Current Approaches to the Development of Airport Retail:

A Sales Performance Analysis and Case Study

by

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ABSTRACT

During the 1990s, a number of airports around the United States radically changed the way they managed the retail space in their terminals. Departing from the traditional master concessionaire/operator model, airports began experimenting with branded direct leasing programs and outsourcing to third party developers. Serving over 700 million domestic airline passengers annually, and until recently overlooked by the retail development community at large, the airport network presents a significant market for retail development. We review the issues surrounding airport retail management, the genesis of the branded, mall-style and developer-run programs, and evaluate the relative performance of different management models both quantitatively and qualitatively, based on recent sales data and case studies of a number of airports.

Data for this report was collected June/July 2002 in the form of publicly available data from industry trade groups and journals, interviews with members of airport business offices, developers active in airport retail, and firms providing concessionaire service to airports.

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Dedicated to those who lost their lives on September 11, 2001, and to all
people who give of themselves for the sake of others:
in peacetime and in war,
as civilians and as soldiers, and
as teachers and as friends.

Introduction

The evolution of airport retailing

In the late 1980s, when you stood in line at the airport check-in counter, your thoughts might have wandered a bit – commenting to yourself on the how poorly the building was showing its age, hoping the airplane was in better shape, and whether you'd have time to sit at the gate and enjoy the view of the planes taking off. Taking a sip from that awful cup of caffeine-laced coffee, you might have found solace in the fact that at least the airline industry had some competition these days, but how could those stewardesses be so friendly this early in the morning.

Ten years later, the well-lit, vaulted ceilings in the new terminal makes for a more pleasant airport experience, but the booking agents seem so much more harried, and you've been in line for almost 45 minutes. At least the java is decent, and you'll have another hour to shop for that gift you've been meaning to get for your spouse, just before you sprint to your gate…to find out your plane has been delayed in Chicago. You might as well check your email at the bank of kiosks while you wait…such is life on the road!

In the wake of September 11th, safety when traveling may be once again central in our minds in a way we thought gone forever, but the experience of traveling through an airport will never be the way it once was. Since 1990, domestic air travel in the US has grown from 424 million passengers a year to over 708 million in 2000, and when you consider that for every one of those people arriving at the airport, you have someone getting off that plane, all told airports in the United States serve over a billion people a year. Meanwhile, airport facilities have been renovated, but the inability of the aviation

network to keep up with that demand has meant an increase in delays, multiple connections and longer dwell times in the airport.

If the previous decade had been spent adapting the business of aviation to the new world of deregulation, the last ten years has seen a revolution in the airport as a commercial venue in it's own right, with name brand retail stores, business productivity centers, even minute spas, become more and more commonplace. This has been driven in part by changes in our culture, as we spend more time traveling greater distances in the course of our professional lives, but it is also due to a change in our expectations of a retail and shopping experience. With Starbucks at every corner, a J Crew or The Limited not far away, and 24-hour pharmacies, our expectation for convenient, familiar conveniences no longer ends just because we'll be traveling halfway across the country. With limited government funding and increasingly squeezed operating budgets, airports are run 'like a business', and if we're spending the time and have money in our pockets, someone, somehow will be there to take it from us.

But behind the scenes, in the airport's business office, someone has to make that miracle of modern capitalism possible. Should the airport take on the job, tight staffed as it is? Perhaps the concessionaire, who generally has great familiarity with and a long-term commitment to operating in the airport environment, could run the operation. Or perhaps they should outsource to a completely new breed of operator from outside the traditional boundary of the industry – the third-party manager-financier-developer – who has the contacts and resources to bring in and manage a program offering a broad variety of name brand products in a high service environment.

All these variations have been tried over the course of the past ten years, and the grand experiment is not yet over. The question we hope to begin to address here is how we have gotten from there to here, if there are indications that there are aspects of these various business models work better than others, and where the industry might be evolving.

The airport network and organization

The Federal Aviation Administration oversees the 3,304 commercial and general aviation airports that make up the national airport transportation system. The top 419 are categorized as primary hub airports, which in 2000 carried over 708 million passengers, the great majority traveling through the 31 large hub (494 million, or 70%) and 35 medium hub (135 million, 19%) airports[1,2] (see Table 1.) This ranking is based on the FAA's measurement of an airport's annual **enplanements**, which are defined as the number of passengers boarding a flight, including origination, stopovers and connections. While the total passenger volume at an airport is double that (as we pointed out, few people actually live in an airport, so in the aggregate there are roughly just as many people leaving the airport system as there are enplaning), the number of enplanements is considered the principal measure of passenger volume in an airport and, more importantly for our purposes, represents those passengers spending their time – and money – in the airport terminal while waiting for their flight.

Most airports in the United States are public entities – either directly owned by the city, or incorporated, but serving the public trust. To meet their operating and capital

[1] ATA Airline Handbook
[2] FAA 2000 Primary Airport Enplanements Activity Summary

investment needs, airports rely on a broad range of funding sources: municipal airport bonds, federal and state grants and airport-generated income, which includes landing fees, passenger facility charges, fees paid by rental car companies, parking fees, facility rent and retail concessions. In some airports these non-airplane related fees, concessions and rents contribute almost a third of the airport's income. Concession fees themselves may be only a few percent of a large airport's operating budget, but they and the rents that those concessions generate are an essential part of the fiscal balancing act.

The retail environment in airports is driven by unique geographic constraints. The major distinction in the airport environment is between "ground-side" and "air-side", a distinction that has been made much clearer to the traveling public and the airport retailer since 9/11. Ground-side, "before" security, with ticketing and baggage handling, has traditionally been the place for an airport's large open spaces. There are many airport layouts, but generally there is a central terminal with connections to ground-side transportation (car or light rail), separated from the air-side concourses and boarding gates by a bank of security. Once on the air-side, there is wide variation in the layout and capacity for retail. Some concourses are short walks from the terminal, with the all gates visible before going through security. Others are completely separate sections to the airport, with shops and restaurants peppered all along their length. Typically however, the design of airports had been focused on getting people from the entrance, through security and to their gate as quickly as possible; what they might be do once they were there was often an afterthought. In the world of commuter shuttles and walk-on booking that was a reasonable and effective design. That design presents challenges in today's much more time-intensive travel experience.

History of retail management in airports

In the past, the great majority of airports either managed operations in house, with a dedicated staff, or contracted for various services through a RFQ/RFP process, and retail concessions were no exception. The choice to outsource could cover the entire range of retail operations, or for a specific product segment. The market segmentation in airports has five principal product categories – food and beverage, specialty retailing, news and gifts, duty free and general services – with different firms specializing in some products and not others, and a few that can service the entire market. Major master concessionaires include HMSHost, formerly Host Marriott Services (news, gift and specialty retail, as well as food and beverage), Parodies Shops (specialty retail), CA One Services (both retail and food/beverage) and DFS Group (duty free).

Generally the contracts ranged from 15 to 25 years with a single, integrated "master (or prime) concessionaire" entity providing the operating staff and management for the retail locations. The advantage of this approach was a simplified interaction with the retail operation, which was considered outside the scope of an airport's primary function. Rather than having a staff to manage the dozens of retailers and operators, a single firm could provide one point of contact. The airport received income from rent on the leased space and a concession fee from the master concessionaire, which was compensation for the effective monopoly the airport had granted.

The concessionaires earned an operating profit, hiring their own staff to manage and operate those stores. With airport employees starting to arrive at 4am, these concessionaires face high labor costs (as they were required to remain open for as many as 14 or more hours a day), as well as a high cost of inventory (airport retail locations are

significantly smaller than a similar space outside the airport, and limit the space available for preparation and inventory). As a consequence much of these higher costs were captured in higher prices charged to the public, who had few other options.

The first signs of change came with the introduction of two new concepts: branded stores and street pricing. Part of the former joys of airport shopping was paying two or three times for the generic version of whatever it was you were buying. As a customer your options were limited. That had to change with the introduction of branded concepts. Once the brand – that is to say, the reputation – of the outside company is at stake, they have an incentive to keep their customers happy with reasonable prices, even if they never pass through that airport or frequent that store again. Brand signals the quality of the product you're buying, and McDonald's will not do a very good business if they ask you to pay twice as much for the comparable burger and fries as you would five minutes away from the airport. This upset to the comfortable business environment stemmed from two experiments at opposite ends of the country.

Early successes

In 1988, Portland International Airport became the first airport in the country to experiment with the themed development of retail. Dubbed "Oregon Market", this central shopping and dining area was an attempt to market the unique culture and experience of the Pacific Northwest, with shops and restaurants that captured the local and regional flavor. It initially opened with six specialty retail shops, oriented around a "main street" theme complete with clock tower to complete the street-like pedestrian experience. The program was a success, and in 1994 expanded to include three

additional retail shops and nine food outlets. Then in 1999, the model was extended with the creation of a concessions court Concourse C, which was recently expanded in 2001. All told, the retail program will encompass 110,000 square feet of retail. Portland has also been the recipient of a number of awards, both locally and nationally. In 2000, the program earned a Governor's Livability Award from Livable Oregon for its success in reflecting the feeling of livability and values of the state. In 2001, Portland distinguished itself among a peer group of medium sized hubs by placing first in three of the five categories in Airport Retail News' annual Best Airport Concessions Poll. In 2002, that impressive performance was surpassed when Portland took top honors in four of five categories. Over time, Portland's model has proven itself by continuing to strive for unique and interesting concepts that capture local flavor and that offer professional design and function. Notably, one of the 2002 judges made specific comment of Portland's fair rent approach to its tenants, which reflects the airport's macroscopic appreciation what it takes to make such a concept work.

