super-regional malls (average size, 860,000 sq. ft.) located in Quebec (5), Ontario (9) and the west (4). All the malls have at least two anchors (usually multi-level depart-
ment stores), and, in general, the anchors provide about 62% of the mall space. Thus, on average, about 330,000 sq. ft. is devoted to non-anchors, usually specialty stores and restaurants.

Although the eighteen malls are in the regional or super-regional categories in terms of size, they embrace a wide variety of classes. A measure commonly used to classify malls is annual sales per square foot. The Korpacz Real Estate Investor Survey, which is based on a large number of mall surveys in the United States, places malls into four basic categories, A, B, C and D, the first three of which are, in turn, bifurcated. It should be noted that the intervals defining the categories are not equal (Figure 1). They are based on industry views of the upper and lower bounds for each class (in 1998 dollars). In this study, American mall category definitions are used simply because there are not enough regional malls in Canada, for which information is available, to undertake a similar type of performance analysis. The highest grade malls (A+ and A) are the most desirable for lessees, and, accordingly, they are able to charge the highest lease rates. Sales per square foot of less than $225 (or US$150) are generally considered impractical to sustain a regional mall -- thereby providing a benchmark that may be used to define potential “greyfield” situations (PWC 2001: 11). All the malls in the analysis lie in the A and B categories with sales greater than $300 per square foot.

Monthly sales aggregations have been provided by the supplier for all stores by zone, and Statistics Canada Standard Industrial Classification (SIC) categories for each zone, for all 18 malls, for the period March 1, 1998 to February 29, 2000. The zones include all lessees located within (A) 100 ft., and (B) 100-200 ft., of a former Eaton’s entrance. Although 100 feet and 200 feet are not great distances, the stores located within Zones A (a maximum of 241 stores in the 18 malls) and B (a maximum of 305 stores) comprised 20% of the total non-anchor mall space, and have an average size of about 2,000 sq. ft. The number of non-anchor stores involved is, therefore, of reasonable size, though there is not sufficient information to estimate parameters that might indicate variations between regions or among malls of different sizes. It should be noted that the word “maximum” is used because the number of stores in Zones A and B varies slightly with openings and closures.
Trends in Monthly Sales

The data are summarised in Figure 2, which shows the trend in monthly sales for the 24 month period for Zones A and B compared with national unadjusted DSTM (department store type merchandise) sales, which exclude food and automobile sales and service. Most noticeable is that the monthly fluctuations tend to mirror each other, with sales in December providing about 16% of annual retail sales in each zone and nationally. Thus, the graph emphasizes the importance of the closure dates -- the Eaton’s stores “went dark” in October/November just before the month during which most malls do one-sixth of their business.

There is also a slight upward trend in sales for the country as a whole and within the two defined zones, which reflects the modest rate of inflation of 2% (year over year) within the country during this period, and a real growth in retail sales of about 4%. Of particular interest is the decrease in retail sales in Zones A and B in October/November, 1999, which, if viewed within the context of a single year, might be taken to reflect the negative externality impact of Eaton’s closures as national DSTM sales do not dip in a similar fashion. But, as the graph indicates that the same pattern also occurs during the previous year, such an interpretation cannot be made. The data, therefore, require closer inspection.
The Impact of Store Closures on Month-over-Month Sales

Given the fluctuations in monthly sales in retailing that occur during a twelve month period, changes are often expressed on a month-over-month basis. Thus, rather than comparing changes in sales in consecutive months, which would be entirely misleading, changes are expressed with respect to the same month in the previous year. The only difficulties that might occur could be an additional day in a month, as with February-over-February every fourth year, or when crucial shopping days (i.e., Saturdays and Sundays) occur in conjunction with national holidays. For example, when Christmas day falls on a Monday in one year, and a Sunday in the year previous, month-over-month sales for December may be significantly affected. In this case, it should be noted that February 2000 had 29 days, whereas February 1999 had 28. Of greater possible significance to sales, while Christmas Day, 1999, occurred on a Saturday, in 1998 it fell on a Friday -- providing a gift to retailers of an entire weekend for “Boxing Day” sales.

