**Corporate Real Estate Site Selection: A Community Specific Information Framework**

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## Abstract

The corporate real estate function has been undergoing a dramatic evolutionary change that has seen it move from tactical decision-making to strategic decision-support. The evolutionary process has been the result of the natural evolution of the discipline, as well as changing corporate needs. During this progression, corporate real estate units have had to deal with more complex real estate issues, while at the same time operating under greater budget constraints and time pressures. This situation has also been experienced by service providers to whom many companies have been turning in outsource arrangements. Similar forces have affected economic development agencies that are under increasing pressure to demonstrate the value propositions of their efforts and expenditures. One of the key decisions that corporate real estate units must make, facilitate or direct, is the site selection decision. The results of such decisions have been receiving increasing attention, as companies begin to appreciate how site location can positively or negatively impact on the bottom line and future prospects for a firm. This paper explores the site selection process, beginning with the literature that has addressed the topic and document its growing importance to firms. The paper also presents a listing of the major factors and individual items that should be factored into such decisions. Finally, the paper concludes with a typology of community specific studies that are generated to support site selection decisions. These studies are presented from two perspectives: that of the company making the location decision; and, that of the community determining what package to present to existing and potential companies. Included in the discussion of the individual studies is an identification of the factors and items that are associated with site selection decisions, presenting a cross-reference guide that can be used to determine where such information can be found.

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## Introduction

Over the past decade, corporate real estate management has undergone dramatic change as it matured into a distinct discipline. As a part of this maturing process, the discipline moved beyond its traditional focus on basic real estate services. Indeed, in a growing number of companies real estate migrated from tactical decision-making focused on day-to-day needs, to strategic decision-making focused on the broader corporate mission. More recently, enlightened companies have moved to a new model that transcends real estate, enfolding the broader area of infrastructure management (DeLisle, 1999). In these companies, emphasis is placed on the bottom line impacts of decisions at the overall corporate level, rather than at the business unit level.

Despite the expanded mission into the strategic arena, the need for support for such basic decisions as real estate site selection has not diminished (Carn, Black and Rabianski, 1999). As a result, the body of knowledge that must be drawn upon has dramatically expanded. There has also been a growing recognition that real estate can be either an enabling, or an inhibiting, factor of production. Thus, corporate real estate management must both enhance the quality of basic services, while continuously pushing out the frontier by offering new services. Unfortunately, few companies have increased the resources available to support both initiatives. Indeed, in many companies, real estate budgets have been under tremendous pressure, as companies cut costs to improve bottom line performance. This situation created a growing need for greater efficiency in the delivery of basic services, including the critical site selection decision.

This paper presents an approach to corporate site selection that can satisfy the need for enhanced support, without compromising the strategic dimensions of such decisions. This framework is intended to help ensure that firms consider the key dimensions of site selection problems and approach them in a disciplined, systematic manner commensurate with the importance of the underlying decision. This discussion should help firms avoid making hasty or shortsighted decisions that can prevent them from arriving at optimal real estate mixes. The inclusion of the community-oriented perspective has a dual purpose: to help firms determine where to look for information; and, to help companies and communities get on the same page in terms of business needs and recruitment efforts.

This paper is organized into several sections. It begins with an explanation of some of the business trends that are elevating the importance, and the complexity, of the site selection decision. The discussion then turns to some of the industry trends that make it more difficult to provide the high level of site selection decision support that companies need. The next section presents a review the literature regarding the importance of site selection, the decision-making processes that companies follow, and the key factors that firms use in making site selection decisions. Based on this foundation, a framework that firms and communities can use to determine the best way to approach site selection problems given their particular situation is presented. This discussion explores how such decisions should be approached, identifies the key variables that should be considered, and introduces some decision tools that can be applied. We also introduce the notion of discounted cash flow analysis, indicating why both companies and communities should apply multi-period investment models to locational decisions. A classification of the various types of community-based studies that are commonly prepared in the process of making locational decisions is introduced. These studies emanate from both the company perspective to support site selection, as well as from the community perspective to establish incentive and recruitment programs. We conclude with a review of the individual community-specific variables that firms may consider in making site selection decisions and indicate which ones typically appear in which studies.