In 1992, another experiment was started at Pittsburg International Airport that took this concept to another level. The airport brought in an affiliate of the United Kingdom's BAA plc to replicate their successful redevelopment of the British Airways terminal at London's Heathrow Airport. BAA designed AIRMALL as a stylish shopping-mall-in-the-airport, on a scale much beyond anything that had been created before. Enforcing the same "street pricing" as at Portland, the AIRMALL is centrally located at the nexus of all four of Pittsburgh's concourses. Once you pass through

security, you connect into the central core of AIRMALL, which you walk through to reach your specific concourse. With almost all of the airport's passenger traffic passing by the 100,000 square feet of retailing and 110 stores, some of them sole local outlets for national chains, the AIRMALL generates sales of $9.02 per enplaned passenger, much improved from the dismal $2.40 prior to the opening in 1992, and consistently ranking it at the top of its peers.

AIRMALL position behind security has challenged it post-9/11, as non-ticketed customers can no longer enter the mall, but a sign of faith in the concept's strength is the announcement in May 2002 of the opening of additional retailers, including Swarovski Crystal, Polished manicures and makeovers and Perfumania and the extensive renovation.

Entry of third party developers

With the entry of BAA at Pittsburg in 1992, the airport world awoke to the potential for retailing as a profit center. And with the profit opportunity have come the developers. From the world of traditional retailing, developers with the relationships to bring in brand named eateries and stores, the management skills to orchestrate the leasing, build-out and tenant relations, as well as the financial acumen and incentives to make the model work tried their hand. There are anecdotes of developers sitting in Oregon Market over lunch, observing the bustling environment and going off to explore a similar opportunity for themselves. A number of new firms entered, most with some prior connection to and experience with the airport environment, which would assist them in navigating the political landscape. Building on their success at Pittsburgh, BAA continued to expand, and was joined by MarketPlace Development (a joint venture of a

major New England mall developer and a prior chairman of MassPort, which operates Logan Airport), LCOR (the US affiliate of the firm that developed Amsterdam's Schiphol Airport), as well as international retailing behemoth Westfield Corporation. The financial structure of the development model is radically different from the concession model. In most cases, the developer is bring a source of financing (which may be in concert with the airport's providing low-cost municipal debt) as well as expertise in the role of general manager, and in exchange for developing and executing the leasing and tenant management function, it receives a partnership interest, generally 20-25%. As compared to the pure mall development model, airports are both smaller in square footage (at most 100,000 square feet versus a mall of 600-700,000 square feet), but their attraction is in the long term stability of the contract.

Competitive response

Since most concessionaires have long-term contracts with "their" airports, these development firms have faced a partially closed market as they have introduced their new brand of retail management. Some airports have successfully brought in a developer when overhauling or expanding their facilities (such as Washington National, see case study later), or in a more limited fashion for selected portions of the airport. For example Boston's Logan Airport introduced Boston Landing, a smaller scale AIRMALL with 35 specialty retail shops in its Terminal C, with the help of Westfield; then, shortly before the prior contract for South Terminal was due to expire, MassPort appointed BAA as developer for Terminals B, D and E. To date over a dozen airports have adopted the

developer model in whole or in part, but unsurprisingly the incumbent concessionaries have mounted a competitive response.

Faced with the introduction of an invigorating array of specialty retailers and branded food and beverage providers, master concessionaires adopted a similar product offering as did developers, while remaining true to their operating model. Still hiring and operating stores themselves, concessionaires began developing a franchise business and bring in such stores as PGA Tour golf shops, Brooks Brothers (both airport exclusives for Parodies Shops), Starbucks, Burger King and Chilis. What is important to mention is that although the stores themselves offer branded products, from the airports perspective the financial relationship has not changed – they still receive rent and a concession fee rather than a share in operating profits. So despite the evolution in the customer experience, this underlying issue remains one of the strategic differences between the two models, and impacts the strategic relationship with the airport.

Impact of 9/11

The landscape of the country has changed since 9/11, and in no place more so than the aviation industry. Security concerns have become paramount, to the point where Los Angeles has announced a multi-billion dollar off-site check-in system, in addition to the disruption that new security procedures and equipment already brings.

After 9/11, airports saw passenger traffic fall 20 to 30 percent, although over time ridership is improving. Industry insiders project that it will take the better part of next year to work out the most pressing issues. And with the fall-off in passenger volume, so has revenue from retail concessions, rental car, parking revenues and landing fees. But

despite this grim situation, many airports have found their retail sales have not fallen as much as could be expected. A large contributing factor in this is likely the longer dwell times travelers are experiencing. With earlier check-ins, passengers have more time to spend, and they'll spend it the restaurants and shops in the airport. But all retail is not equal. While in the past passengers felt comfortable spending their time in the central terminal, confident they could move through security quickly, most passengers today expect long lines at the security checkpoints, and generally go through to the concourses as soon as possible and spend their time there. This has decimated the sales of ground-side stores, with few exceptions. At National Airport in Washington, DC, airport managers point to the design of the facility as encouraging people to stay in the central terminal. With short concourses, travelers can see their gate from the central terminal and this, managers believe, gives passengers the comfort level they need to stay in the more relaxing environment of the central terminal.

Space is another constraint that redesigned security considerations are imposing on airport retail. The new scanning machines mandated into every US airport are massive pieces of equipment. Faced with little alternative, South Florida's Ft. Lauderdale-Hollywood International has reduced the square footage available to the retail locations adjacent to security, and in some cases has decided they must give up those sites entirely. The operation of stores has changed – steak is tough product to sell without steak knives – and shipments of the most basic staples, food and paper goods, must now be delivered in secured trucks and coordinated more closely with airport security. With flexibility and coordination at a premium, the post-9/11 world will help

clarify the strategic differences between the different retail management models. In the next section we look at those strategic consequences, both as related to 9/11 and beyond.

Strategic Issues

Choice of management structure vs. format of retail environment

An important distinction needs to be made when between the function that management plays, and the form and design of the retail areas in the airport. A consumer may not even be aware that there is one concession manager in the airport, and that the employees of the bookstores, restaurants and specialty retail stores all work for the same company. In the past, that may have been indicated by the generic branding of the stores, but today's concessionaires have made extensive use of franchising to bring branded retail to the airports in which they operate. In addition, while an airport's priority is not to create the most effective mall at the expense of passenger convenience and safety, an airport's management can still outsource to a 3rd party or private developer to leverage the skills that they bring to the table.

Three categories of management structure

For purposes of comparison, we can describe three general categories of management structure; in reality, each airport may structure the relationship differently, and in many cases a hybrid exists among different product types or between different locations in the airport. Firstly, the airport can manage tenants directly ("direct airport" model.) In the pure form of this model, the airport has the staff with appropriate expertise to set the overall agenda of the retail program, recruit quality tenants and serve their needs on a ongoing basis; in some circumstances, the airport might outsource a part of that function to a 3rd party manager. This provides the airport with greatest degree of

oversight and the potential to capture all the surplus profit, but it comes with some downsides. Firstly, the airport has to be either so large as to support a full time staff, with commensurate expertise, or so small as to fit those responsibilities within a larger job description.

More importantly, that oversight can become a liability. Airports are often the local municipality's largest asset, and are often beholden to the pressure of local politicians. There have been recent allegations that a former Mayor of Atlanta influenced the selection of concession operators at Hartsfield Atlanta, circumventing the bidding of two concession contracts generating $20 million a year in revenue, among almost two dozen other contracts.

The second major form is the modern adaptation of the traditional prime/master concessionaire. Now offering branded retail at street prices, these concessionaires still make their money from operating profit, leasing the space from the airport on relatively long term leases, plus paying a concession fee to the airport. There has been a growing trend towards the segmentation of RFQ/RFPs, which works well with this model. For example, a firm might bid on the provision of themed restaurants throughout an airport, and a concessionaire with expertise in creating those types of eating environments could pick up two, three or more differently branded locations under one contract, without having pick up the bar contract, for example, as well. This further segmenting of the contracts alleviates another downside of this model, that of the double optimization of profit that occurs when subletting. If a concessionaire does not have the requisite expertise, the concessionaire sublets the space, adding their own profit margin (a rational choice on their part) in addition to the profit margin offered to the airport. The net effect

is a higher rent to the tenant, forcing higher prices and thus sub-optimal performance for the airport. This points to a more subtle issue – concessionaires are rewarded by maximizing operating profit, which is not the same goal as the airport's after the long term contact has been signed. The next model attempts to align those interests more closely.

Under the third party or privately owned developer model, the airport partners with a development organization that takes responsibility for all aspects of the retail environment and fully shares the risks with the airport. For example, neither the airport nor LCOR Schiphol, which runs JFK's Terminal 4 program, has drawn a profit since 9/11, but LCOR is choosing to weather the storm because of JFK's long, successful track record. They had made an initial investment which committed them to the project over the long term. The downside to this alignment of interests is that the risks that the airport is now sharing may bring down the private sector partner. Under the concessionaire model, the manager passes on rental income; here the manager may make the decision to renege on their contract with the airport in the face of a long period of no or minimal profit. Similarly, when times are not good, there is less profit to go around, and the airport may wish to renege and renegotiate with the manager. As a partner, rather than a tenant or vendor, both sides of the relationship are exposed to the risks of the other trying to change the relationship midstream. On the other hand, this model is well suited to an uncertain environment if both parties understand the risks they are taking on, and are compensated fairly for them.