With these minor caveats in mind, it is interesting to note the quite wide variation in changes in month-over-month sales increases (or decreases) that occurred in the two zones within the 18 malls used in the analysis (Figure 3). Not only are there wide fluctuations in changes -- in Zone A the highest month-over-month sales increase is the August ‘99/August ‘98 value of 10 %, and the lowest
is the November '99/November '98 figure of – 0.01 %; and, in Zone B, the changes vary between 19.3 % for March '99/March '98, and 4.5 % for November '99/November '98.

It is noticeable that, until July '99/July '98, month-over-month sales increases in Zone A are similar to national DSTM sales patterns. Sales increases in Zone B are, however, much higher -- reflecting, perhaps, the general strength of the regional and super-regional malls used in this analysis. The difference between the monthly changes in sales in the two zones may well be related to the increasing “tiredness” of the Eaton’s anchor -- it was no longer attracting as many shoppers to its end of the mall. The August '99/August '98 sales increase of 10 % appears, therefore, to be anomalous, until it is recalled that Eaton’s liquidation sales commenced on August 25, providing seven days of frenzied bargain hunting prior to the end of the month to boost pedestrian flow at the Eaton’s end of the malls.

Then, from August to November, 1999, Zone A exhibits declining month-over-month sales increases, and in November the change was zero, which, given the small inflation rate, actually means a decline in real dollars. The extended three month period of decline is related to the staged nature of the closures -- the stores closed on different days extending to mid-November. Even though monthly increases in sales occurred from December 1999 through to February 2000, they were at about the inflation rate for the period, and far less than aggregate sales increases in stores in Zone B, and one-third annual DSTM sales increases. The negative externality impact on the stores in Zone A is, therefore, quite marked for the entire post-closure period of Eaton’s stores from October 1999 through to the last element of the data set in February 2000.
Aggregate month-over-month sales of stores in Zone B, though only 100 to 200 feet from an Eaton’s entrance, appear to be remarkably insulated from the negative externality impact of Eaton’s closures. There is no doubt that declining attraction of the Eaton’s stores prior to closure had an impact on stores in Zone B from March to July 1999, but the affect merely reduced month-over-month sales increases from almost 20% to 10% -- still far in excess of national DSTM sales increases. The negative externality impact appears to have kicked in most strongly from August through to November 1999 when, in two of the four months, Zone B sales increases were, in general, less than national DSTM sales increases. Zone B sales, however, rebounded strongly in December, 1999, and remained strong for the rest of the period represented by the data.

Two basic periods can, therefore, be defined for summarising the month-over-month trends:

- An immediate pre-closure period extending from March, 1999 to September, 1999, which can be compared with March, 1998 to September, 1998; and,
- A post-closure period extending from October 1999 to (at least) the last element of information in the data set for February 2000, which can be compared with October, 1998 to February, 1999 (Figure 4).

In the pre-closure period, although store sales in Zone A may have already been affected by the Eaton’s decline, the aggregate sales increase for the seven month period (6.4 %) for the 18 malls is similar to that for DSTM nation-wide. Sales in Zone B are plainly unaffected (an 11 % same period increase). In the post-closure period, aggregate sales increases in Zone A (1.7 %) barely keep pace with inflation, and are much less than the national DSTM increase (6.2 %). And, even though the aggregate increase in sales in Zone B (8.9 %) is larger than the DSTM post-closure increase, the difference is not as large as it was in the pre-closure period. Thus, the stores closest to the Eaton’s entrances were greatly affected, while those only a short distance away were hardly affected at all. For this selection of malls, the negative externality affect weakens sharply with distance.

**Differential Negative Externality Impacts by Merchandise Category**

Are all store types affected equally? An analysis of post-closure (i.e., October 1999 to February 2000 compared with October 1998 to February 1999) changes in sales for stores aggregated into thirteen merchandise categories, by zone, for the eighteen malls, suggests that the negative externality impact affects some types of
stores more than others. The range of apparent impacts is indicated in Figure 5, in which the thirteen categories of stores are ranked by percent change in sales in the post-closure period for both zones. The range of percent changes in sales is quite startling: from a low of –9.5% for stores supplying fashion accessories in Zone A, to a high of 32% for home furnishings (including hardware and kitchen supplies) in Zone B. As some of the large percentage changes in particular categories are undoubtedly based on small numbers of stores (perhaps two or three), they must be interpreted with caution.