## Business and Industry Trends

### Importance of Site Selection

Over the past several years, a number of trends have dramatically changed corporate site selection process. Some of these trends have increased the complexity of the site selection process and compressed its temporal nature. Others changes made it more difficult to provide the level of site selection decision support warranted by its rising importance. With respect to the first category, the continuation of two major trends –consolidation and globalization—have made the site selection process more complex. This complexity has been amplified by the emergence of the e-business revolution, a trend that has even more dramatic implications on the site selection process.

Consolidation. The trend toward consolidation has rippled across many industries, including corporate users and real estate service providers. On the demand side, for many companies consolidation created instantaneous and unavoidable real estate surpluses and/or imbalances. While a natural by-product of consolidation, property surpluses are particularly troublesome to many companies. In particular, the

significant capital requirements associated with real estate, the inflexible nature of many leases, and the illiquid nature of investments make it difficult to reduce capacity in a short period of time. Despite this situation, many corporate real estate departments find themselves under a strong mandate to cut costs in a relatively short time. This is especially true where consolidations involve competitive firms, where the promise of economies of scale is a key driver behind the decision. The elevated risks associated with fast tracking real estate decision-making stems from several factors. First, the combined companies are typically in a state of flux, when employees are under increased stress, and cultural and political issues are still being sorted out. While not unacceptable per se, accelerated decision-making about real estate can put the wheels in motion to liquidate assets prior to the completion of critical transition programs. Second, the companies must apply a systematic form of reverse site selection (i.e., disposition), to ensure that the remaining assets reflect the optimal mix that will satisfy the on-going real estate needs of the merged company. Third, the real estate market is inherently slow and inefficient, making it difficult to execute a disposition strategy. Thus, real estate departments in rapidly consolidating industries must make disposition decisions under extreme pressure during periods of heightened uncertainty.

Globalization. A second on-going trend that is somewhat related trend to consolidation, globalization, has made the site selection decision more complex and important to firms. Although not all companies and industries lay claim to the global label, the trend has been pervasive, affecting most sectors, businesses, capital markets and consumer markets, either directly or indirectly. In the case of the increasing number of companies directly operating in the global arena, the site selection process takes on increased complexity. For these companies, workplace and other real estate needs must be managed over a more diverse, and broader scope than in the past. Not only are corporate operations complicated, but also business and corporate practices, policies and cultures must be reconciled. In addition, real estate departments must learn how to deal with a myriad of new laws and regulations that affect ownership, development and leasing of corporate facilities. In the case of companies that are not directly involved in global business, globalization can also impact site selection decisions, as globalization changes business, consumer and competitive market balance. In some cases, such changes can create ripple effects that dictate a revisiting of the site selection decision, one in which existing locations can be reviewed in the context of the new business order.

e-Business. A third trend that has made the site selection process more complicated has been the recent e-Business Revolution that is rippling across business and consumer markets around the world. This trend has been triggered by the dramatic changes in technology and the explosive growth of the Internet. This

technological revolution was initially labeled the e-Commerce Revolution, focusing on business to consumer (B2C) transactions. However, over the past several years it has quickly penetrated the business-to-business (B2B) domain, dramatically affecting how companies operate and relate to one another and the overall market. While the ramifications of the e-business revolution for corporate real estate is uncertain, it is clear that the trend will have a significant impact on logistical needs and locational preferences of much business. Even more importantly, the compression of business, product and service life cycles associated with the e-business revolution has changed the temporal planning horizon for many companies. In general, the trend has placed downward pressure on the length of time a company can plan its capital situation, resource requirements and real estate needs. Unlike the consolidation and globalization trends that have not affected some companies and industry sectors, the e-business revolution promises to affect all companies. Indeed, in many companies, the e-business trend is creating a revolution in spatial needs. Unfortunately, the trend is so new and is still unfolding at such a rapid rate, that the ultimate impacts on real estate are unclear. However, most agree that e-business is shifting attention away from rigid workplace solutions to ones that are more flexible in terms of the quantity and quality of real estate. In addition to making it more difficult to assess real estate needs and implications, the dramatic growth of e-business is also placing greater stress on business budgets and traditional management models.