Political considerations

Since airports are often a division of their local municipality, that separation from control of tenant selection under the developer model is no mean feat. Otherwise subject to local politics, the airport can claim to have washed its hands of the tenant selection process; of course, how uninvolved depends on the particular circumstances in the airport and the terms of the contract with the developer. An airport that has historically been involved in every aspect of tenant selection might find it difficult to give up control of the tenants, or as indicated above, may consider that to be the least attractive part of their job and happily hand it off to the outside developer. But perhaps even more contentious is the profit sharing relationship. The transparency of airport operations to the political process makes profit sharing a frequent hot topic. In the positive growth years of the 1990s, with everyone making money, that has been manageable, but with the future more uncertain, that issue may rise to the fore. On the other hand, the developer model gives as good as it gets – in the months since 9/11, many developers have made no money on their projects, but stay involved for the long haul in the conviction that the airline market is sound. The financial benefits of the developer model will be explored more fully in the later section on Data Analysis.

Organizational models

The issues discussed above can be encapsulated in the classic tradeoff between control and incentive in and between organizations. On one extreme, with the direct model you can have absolute control over the process with absolute clarity as to direction and alignment of purpose. But the sacrifice is in incentive and motivation – no

bureaucracy, even a benevolent one, can hope to attract as broad a range of skills and as full a commitment to the cause as an independent, profit-seeking entity. But a separate organization is rightly looking out for its own best interests first – and if the long term profits and cost of a damaged reputation didn't justify the continued investment, then that separate organization can and should exit the market. Post-9/11 these considerations may seem less abstract and an awareness of the theoretical possibilities can shed some insight on the subject.

Analysis of Sales Performance Data

Data Sources

To ascertain whether there is a quantifiable difference in sales performance between these various models, we made use of two primary sources of numerical data. The first, published in the Airport Retail News (ARN) Factbook, is the product of an annual survey of airports that started in 1997. In 2000, the last year for which data was available, the Factbook included 70 domestic airports, including all the large hubs, 22 of the 35 medium hubs, and four Canadian airports. ARN has collected data on passenger traffic, gross sales, gross sales per enplaned passenger and airport revenue broken down by product (food & beverage, specialty retail, news & gifts, duty free and general services); in addition, for each airport they list square footage by product and tenant, as well as lease maturities. Where provided by the airport, these figures are further broken down by concourse and terminal.

The second data set was provided courtesy of the Metro Washington Airport Authority. For 2000 and 2001, the majority of large and medium airports participated in an email survey, and reported sales broken down into food & beverage and retail, airside and groundside, and for each product type the concession management model used by the airport. As small number of large and medium hub airports are missing from this data set, ARN data was used to supplement them. The separation of airside versus groundside sales is not available across all airports, and has been ignored for the purposes of a comparative analysis, although it is clear that a forecasting model would rely heavily on that subset of the data.

The challenge with making use of both these data sources is the short history – four years in the first case and two in the second. Ideally, we would like to see data that spans over an airport's introduction of a new retailing model. A number of airports made that transition just before the start of the earlier data set; others are currently undergoing construction with completion dates over the next one to two years. Another is resolving the discrepancies between data sets regarding enplanements; ARN data is published before the final figures are calculated by the Federal Aviation Administration, and the MWAA survey has self-reported data. For the most part the differences are minor, but in a few cases there may be timing issues (fiscal versus calendar year, for example.) This is directly relevant, as a key measure of performance is sales per enplanement, and different enplanement figures will give different values for this metric, even with agreement on the sales level. The net effect is to reduce the accuracy of the data to +/- $0.15. A more fundamental issue is the predictive power of aggregate data at the airport level. More specific conclusions could be drawn from the volume of sales (rather than dollar volume) of comparable items, such as pulp paperback or cheeseburgers, across many airports and time periods.

Despite all these shortcomings, the data provides clear direction as the relative performance of developer vs. concessionaire vs. directly run programs, both in the 2000 base year, and over time. While a longer or more detailed data set might prove to reduce the uncertainty as to the magnitude of difference in performance between groups – and might increase or decrease it -- the differences between the models is clear, as will be demonstrated in the following sections.

Metrics

From the perspective of the traditional retailer, gross sales per square foot is a principal measure of performance. In the typical urban or suburban environment, each retail center competes with the others within the MSA (metropolitan statistical area) for the disposable income of various population segments. Retail sales in an airport are driven by very different factors. Firstly, there is a captive audience. Not many people go to the airport to shop; most travelers are trying to fill their time as productively as they can. Secondly, the great majority of airplane passengers are traveling for business or on vacation, and in either case their 'willingness to pay', a measure of the profit available for capture when transacting with them, is higher than under other, more banal, circumstances. Lastly, airport retail is an exceedingly local business. In the language of real estate economics, the commuting cost between airports is infinite – you don't travel from one airport to another to purchase an item – and thus the productivity of a retail store is driven not by its size and turnover, but by the people close enough to pass by the front door – in other words **exposed passenger traffic**. More specifically, **exposed enplanements**, as debarking passengers rarely spend more time in the airport than they have to. (A passenger on a stop-over or waiting for a connecting flight counts as a separate enplanement.)

Analysis

In the Tables and Figures section below, Figure 1 (Food & Beverage), Figure 2 (Retail) and Figure 3 (Total Sales) show that the distribution of sales per enplaned passengers across all the airports in the MWAA data set (which includes the large hub

airports and 10 medium hubs) falls in a broad band between $2.50 and $3.50 per EP for food & beverage, $1.00 and $3.50 for retail. At this level of analysis, when grouping the airports by management structure, the variation among food & beverages does not distinguish one model over the other, but in retail, the developer group seems to have a better track record than either master operator or direct airport management.

To refine our observations, we looked more closely at the ARN data, and selected a subset at the subset for which we have sales performance data throughout the 1997 to 2000 period. This dropped 13 airports from our data set of 55. Focusing on retail performance (comprised of specialty retail and news/books, as this data was often reported together from some airports and separately from others), we grouped them into five categories: the three straight-forward models discussed above, and two hybrids, airport direct / master concessionaire and "other" which included a partially developer run airport.

The principal observation with the specialty retail product type is that sales per enplaned passenger are far and away higher with airports that are managed by developers, but more significantly, over the 1997-2000 time-period the group of developers increased that lead enormously. (See Table 2 in Tables and Figures section.) In 2000, the average developer-managed airport brought in $3.23 in retail per EP, while the average prime contractor managed airport brought in $1.67, a significant differential, but all the more impressive considering that the average developer-managed airport in 1997 brought in $0.99 per EP, and the average prime concessionaire managed airport $1.35 ($2.24 improvement versus $0.32). Of course, averages can be deceiving, but when we looked at the changes at individual airports, we found that fully 75% of the developer-managed

airports increased by at least $1.40, while the 75th percentile for increases at prime-concessionaire managed airports was only $0.09 per enplaned passenger.

On the other hand, the distribution of outcomes was much broader at developer-managed airports – there were some significant outlying data points to the upside. In 2000, the spread between the top and bottom quartile of prime-concessionaire managed airports was $0.54, while $1.79 among those managed by developers. Since even the best performing concession-run airports did not increase significantly (top quartile shifted from $1.86 from $1.82), this is almost entirely due to an increase in the bottom performers. A possible explanation for this behavior is as a competitive "tightening of the pack", as less well performing concession-managed airports increased their focus on performing more in line with their peers, considering the attention that the presence of developers had brought to specialty retail.

As a comparison, airports that ran their specialty retail franchises directly had a similar performance profile to concession-run airports – the spread between top and bottom quartiles tightened from $1.28 to $1.07, while the average shifted upwards by $0.52 to $1.88, with the increase at the median airport of $0.07 even lower than at concession-run airports (where it was a slight increase of $0.23). Compare this to developer-run airports where the median airport improved by $1.48!

Interestingly, those firms that combined direct management by the airport with master-concessionaire programs did better than either alone. Those airports already started out ahead of direct- and concessionaire-managed airports (for the most part – their sales were closely distributed around $1.72 in 1997); by 2000 they had maintained that tight distribution while increasing average sales per enplaned passenger ($2.28 vs. $1.88

and 1.67), but were still not within striking distance of the developer-managed group (top quartile of hybrid-managed airports were above $2.50, but bottom quartile of developer-managed airports was $2.68).

Similar observations can be made with regard to food & beverage sales. The average developer-managed airports improved $1.51 over the time period, compared to $0.54 (airport direct) and $0.48 (concessionaire). In 2000, all three groups had similar tight ranges around that mean (top 25% to bottom 25% ranged from $0.46 to $0.37, not significantly different given our data.) However, this was an improvement for developer airports, which started out 1997 with a range of $0.76 versus $0.50 (concessionaire) and $0.39 (airport direct). Given the same logic as above, it's possible that developers had a learning curve to climb with regard to food & beverage. Again, direct airport-prime concessionaire hybrids did better than either alone, but not quite as well on average as the group of developer airports.

On the whole, though, this is a minor point in the context of the larger observation: by 2000 developer airports as a whole did better than their peers, even though some concession-run programs (especially the joint direct airport-concessionaire hybrids) might have outperformed a number of developer-run programs. This can be observed visually in Figures 4, 5 and 6 (see Chart and Figures section below.)

Case Studies

In this section, we look at two airports – one developer run in part, the other operated directly by the airport – to explore some of the issues raised in the previous sections.