As would be expected, given the discussion in the previous section, the negative impact of the closures is far more evident in the merchandise categories in Zone A than Zone B. More than half of the merchandise categories in Zone A experience a decline in sales in the post-closure period, compared with only three in Zone B. Although Kendall’s coefficient of concordance ($W$) indicates that there is no agreement between the rankings of the changes in sales, by merchandise category, between Zone A and B, nevertheless two of the three “negatives” in Zone B appear among the seven in Zone A. Conversely, five of the merchandise categories that are “negatives” in Zone A are “positives” in Zone B.

In general, it would seem that the merchandise categories most affected by the Eaton’s closures in both zones are variety stores, food (mostly fast food), and
ladies wear. Stores offering fashion accessories, gifts/books/stationary, shoes, and men’s wear, are, in addition, most affected in Zone A. At the other end of the impact spectra, the stores apparently most immune to the negative affect of Eaton’s closures are those involved with leisure goods, services, jewelry, unisex and child wear, and pharmacies. Thus, all store types are not affected equally, and it would seem that those most affected tend to the ones that depend on high volumes of pedestrian traffic and/or comparative shopping, while those most immune are destination stores.

Differences in Trends in Annual Sales

There is, then, a clear difference in aggregate month-over-month changes in sales between Zones A and B, and variations in sales performance by merchandise category. Stores in Zone A seem more affected by Eaton’s closures than those only a short distance away in Zone B -- the Eaton’s shadow appears short, though sharply defined, in those regional malls used in the analysis. But, though Eaton’s entered its phase of liquidation sales, and the various stores “went dark”, within two months, the death throes of the chain lasted at least from May, 1997, when the company announced that it was seeking creditor relief. In what ways are these “death throes” captured in the trends in sales per square foot in Zones A and B?

The trends are estimated from annualised sales per square foot in the two
The most evident trend is for the gap in annualised sales per square foot in the two zones to widen throughout the period. For the twelve month period ending February, 1999, the gap is only $19 per square foot, but by the period ending February, 2000, the gap has become $44 per square foot. Sales per square foot in Zone A were, therefore, 4.5% less than those in Zone B at the beginning, and 9.4% at the end, of the data sequence. This end-of-sequence gap, large though it may be, may underestimate the negative externality impact in Zone A because the full affect would probably be most evident in the data points for the full post-closure year -- i.e., October, 1999 to August, 2000. Furthermore, the narrowness of the gap at the beginning of the sequence suggests that at some time prior to the 24 month period embraced by the data, sales per square foot in both Zones may have been similar.

An estimate of these out-of-range data points may be derived from the trends suggested in Figure 6. The Zone B trend is basically linear, though the thirteen data points exhibit some minor periodic perturbations around a straight line fit.
Although it is doubtful whether this linearity extends too far outside the sequence of data points -- perhaps the trend line is S-shaped, reflecting the 1991-2001 business cycle -- there is no evidence available to assume differently. The Zone A trend, consistent with the pre-closure/post-closure periods defined previously, exhibits a double linear piece-wise pattern, with a linear trend for the pre-closure period (based on eight data points) that is three times the gradient than that for the post-closure period (based on five data points). Furthermore, the magnitude of the gradient of the Zone B trend is larger (about 70% greater) than that for the Zone A pre-closure period.

Estimates of future and past sales per square foot for Zone B can, therefore, be based on the thirteen point trend; while past sales per square foot for Zone A are made on the basis of the pre-closure data points, and those for the near future are made on the basis of the post-closure trend. The extension of the trend lines back into the past suggest that sales per square foot in the Fall of 1997 in both Zones were roughly similar, and had probably been tracking along a comparable path for some time. The extension of the trend lines into the future suggest that the difference in sales, between Zone A and Zone B, for the full twelve month post-closure period (October, 1999 to August, 2000) will probably prove to have been about $60 per square foot.