## Constraints on Expansion of Decision Support

Despite the rising importance of the site selection decision, several industry trends have been working against broadening of real estate decision support. These trends have the potential to undercut much of the progress that has been made to advance corporate real estate decision-making, including the site selection decision. The first of these industry trends is the general decline in real estate budget allocations in many companies as firms seek to lower direct operating costs. The e-business revolution has exacerbated this situation, forcing many companies to deploy assets away from real estate in favor of greater allocations to technology and human resources (DeLisle, 1999). While not unacceptable per se, if budget limitations are not kept in check, companies risk under-allocating to real estate at a time when it is become more important to invest in the workplace. The consequences of inadequate real estate investment could be devastating. In some cases it could lead to an erosion of employee morale due to inadequate facilities. In other cases it could lead to a loss of market share. For example, in the e-business environment, logistics is becoming a critical success factor in many industries. Thus, logistical problems

that prevent a company from addressing customer needs in a timely, efficient manner could directly cut into sales. The situation is further complicated by the absence of industry benchmarks, which leaves the market without a formal system of checks and balances to help companies avoid cutting real estate budgets too far in the pursuit of false economies.

The second trend that is creating new challenges to maintaining and/or enhancing corporate real estate support is the movement toward "outsourcing" real estate functions. In effect, outsourcing refers to the reallocation of internal duties and responsibilities to external service providers. Such decisions are based on a number of factors ranging from the desire to cut fixed overhead and operating costs, to the desire to access more advanced support from "specialists" who could not be justified on an internal payroll. The extent of this outsourcing spans a wide continuum, ranging from modest outsourcing of maintenance or facility management, to total outsourcing of the overall real estate function. This industry trend has shifted responsibility for and control of the real estate function outside of the firm. While such a restructuring can well reduce overhead in the near term, it is not without its risks, since it shifts responsibility and accountability to third parties who are not completely aligned with the firm. Companies have attempted to address this limitation by developing strategic alliances, developing preferred service provider relationships, and by establishing performance measurement systems. In terms of the quality and level of real estate decision support, outsourcing makes it more challenging to enhance services and maintain cost savings over the long term. Further, by laying off the basic, low margin services that are not critical to the success of the firm, the internal department or unit can concentrate on more strategic issues, turning attention to the corporate mission. However, it must still provide proper management and oversight, be careful in selecting service providers, and be able to meaningfully align the interests of a company with its service providers.

The third trend that makes it difficult to enhance real estate decision support in some companies can be labeled "Financial Myopia." While this term might sound extreme, it illustrates the fact that in a growing number of companies, management of the real estate function has been reassigned or reallocated to the corporate finance area. While not unacceptable per se --and in a sense directive toward the goal of greater integration of real estate decision support with other business functions—unless carefully balanced, this organizational move can have negative impacts on the quality of real estate decision support. Of particular concern is the potential of placing responsibility for the real estate function in the hands of pure finance-types with little formal training in the complexities of real estate and with little appreciation of the subtleties of the real estate process. This limitation is exacerbated by the fact that MBA programs do not

include any formal real estate training as part of a core curriculum. Although successful professionals in their own field of practice, without formal training in the subtleties of real estate and workplace management, few have the backgrounds to draw on to make strategic decisions on their own. In some cases, they are forced to defer to junior real estate management whose capabilities are limited to tactical real estate decision support. In other cases they have to rely on the advise of external service providers who either may not understand the spatial implications of a company's business plan as it relates to real estate, or may not share its vision.