Chicago Midway Airport (MDW)

Midway Airport (2000 FAA ranking #32), sister airport to the #2 ranked Chicago-O'Hare International, exemplifies the redesign of an airport terminal with attention to the creation of a retailing atmosphere. In 1997, the City of Chicago began an ambitious $761 million revitalization of Midway Airport, the 7-year Terminal Development Program. As part of the program, Midway has built an integrated municipal subway stop, a new parking garage, and an impressive pedestrian bridge to a renovated terminal with 41 new gates.

The investment in new infrastructure was well overdue. Sales per enplaned passenger totaled $3 in both 1999 and 2000 (around $2 per EP for food & beverage and $1 in specialty retail and news & gifts), giving Midway the unenviable distinction of the second lowest sales performance per EP, both among its peer group of medium hubs (which averaged $4.40), as well as the overall airport network (which averaged $5.16 per EP in 2000.) As with other successful concession programs, such as Portland's OregonMarket and Pittsburgh's AIRMALL, "Midway Boulevard" includes a mix of 23 national specialty stores as well as local Chicago favorites, with a notably high proportion of food and beverage concessions. Like Portland, the Airport Authority has made the

commitment to developing this concept internally, and has worked closely with potential tenants and the public to see it off successfully.

The ribbon cutting ceremony for the 23,000 square feet of new concessions was on August 28, 2001 (see images at the end of this section). Another 24,000 square feet of food & beverage and retail space is scheduled to open in the adjacent concourses at the completion of the development program in 2004. The development plan for the full program called for the concessionaires' contribution of $12.8 million toward tenant improvements, with gross sales projected at $39 million annually, and a 13% concession fee to the airport – on the high end for medium sized airports, but 9/11 has certainly changed the equation here, as elsewhere. Working in Midway's favor is the placement of the concessions triangle on the airside, after security, with clear vantage points to three terminals, and a preponderance of food & beverage, which from anecdotal evidence seems to come back at airports around the country more strongly than retail.

Unfortunately, sales data for 2001 was not available at the time this report was printed, but Midway is a good test case for the retail concept. Quantifying the effects of 9/11 will be difficult, as the gross sales/EP metric may very well have to be adjusted; a closer look at the difference in product categories (food & beverage versus specialty retail and news & gifts) is warranted. In addition, Chicago has made a significant commitment in time and money to the revitalization of Midway; not every airport or municipal authority has the luxury of starting from the ground up.

Ronald Reagan Washington National Airport (DCA)

National Airport is the nation's 31st largest airport, serving 17.5 million enplaning passengers in 2000, bringing it in just above the cutoff between large and small hubs. As short-haul airport, DCA primarily serves the US cities within 1250 miles. In 1999 that mandate was extended to include daily round-trips to Denver, Phoenix, Las Vegas and Seattle. On July 27, 1997, the "new" B/C Terminal opened, with 1 million square feet of space – 35 gates, 100 ticket counters, 12 baggage claims, and the Cesar Pelli designed "National Hall", a main street for nearly 100 shops and eateries on the concourse level, with a mix of national, local and regional retail and food concessions.

Prior to the new terminal, National was a classic case of direct leasing – a few retail stores, newsstands and the like. The new terminal encompasses 61,000 square feet of retail and food & beverage. Remarkably, National is among few airports in the country that have seen an increase in ground-side sales (pre-security) since 9/11, from $6 per EP to $8, putting it in the top 5 airports in the country. From National Hall (pictured above), the gates extend out on three piers, all less than 100' in length. This is in contrast to an airport like Boston's Logan, where gates are situated at the end of long concourses, requiring people to go through security earlier.

Initially, the program at National ran into challenges. Managers there point toward too many nationally branded stores; since then they've introduced a mix of local and regional names as well as national. Having Westfield as the outside developer helped pull the program together, from bringing in franchisees such as McDonald's to running the competitive bid without entanglements into DC politics, adapting quickly to the early changes, as well as the ones since 9/11. The relationship with Westfield has worked well, with a roughly 25%-75% partnership split (25% to Westfield, 75% to the airport); HMSHost ran the food & beverage program on a 50%-50% basis (this was their first foray into the developer model), but has found that they are more comfortable leveraging their traditional operational expertise as vendors.

Since the opening of the new terminal, sales per enplanement have risen from around $4.50 to over $6.25 – and then to $8 after 9/11, bringing in over $6 million in revenue (on $50 million in sales) to the airport in 2000. This represents a doubling of income to the airport as compared to prior to the construction of the new terminal. Much of that is due to the sales volume that came from the added retail space, but it does demonstrate that there is revenue to capture. On the other hand, this was an expensive renovation, and you could not justify such an elaborate terminal on the basis of improved performance of retail and food concessions! What it does demonstrate is that thoughtful integration of revenue capture when redesigning a terminal can improve an airport's balance sheet significantly. In 2000, National's revenue was $130 million overall, $60 million of which from non-airline sources (parking, concessions, advertising). In other words, 10% of the non-airline revenue – or 4.6% of the airports total revenue – was derived from retailing.

Conclusions and Recommendations for Further Research

A little more than ten years after the first shot was fired in the revolution of airport retailing, the landscape has changed forever. From a sales volume perspective, the developer model seems to have an advantage, although the best of the concessionaire and directly run programs often perform superbly. Over the short term, airports around the country will be facing difficult times, but with projections of continued growth, and increased delays, it will only become more important for airports to capitalize on the profit center represented by retailing. There are a number of considerations that industry participants must address.

Firstly, although this evolution is a slow process, given the entrenched interests and long contract times, this is a trend that is now reaching an inflection point that foretells more rapid change. The pace of change – whether it be to a totally developer run programs like Pittsburgh or a hybrid of airport/concessionaire/developer food court (*a la* Boston Landing) – will only accelerate as contracts are renewed on a 5 year versus a 15 year cycle. Secondly, airports and developers must appreciate the differences and challenges of dealing with a public-private partnership rather than a purely financial vendor relationship. Investing in airport-based projects is generally a stable investment, but there are political and organizational hurdles to be overcome. The concessionaire model had adapted to this politicized environment, and the changes that have already occurred reflect those organizations to change with the times. However, it is not clear, and the data does not support the argument, that the deep knowledge of the airport industry will enable them to compete head to head with a developer program. The

structural difference created by profit sharing, as compared to fixed rental payments, seems to support the classic argument of coordination versus incentive to produce.

With the fragmentation of RFQs and RFPs to smaller and smaller projects, the concessionaries will find themselves competing on the basis of more narrowly defined expertise for less extensive projects. Whether the current field of development firms can afford to all remain in the industry under these conditions is highly doubtful. There are only a handful of airports that offer the choice projects that meet the investment criteria of the largest development firms, and once those are redeveloped, there may be significant firm exits from the industry. For those that do win projects, there will be a steadily growing income stream directly tied into two key drivers of the US economy – consumer spending and travel.

The directions for additional research are clear: as time passes the historical data set that is easily available is growing and additional data going back to the early 1990s is available through the Freedom of Information Act. As the conversions at developer-run airports are completed during the 2002 to 2004 time-frame, a broader set of comparative data will become available. In addition, with the expected growth of hybrid awards within a particular airport, further analysis and disaggregating of the components of the "hybrid" model should provide much fruitful labor.