Forecasts of future sales per square foot, in this case up to the September, 1999 to August, 2000 period, assume stability in the externality environment. That is, the assumption is that the space occupied by the former Eaton’s department stores remained vacant, or part of the space was placed in some temporary use. This, in retrospect (the paper was written in March 2001), proved to be the case, for the former Eaton’s spaces did not start to re-open (as either Sears or eatons stores) until the late summer/early Fall of 2000. There was, therefore, a relatively long period of time (in the life-cycle of retailers) of about twelve months during which the negative externality impact of the closures could reverberate.

The negative externality impact of the “death throes” of the Eaton’s chain is suggested by the difference in the trends in sales per square foot between Zone B and the pre-closure period in Zone A. The story that can be reconstructed from the trends suggests two negative externality affect phases:

- **Phase 1** -- A depressing affect, extending from May, 1997 to August, 1999, during which time the negative publicity surrounding the creditor relief announcement, and straight jacket of the subsequent re-structuring arrangements, escalated the negative externality impact of Eaton’s anchors. As these anchors were already “tired”, the prime effect was restricted to a narrow zone closest to the Eaton’s entrances. The result of this depressing phase was that, by September, 1999, Zone A sales per square foot were 6.7% less than those in Zone B.

- **Phase 2** -- A closure affect, extending from September, 1999, through to such time as the anchors may have been successfully re-opened, which includes a twelve month post-closure period, during which time the negative externality impact was much greater because the anchors were either closed, or partially
in some interim use. The result of this closure phase was that by August 2000 annualised Zone A sales per square foot were probably 12.3% less than those in Zone B.

Conclusions

There is no doubt that the closure of Eaton’s department stores had a negative impact on stores in the malls involved in the analysis. However, the negative impact:

- did not result, in the aggregate, in losses in current dollars;
- was felt in the form of a dampening of month-over-month increases in store sales;
- was felt strongly only in the stores in the zone (Zone A) closest to the former Eaton’s entrances, and, on the basis of the weak impact on stores in Zone B, probably felt little throughout the rest of the malls;
- in Zone A was such that, during the period after the closures, month-over-month sales increased by only 1.7%, compared with 8.9% in Zone B; and, 6.2% DSTM nationally;
- was not experienced similarly in all merchandise categories – stores selling fashion accessories, gifts/books/stationary and food were most affected; while stores involved with leisure goods, personal services and jewelry were the least affected;
- was, perhaps, mitigated by the large size of the malls, all of which provide at least one other major anchor, and other “anchor” like customer attractions, and also their classification among the highest class performing shopping centres; and,
- may prove, for the year following closure (October, 1999 to August, 2000), to have dampened aggregate sales per square foot in the areas closest to Eaton’s entrances by about 12%.

The implication of this analysis on mall leases is quite significant. The negative externality impact within these high performance malls is, on the whole, restricted to those stores closest to the former Eaton’s entrances. While they did not lose sales, in current dollar terms, they did not achieve the sales increases of those stores a short distance away within the mall. Thus, given the slim nature of gross margins under which retailers operate (Yeates 2000: 66), it is the stores in this narrow zone only that may warrant some short-term mitigation of lease arrangements. Stores located elsewhere within the malls, which seem to have been largely insulated from the negative externality affect of the closures, appear to have no such claim.

The empirical results presented in this paper raise a number of fundamental issues regarding the future operation of planned regional shopping centres. It would
appear that if the absence of an anchor can dampen aggregate sales in adjacent stores by about 12%, then a vibrant anchor may stimulate aggregate sales in adjacent stores by a similar percentage. Again, given the margins under which stores operate, such a percentage can have a huge affect on profitability. It remains, therefore, in the financial interest of mall owner/operators to search for stores which can generate positive externalities for other stores. Given, however, the declining importance of traditional department stores in the current Canadian consumer service environment, as they become little more than large fashion outlets, what are the new anchors? Current research concerns the types (and mixes) of stores that may be emerging to replace department stores as anchors, and the amounts of differential lease rates (and lengths of leases) that should be provided in recognition of their anchor roles (Charles et al 2002).

References

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