### Implications for Site Selection

Regardless of how a company's real estate needs and decision support functions have reacted to the major business and industry trends, firms must still make fundamental real estate decisions. One of the key types of decisions that are taking on even greater importance is the "site selection" decision. As noted previously, companies are faced with a number of challenges in making such decisions. On the one hand, the stakes are higher, the decisions are more complex, and the time pressures are greater. On the other hand, in many firms resources are more constrained, training is more limited, and management oversight is more complicated. In this environment, there is a clear need for more refined, manageable and efficient site selection process. This caveat is particularly true for companies in which real estate departments are being asked to manage real estate from a strategic perspective. In addition to conducting or overseeing the rather detailed analyses associated with site selection, these units are expected to consider additional factors to ensure that the resultant site strategy fits into the corporate plan. To address this need, it is important to document the site selection process to avoid procedural or technical oversight. Furthermore, such documentation and process clarification can help free up key resources that are better spent on the more strategic decisions. This paper provides a descriptive overview of the site selection process that both internal departments and external service providers can use to improve or maintain the quality of site selection decisions. This paper should also help service providers provide better support for site selection decisions by helping them develop a better understanding of corporate decision processes and real estate needs. Finally, the paper should help economic development agencies assess their deficiencies and others' competitive advantages. This insight should improve the efficiency and effectiveness of economic development activities and enable them to avoid losing firms to more aggressive competitors and help attract relocating companies.

## Literature Review

## Overview

To this point, the discussion surrounding the increased importance and complexity of the site selection decision has been based on anecdotal evidence. This discussion has helped us understand some of the implications of the major business and corporate trends on site analysis. To demonstrate the need additional descriptive site selection research from a more rigorous perspective, the literature that has addressed the topic should be reviewed. Before presenting the results of the literature that address the site selection process and its impact on the firm, it is useful to step back and explore the fundamental question of whether such decisions are systematic--and thus subject to quantification or classification-- or whether they are the result of random factors.

A number of studies have been directed explored the pattern of corporate locations to determine if some systematic processes are being followed by companies (Ettlinger 1991, Enright 1995, Freed 1989). In general, published research supports the hypothesis that companies follow systematic processes in selecting locations. For example, in a recent study, the authors explored the geographic concentration of manufacturing industries, comparing the observed results with a "dartboard approach" (Ellson and Glaeser, 1997). The results of this research suggested that some underlying forces create geographic clusters of activities than the dispersed pattern that would result if such decisions were based on purely local or random events. The authors suggested that agglomerative forces can be used to help describe patterns of concentration, as well as assess to affect of localization (i.e., industry specific spillover and natural advantages). Finally, the research suggests the importance of coagglomeration of related industries, which leads to greater cross-firm synergies and improved supply chain management. A similar line of research reaffirmed the relevance of the "efficiency parameter" of agglomeration theory, especially when the production function is reinterpreted as a productivity function (Shilton and Stanley, 1999). The authors found a high degree of geographic clustering of headquarters among Fortune 500 firms, both among markets and within markets. This, and related research cited in these articles, suggests that firms do indeed apply some form of systematic decision processes in making locational decisions. Thus, it is useful to review the growing body of literature surrounding corporate site selection. This literature can be grouped into several categories: financial views, agglomeration studies, and locational decision variables.