Tables and Figures

Table 1: FAA Large and Medium Hub Airports

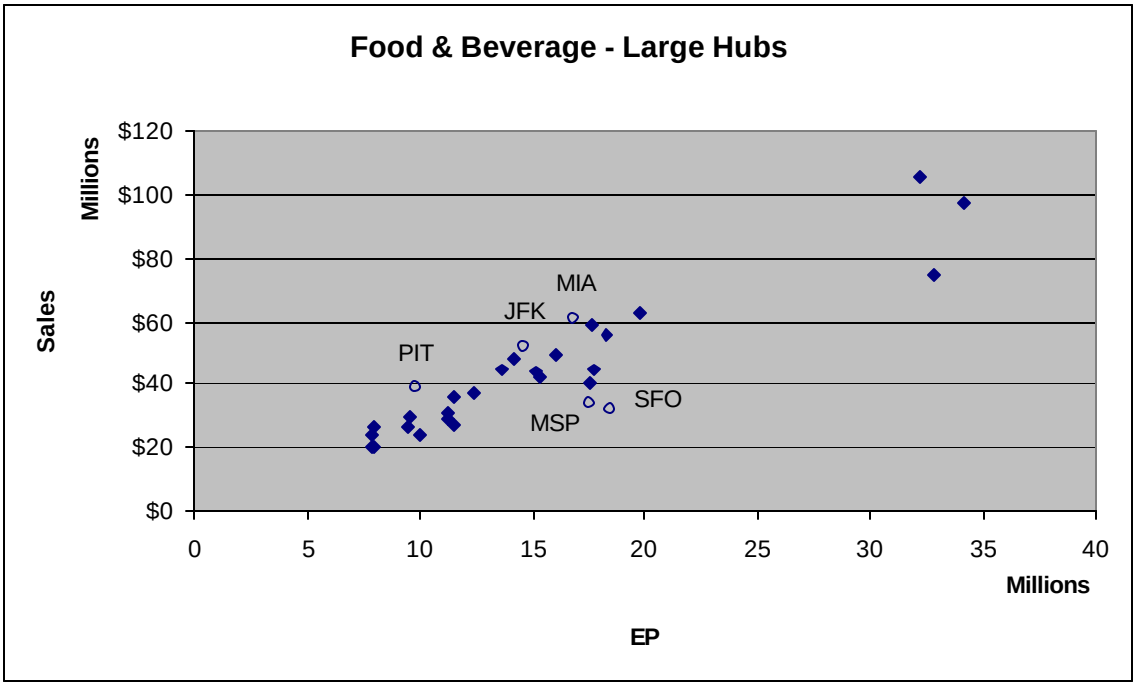
		PRIMARY AIRPORT ENPLANEMENT	*ACTIVITY SUMMARY*	*FOR*	*CY2000*	*10/19/2001*
Rank	**LOCID**	**Airport Name**	**Associated City**	**ST**	**Enplanements**	**Hub**
1	ATL	THE WILLIAM B HARTSFIELD AT	ATLANTA	GA	39,277,901	Large
2	ORD	CHICAGO O'HARE INTL	CHICAGO	IL	33,845,895	Large
3	LAX	LOS ANGELES INTL	LOS ANGELES	CA	32,167,896	Large
4	DFW	DALLAS/FORT WORTH INTERNATI	DALLAS-FORT WORTH	TX	28,274,512	Large
5	SFO	SAN FRANCISCO INTERNATIONAL	SAN FRANCISCO	CA	19,556,795	Large
6	DEN	DENVER INTL	DENVER	CO	18,382,940	Large
7	PHX	PHOENIX SKY HARBOR INTL	PHOENIX	AZ	18,094,251	Large
8	LAS	MC CARRAN INTL	LAS VEGAS	NV	17,425,214	Large
9	DTW	DETROIT METROPOLITAN WAYNE	DETROIT	MI	17,326,775	Large
10	EWR	NEWARK INTL	NEWARK	NJ	17,212,226	Large
11	MSP	MINNEAPOLIS-ST PAUL INTL/WO	MINNEAPOLIS	MN	16,959,014	Large
12	MIA	MIAMI INTL	MIAMI	FL	16,489,341	Large
13	IAH	GEORGE BUSH INTERCONTINENTA	HOUSTON	TX	16,358,035	Large
14	JFK	JOHN F KENNEDY INTL	NEW YORK	NY	16,155,437	Large
15	STL	LAMBERT-ST LOUIS INTL	ST LOUIS	MO	15,288,493	Large
16	MCO	ORLANDO INTL	ORLANDO	FL	14,831,648	Large
17	SEA	SEATTLE-TACOMA INTL	SEATTLE	WA	13,875,942	Large
18	BOS	GENERAL EDWARD LAWRENCE LOG	BOSTON	MA	13,613,507	Large
19	LGA	LA GUARDIA	NEW YORK	NY	12,697,208	Large
20	PHL	PHILADELPHIA INTL	PHILADELPHIA	PA	12,294,051	Large
21	CLT	CHARLOTTE/DOUGLAS INTL	CHARLOTTE	NC	11,469,282	Large
22	CVG	CINCINNATI/NORTHERN KENTUCK	COVINGTON/CINCINNATI	KY	11,223,966	Large
23	HNL	HONOLULU INTL	HONOLULU	HI	11,174,701	Large
24	PIT	PITTSBURGH INTERNATIONAL	PITTSBURGH	PA	9,871,995	Large
25	BWI	BALTIMORE-WASHINGTON INTL	BALTIMORE	MD	9,675,681	Large
26	IAD	WASHINGTON DULLES INTERNATI	CHANTILLY	VA	9,643,275	Large
27	SLC	SALT LAKE CITY INTL	SALT LAKE CITY	UT	9,522,344	Large
28	TPA	TAMPA INTL	TAMPA	FL	7,969,797	Large
29	SAN	SAN DIEGO INTL-LINDBERGH FL	SAN DIEGO	CA	7,898,360	Large
30	FLL	FORT LAUDERDALE/HOLLYWOOD I	FORT LAUDERDALE	FL	7,817,173	Large
31	DCA	RONALD REAGAN WASHINGTON NA	ARLINGTON	VA	7,517,811	Large
32	MDW	CHICAGO MIDWAY	CHICAGO	IL	7,059,520	Medium
33	PDX	PORTLAND INTL	PORTLAND	OR	6,754,514	Medium
34	CLE	CLEVELAND-HOPKINS INTL	CLEVELAND	OH	6,269,516	Medium
35	SJC	SAN JOSE INTERNATIONAL	SAN JOSE	CA	6,170,384	Medium
36	MCI	KANSAS CITY INTL	KANSAS CITY	MO	5,903,296	Medium
37	MEM	MEMPHIS INTL	MEMPHIS	TN	5,684,619	Medium
38	OAK	METROPOLITAN OAKLAND INTL	OAKLAND	CA	5,196,451	Medium
39	RDU	RALEIGH-DURHAM INTL	RALEIGH/DURHAM	NC	5,191,077	Medium
40	SJU	LUIS MUNOZ MARIN INTL	SAN JUAN	PR	5,135,591	Medium

41	MSY	NEW ORLEANS INTL/MOISANT FL	NEW ORLEANS	LA	4,936,271	Medium
42	BNA	NASHVILLE INTL	NASHVILLE	TN	4,479,909	Medium
43	HOU	WILLIAM P HOBBY	HOUSTON	TX	4,354,609	Medium
44	SMF	SACRAMENTO INTERNATIONAL	SACRAMENTO	CA	3,979,043	Medium
45	SNA	JOHN WAYNE AIRPORT-ORANGE C	SANTA ANA	CA	3,914,051	Medium
46	IND	INDIANAPOLIS INTL	INDIANAPOLIS	IN	3,833,975	Medium
47	BDL	BRADLEY INTL	WINDSOR LOCKS	CT	3,651,943	Medium
48	AUS	AUSTIN-BERGSTROM INTL	AUSTIN	TX	3,648,600	Medium
49	DAL	DALLAS LOVE FIELD	DALLAS	TX	3,596,052	Medium
50	SAT	SAN ANTONIO INTL	SAN ANTONIO	TX	3,528,955	Medium
51	CMH	PORT COLUMBUS INTL	COLUMBUS	OH	3,441,286	Medium
52	ONT	ONTARIO INTL	ONTARIO	CA	3,197,795	Medium
53	ABQ	ALBUQUERQUE INTL SUNPORT	ALBUQUERQUE	NM	3,148,780	Medium
54	MKE	GENERAL MITCHELL INTERNATIO	MILWAUKEE	WI	3,089,592	Medium
55	OGG	KAHULUI	KAHULUI	HI	2,999,863	Medium
56	PBI	PALM BEACH INTL	WEST PALM BEACH	FL	2,928,658	Medium
57	RNO	RENO/TAHOE INTERNATIONAL	RENO	NV	2,732,837	Medium
58	PVD	THEODORE FRANCIS GREEN STAT	PROVIDENCE	RI	2,684,204	Medium
59	JAX	JACKSONVILLE INTL	JACKSONVILLE	FL	2,616,211	Medium
60	RSW	SOUTHWEST FLORIDA INTL	FORT MYERS	FL	2,574,322	Medium
61	ANC	TED STEVENS ANCHORAGE INTL	ANCHORAGE	AK	2,503,138	Medium
62	BUR	BURBANK-GLENDALE-PASADENA	BURBANK	CA	2,380,531	Medium
63	BUF	BUFFALO NIAGARA INTL	BUFFALO	NY	2,140,002	Medium
64	SDF	LOUISVILLE INTL-STANDIFORD	LOUISVILLE	KY	1,974,269	Medium
65	OMA	EPPLEY AIRFIELD	OMAHA	NE	1,861,057	Medium
66	TUS	TUCSON INTL	TUCSON	AZ	1,804,086	Medium

Table 2: Analysis of ARN data 1997-2000

		1997			2000			Change at each airport 1997-2000		
Airport Directly	min	0.00	0.00	0.00	3.72	2.31	1.41	-1.15	-1.22	-0.08
	25%	3.06	1.93	1.08	4.23	2.42	1.49	0.37	0.35	-0.01
	average	3.27	2.01	1.36	4.58	2.55	1.88	0.55	0.39	0.07
	75%	5.71	2.32	2.36	5.31	2.85	2.56	1.17	0.80	0.52
	max	6.62	3.55	4.46	7.04	3.15	4.49	4.59	2.71	1.88
	skew	-0.42	-0.87	0.96	1.13	0.65	1.62	1.44	0.52	1.84
	kurtosis	0.10	2.81	0.93	0.39	-0.94	2.51	3.04	2.59	3.09
	count	**8.00**								
Prime Operator	min	1.34	0.36	0.64	1.15	0.70	0.44	0.09	-0.02	-0.29
	25%	3.20	1.79	1.02	3.78	2.29	1.36	0.59	0.35	0.09
	average	3.54	2.08	1.35	4.05	2.56	1.67	0.76	0.48	0.23
	75%	3.97	2.29	1.82	4.76	2.75	1.86	0.88	0.56	0.39
	max	4.46	2.64	2.08	5.31	3.17	2.69	2.50	2.29	0.78
	skew	-1.25	-1.66	0.10	-1.82	-2.08	0.18	1.85	2.61	0.08
	kurtosis	1.48	3.81	-1.05	5.60	6.38	1.24	5.16	8.44	0.66
	count	**17.00**								
Developer	min	2.78	0.00	0.00	5.68	3.00	2.39	-0.90	0.61	1.33
	25%	2.79	1.79	0.95	5.73	3.15	2.68	1.94	0.93	1.40
	average	4.45	1.84	0.99	6.38	3.35	3.23	2.42	1.16	1.48
	75%	5.98	2.55	1.90	7.99	3.52	4.47	2.89	1.56	1.73
	max	8.89	2.65	3.33	8.40	3.59	4.81	2.95	3.52	4.47
	skew	0.99	-1.50	0.79	0.47	-0.30	0.33	-1.89	1.75	2.17
	kurtosis	0.20	2.49	0.72	-2.83	-1.85	-2.66	3.68	3.29	4.74
	count	**5.00**								
Airport/Operator hybrid	min	2.59	1.53	1.06	4.26	2.50	1.67	0.27	-0.12	-0.39
	25%	3.41	2.02	1.31	4.90	2.87	1.91	0.94	0.65	0.21
	average	4.10	2.25	1.72	5.35	3.05	2.28	1.27	0.73	0.47
	75%	4.78	2.61	2.02	5.85	3.34	2.50	1.65	0.95	0.64
	max	5.96	3.22	3.00	7.37	3.61	4.27	2.45	1.52	2.25
	skew	0.16	0.31	0.75	0.83	-0.13	1.62	0.32	-0.26	1.27
	kurtosis	-0.49	-0.37	-0.25	0.08	-0.98	2.82	0.05	0.87	1.88
	count	**10.00**								
Other/developer hybrid	min	4.90	2.38	2.39	2.65	1.79	0.87	-2.68	-0.59	-2.09
	25%	5.01	2.41	2.53	3.18	2.08	1.10	-2.05	-0.33	-1.72
	average	5.12	2.44	2.67	3.71	2.37	1.33	-1.41	-0.07	-1.34
	75%	5.23	2.48	2.82	4.23	2.67	1.57	-0.78	0.19	-0.97
	max	5.34	2.51	2.96	4.76	2.96	1.80	-0.14	0.45	-0.59
	skew	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	kurtosis	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	count	**2.00**								

Figure 1


Food & Beverage - Large Hubs
Sales
Millions
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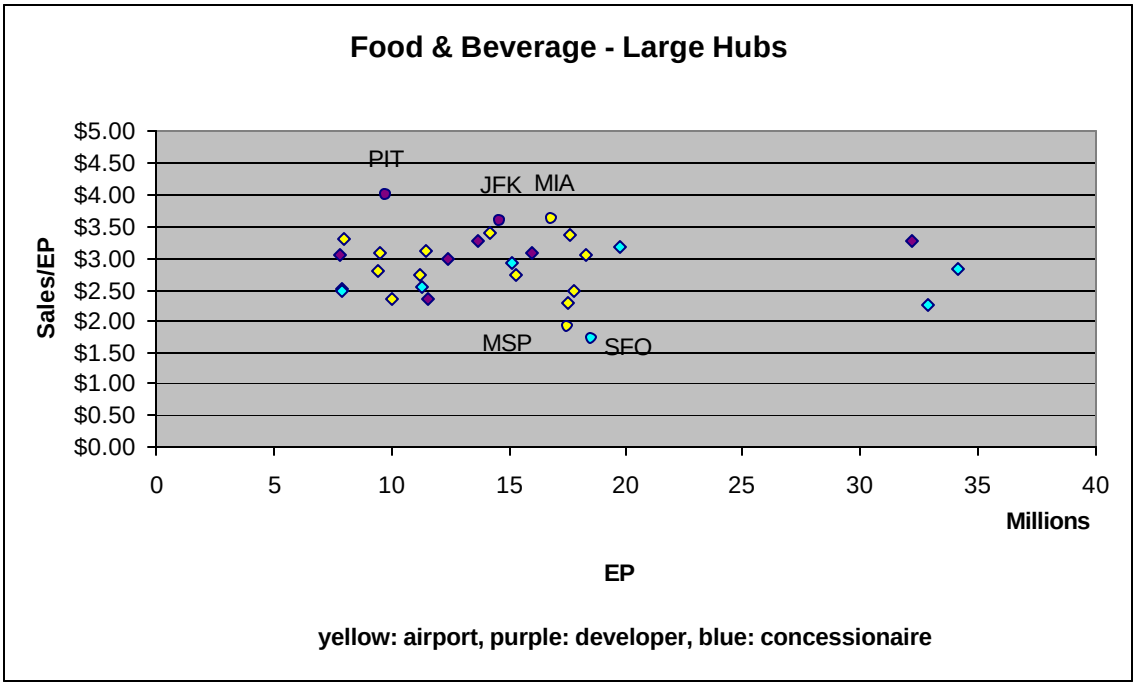
$100
$80
$60
$40
$20
$0
MIA
JFK
PIT
SFO
MSP
0
5
10
15
20
25
30
35
40
Millions
EP


Food & Beverage - Large Hubs
Sales/EP
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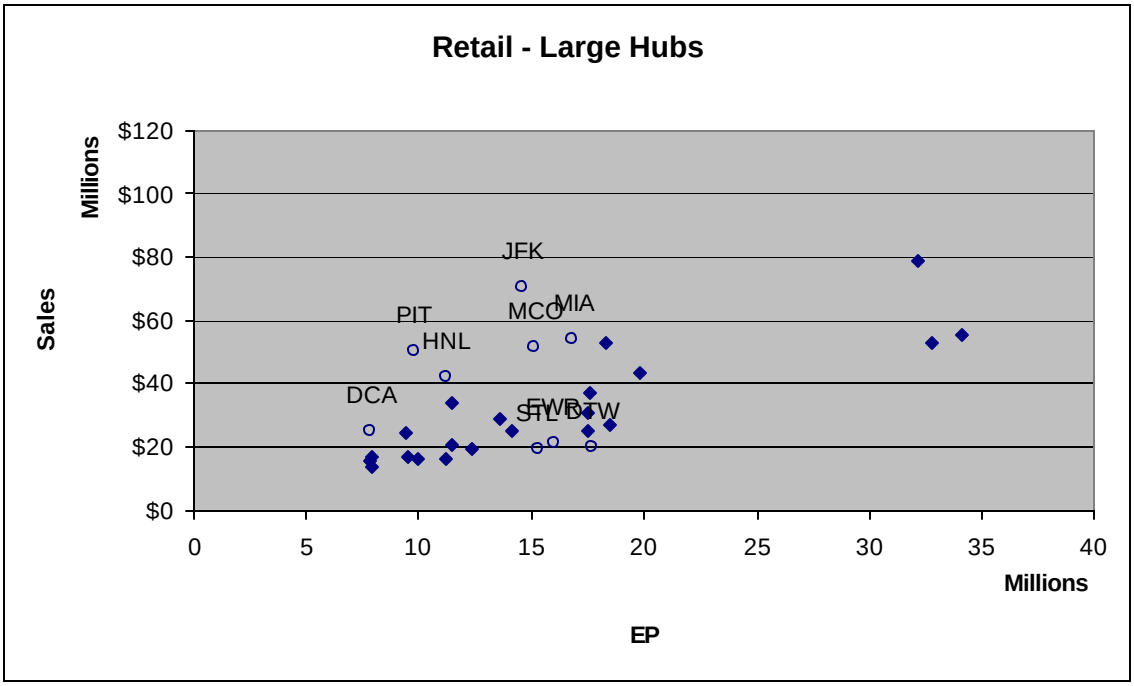
$4.50
$4.00
$3.50
$3.00
$2.50
$2.00
$1.50
$1.00
$0.50
$0.00
PIT
JFK
MIA
MSP
SFO
0
5
10
15
20
25
30
35
40
Millions
EP
yellow: airport, purple: developer, blue: concessionaire