## Financial Views

Site selection studies that fall under the "Financial Views" label consist of a range of "event studies" that look at the impact of location decisions on stock prices. The general field of event studies emanates from financial research in which the objective is to determine if security holders earn abnormal returns accompanying specific events (e.g., earnings announcements, mergers, stock splits). In this context, abnormal returns are the difference between observed returns and "appropriate" returns given a particular return generating model (Peterson, 1989). With respect to capital-intensive real estate decisions, event study analysis has been used to explore whether corporate capital expenditure decisions and capital market responses are consistent with the market value maximization hypothesis and traditional corporate valuation models (McConnell and Muscarella, 1985). These authors found that the expected relationship held up for industrial firms, but did not extend to public utilities. This relationship held up in a more direct test of stock market reaction to corporate headquarters relocation, which found that stockholders benefited from corporate headquarters location announcement. This benefit was especially prevalent when firms relocated to cities with high labor supply and low cost of living. It also held up with firms who were reducing employment levels (Alli, Ramirez, and Yung, 1991). This particular study also found that larger firms with greater rental expenses per dollar sales are more likely to make relocation decisions. Furthermore, it found that larger listed firms with greater employment/asset ratios are more likely to relocate to Fortune-ranked cities.

Another study into stock market reaction to business relocation decisions concluded that the nature of the market's reaction depends on the motivation underlying the decision (Ghosh, Rodriguez and Sirmans, 1995). In particular, the market reacted positively when the decisions could be attributed to cost savings, and negatively when the decisions were attributed to managerial self-interest. Similar results where reported in a separate study, although the authors found that the results varied by type of firm (Chan, Gau and Wang, 1995). For example, these authors found that the market differentiated among firms based on a two-stage process: the motivations driving the relocation, and the implied prospects for the firm. In particular, the researchers found that the market generally reacted negatively to plant relocation announcements and positively to headquarters relocation. However, rather than the type of facility, they found that the key underlying factor was whether the announcement signaled expansion or contraction of the firm's business, with the market rewarding positive news and penalizing negative news.

A more recent study explored the factors influencing corporate location decisions and addressed how such decisions impacted on shareholder wealth (Manning, Rodriguez and Ghosh, 1999). The authors concluded that relocation decisions can have a material impact on stock prices, with the determinant of

whether that impact is positive or negative related to the underlying factors that trigger the locational decision. In general, when relocations appear to reduce costs without compromising growth or sales, stocks are favorably impacted. As might be expected, the reaction is the opposite in cases where the market perceives some future erosion in profits either leading up to, or coincident with, the relocation decision.

## Agglomeration Studies

The second major class of articles that address the corporate location decision falls under the general category of agglomeration studies. In general, these studies explore location preferences in light of several distinct perspectives: scale economies within a firm, efficiencies that can be captured by concentrating supply chains, and synergies that can be tapped by locating in clusters of complementary or competitive firms (Abdel-Rahman 1990, Holloway 1991, Pascal 1980, Porter 1998). For example, in a study of the locational models of industrial firms in Britain, researchers found a positive relationship between size of firms and the propensity to locate in national centers (Evans 1973). This relationship was especially strong in cases of merger activities that combined the operation of regional firms, or in firms that have a number of satellite operations that serve broad geographic markets. In a subsequent comment on this work, the general findings were upheld, although the author found different tendencies and decision variables depending on whether the location decision was vertical --across markets--or horizontal --within markets (Burns 1977).

In the second class of agglomeration studies, the phenomenon is approached as a spatial concept that explores economies external to a firm, but internal to an industry in the particular locations (Goldsteim and Gronberg, 1984). These economies can be referred to as “localization economies” that can differ by type or size of firm. For example, new firms, which are often smaller, are often drawn to sites that provide access to public infrastructure. This greater dependency on public services leads such firms to concentrate in CBDs or business/industrial parks. On the other hand, larger firms can also be drawn to such concentrations for different reasons. For example, larger firms sometimes select locations that are clustered among complementary land uses and land users. This strategy can help them reduce the risk of being too dominant in a local market and dependent on service support that is based on its own presence, rather than relying on corporate synergies that are broadly based. In related work, Imai introduced the notion of a locational interactive effect among firms and workers. This research was directed at explaining the growth of cities and the emergence of employment concentrations (Imai 1982).