Figure 2


Retail - Large Hubs
Sales
Millions
$120
$100
$80
$60
$40
$20
$0
JFK
MIA
MCO
PIT
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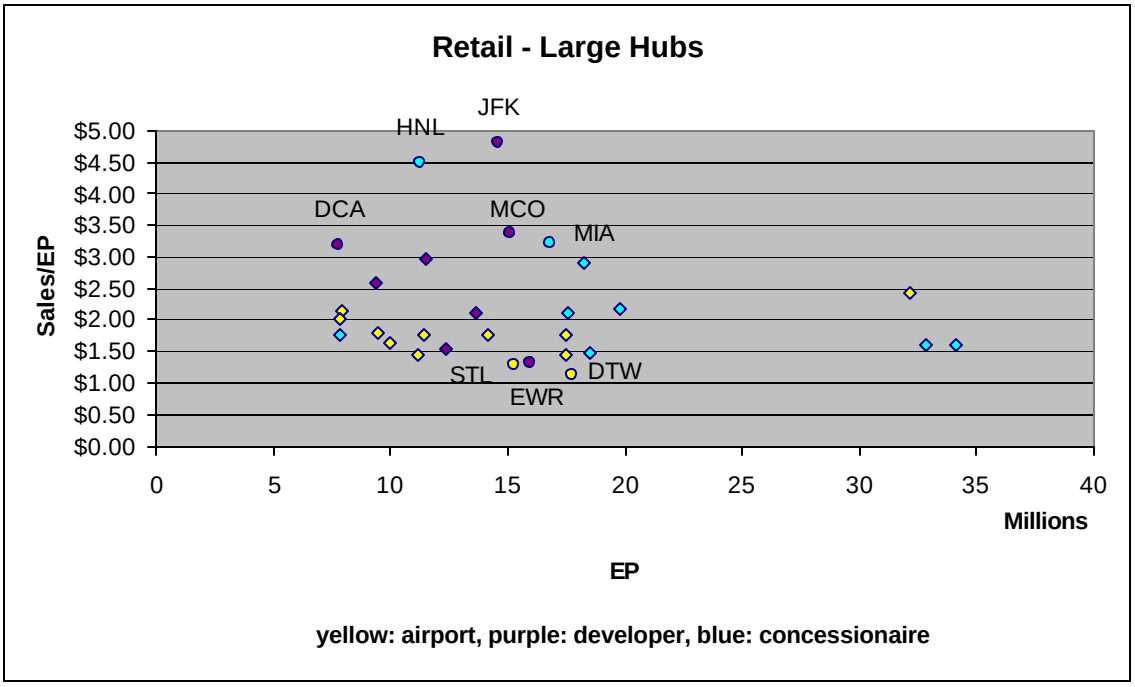
30
35
40
Millions
EP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Sales/EP
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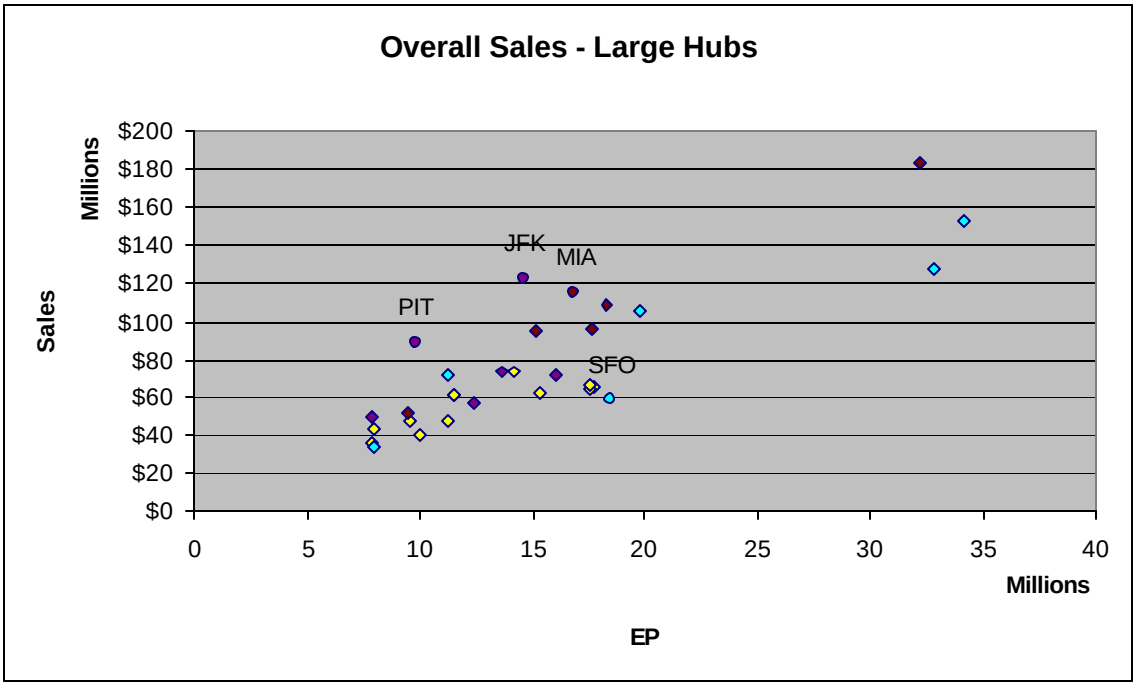
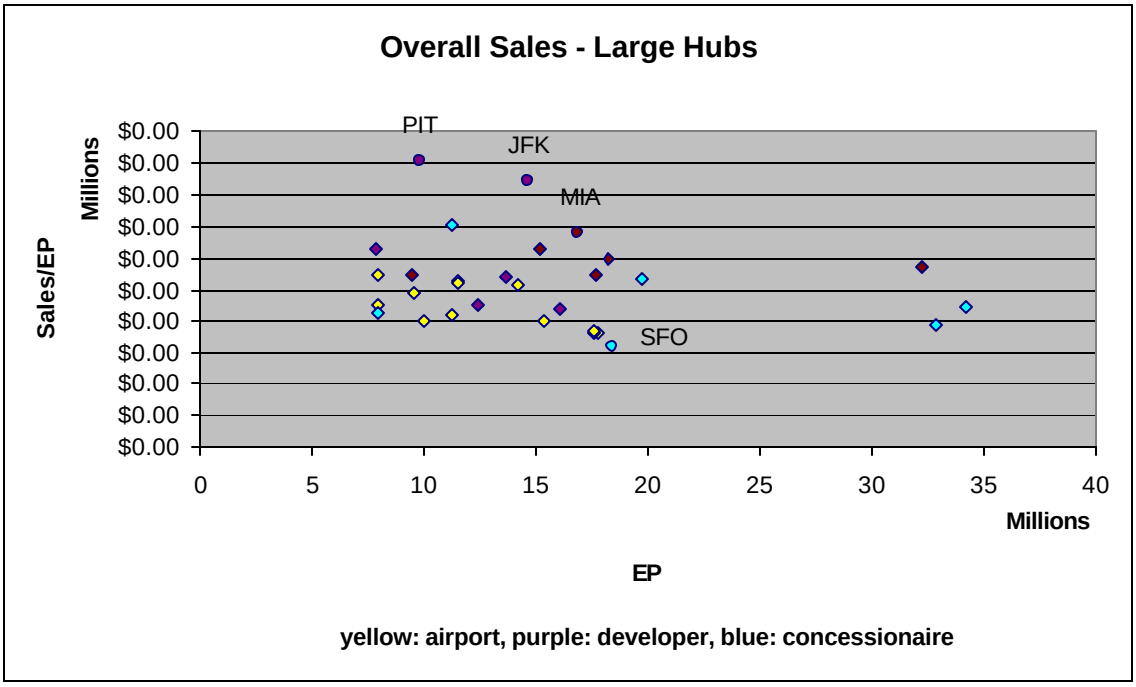
$4.50
$4.00
$3.50
$3.00
$2.50
$2.00
$1.50
$1.00
$0.50
$0.00
JFK
HNL
DCA
MCO
MIA
STL
DTW
EWR
0
5
10
15
20
25
30
35
40
Millions
EP
yellow: airport, purple: developer, blue: concessionaire

Figure 3


Overall Sales - Large Hubs
Sales
Millions
$200
$180
$160
$140
$120
$100
$80
$60
$40
$20
$0
JFK
MIA
PIT
SFO
0
5
10
15
20
25
30
35
40
Millions
EP


Overall Sales - Large Hubs
Sales/EP
Millions
$0.00
$0.00
$0.00
$0.00
$0.00
$0.00
$0.00
$0.00
$0.00
$0.00
PIT
JFK
MIA
SFO
0
5
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25
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35
40
Millions
EP
yellow: airport, purple: developer, blue: concessionaire

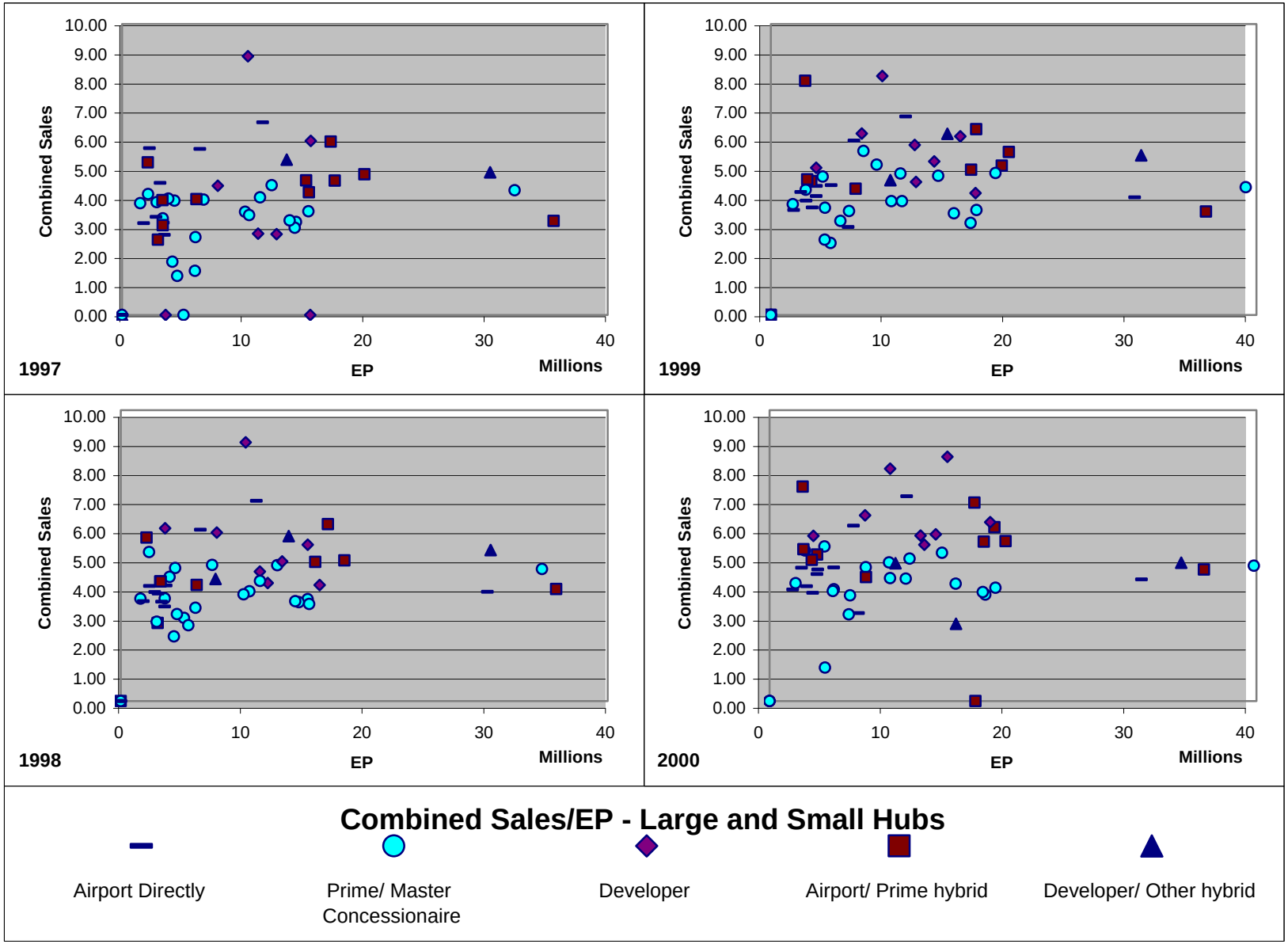
Combined Sales
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0
10
20
30
40
EP
Millions
1997
1998
1999
2000
Combined Sales/EP - Large and Small Hubs
Airport Directly
Prime/ Master Concessionaire
Developer
Airport/ Prime hybrid
Developer/ Other hybrid

Figure 4

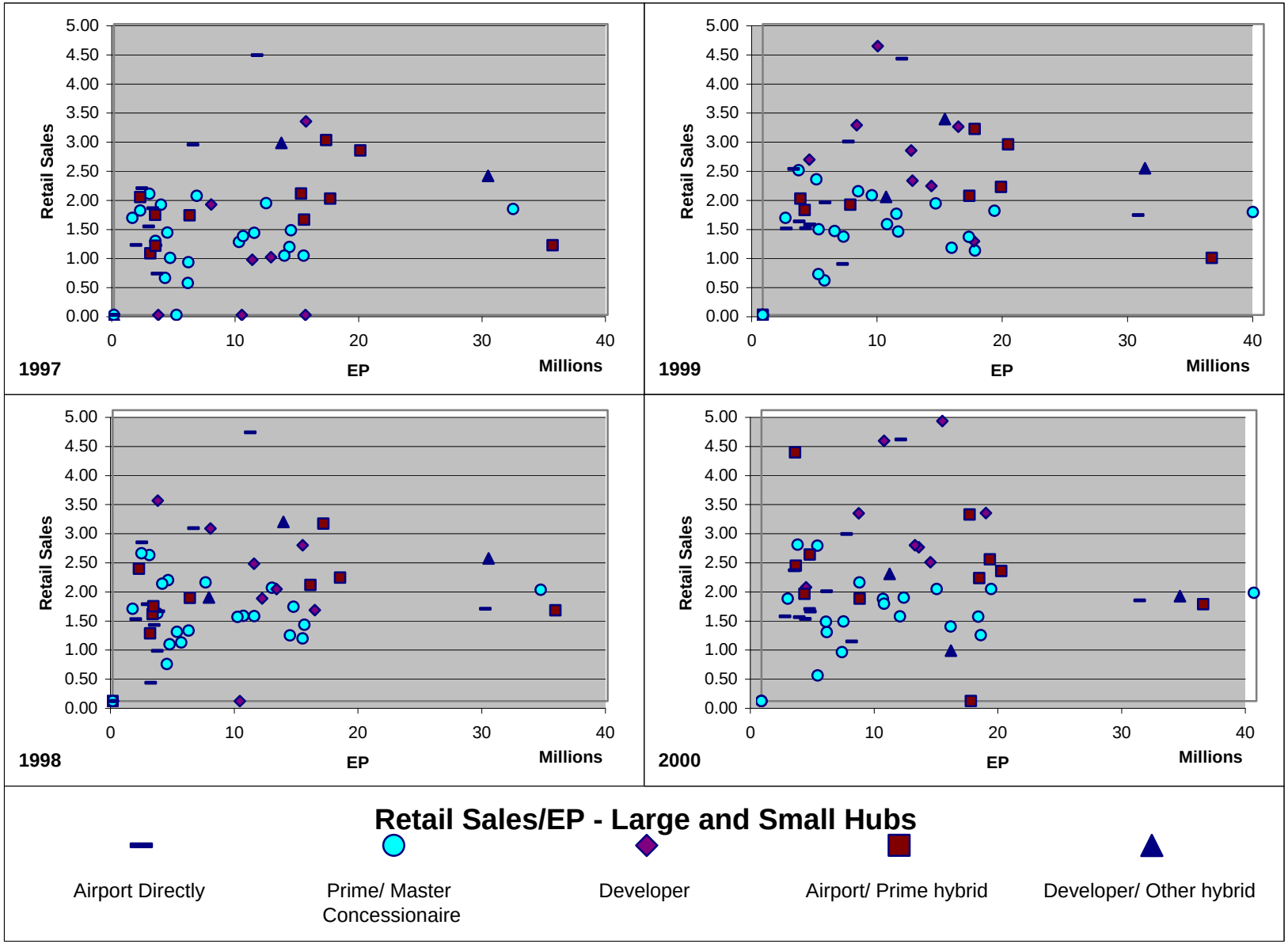
Retail Sales
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0
10
20
30
40
EP
Millions
1997
1998
1999
2000
Retail Sales/EP - Large and Small Hubs
Airport Directly
Prime/ Master Concessionaire
Developer
Airport/ Prime hybrid
Developer/ Other hybrid

Figure 5

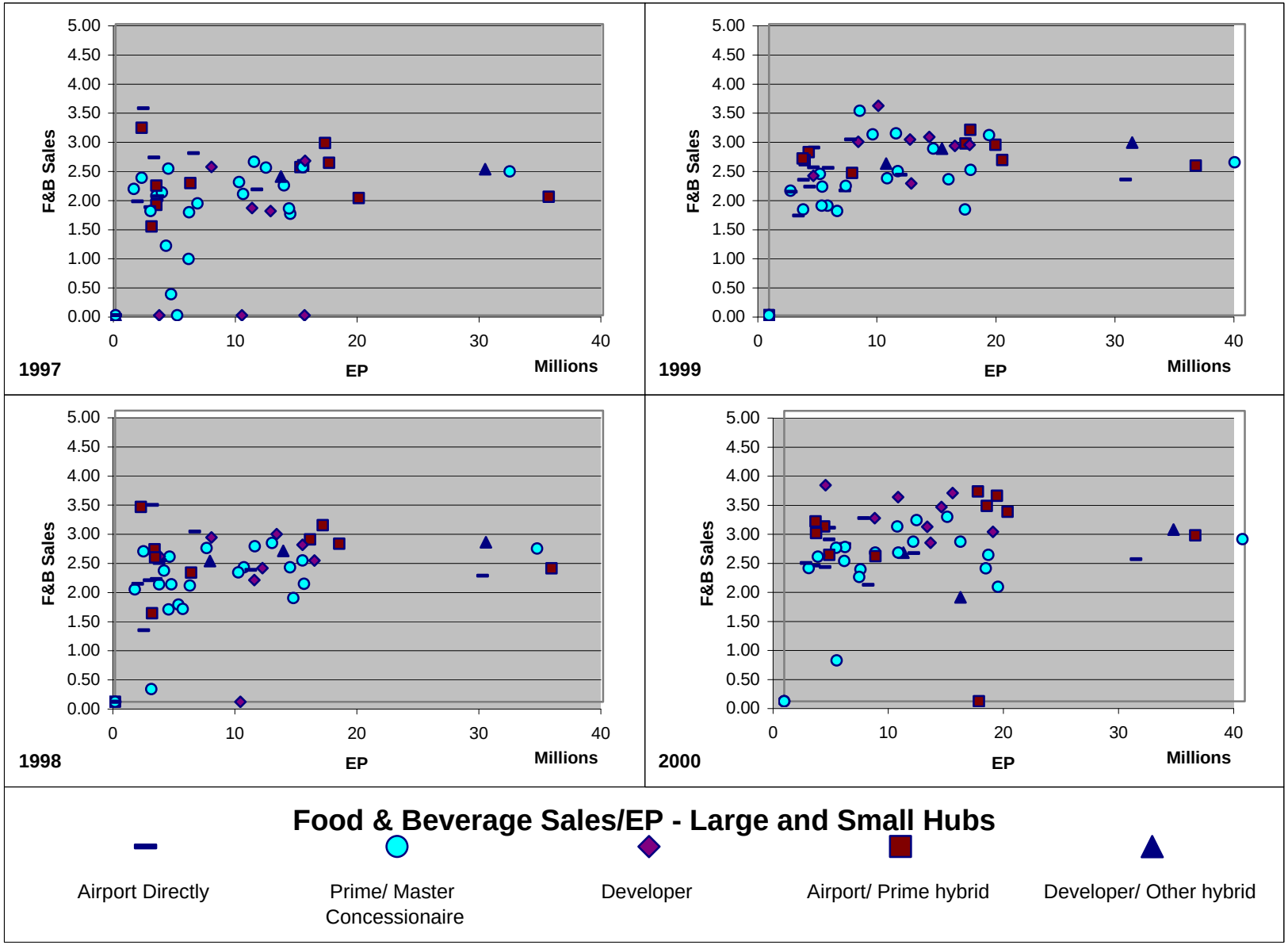
1997
1998
1999
2000
F&B Sales
EP
Millions
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
0
10
20
30
40
Food & Beverage Sales/EP - Large and Small Hubs
Airport Directly
Prime/ Master Concessionaire
Developer
Airport/ Prime hybrid
Developer/ Other hybrid

Figure 6

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    iii. Fort Lauderdale-Hollywood International (Broward County Aviation Department)
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        2. Bryan Malinowski, Airport Properties Manager (Airlines/Concession)
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    ii. Westfield
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