Despite the positive results of the general body of "agglomeration studies," a cautionary note was raised early in the extension of such analytical modeling should be noted (McCall 1980). He pointed out that such economies are only part of the equation that optimal locations change over time due. These changes can be triggered by firm or industry trends. However, a better understanding of how a firm operates, what makes it successful, and which logistical criteria are the most important to its continued success can also trigger them. Thus, agglomeration studies and other causal factors that can be attributed to historical locational decision models should be periodically revisited to adjust to changing forces, market conditions, user preferences and needs.

Locational Decision Models

The third class of studies associated with corporate location decisions focus on the specific attributes and/or decision models that firms use in selecting locations (Archer 1981, Erickson 1980, Meirleir, 1990, Wilson 1987). Although the scope of these studies have varied widely and has changed over time, several common factors have emerged. First, most researchers agree that locational decision models differ for existing operations versus firms seeking new operations or new locations (Carlton 1982, O'Mara 1999). In general, new and relocating plants respond to current incentives and cost differentials including energy, incentives, employment concentrations, and employment expertise. Second, the predictive ability or insights derived through location models can be enhanced by differentiating among types of firms as well as the size of the overall firm or the branch that is being relocated (Carlton 1982, Raper 1993, Schmenner 1982). Third, locational decisions are typically multi-stage, with certain variables or models being used to filter choices to a finite list, and different variables and models used to select among the remaining candidates (Schmenner, Huber and Cook 1987). Fourth, site selection research generally agrees on the major variables that affect locational decisions (Harding 1988, Shakeo 1992, Wasylendo 1985. For example, Schmenner's (1982) seminal work on corporate plant location cites six dominant requirements a corporation utilizes in making a corporate plant location decision:

1. Competitive labor costs.
2. Degree of and/or potential for labor unionization.
3. Proximity to markets.
4. Proximity to supplies or resources.
5. Proximity to other corporate facilities.

6. Quality of life concerns.[i]

Other common variables include business climate, taxes, employment base, unionization, and services (Plaut and Pluta 1983, Bartik 1985).

Despite the general agreement on many of the key variables that are used in corporate site selection, it is generally recognized that the importance of such variables and the existing of new considerations changes over time. Furthermore, the variables and their respective importance differ among industries, and among companies. Thus, while more attention is being paid to the site selection decision, a growing number of authors are calling for a more strategic approach to the topic (Wilson 1987, 1989, Roulac 1999). In an attempt to bring some order to location decision analysis, O'Mara created a typology of locational decisions to provide greater insight into the actual drivers and models that various decision-makers might apply. These decisions were grouped into two major categories: moves to a new geographic area; and, moves within the same geographic area. In the first category, decisions could be further subdivided into "Pick up and Go," "New Horizons," and "Consolidation to a Beachead." With respect to intraurban (i.e., same market) decisions, decisions were subdivided into "Green Acres," "New Urbanites," and "Recommitment." In each case, the author suggested that certain common themes could be extracted for many companies, allowing researchers to better predict the results of relocation decisions, as well as to identify the key drivers that should be addressed in attracting or retaining businesses.

## Alternative Approaches to Site Selection

Two major studies that document the site selection decision are noteworthy. Based on an analysis of Fortune 500 firms involved in corporate plant location decisions, Schmenner identified an eight-step sequence of incremental decisions involved in the corporate plant site selection process:

1. The decision to seek a new site, with notification to corporate staff members involved in site selection.
2. Decisions relating to size and operational requirements for the plant under consideration.
3. Decisions relating to the design and engineering of the plant, pursued simultaneously with the location search.
4. Decisions relating to the key location criteria used in developing a "must" list (conditions which have to be met at any new location) and a "wants" list (remaining location factors that are desirable but not essential).
5. Regional location selection decision(s) to designate candidate regions using the "must" and "wants" list.

6. Decisions to include specific available, desirable sites in communities within candidate regions to form a list of alternative sites for evaluation.
7. Decisions to reduce the number of alternative sites for intensive site-specific analyses.
8. Site selection decision, initially made by division personnel with corporate approval, using results of comparative site-specific analyses.[ii]

Nourse argued that the rules of thumb for corporate plant location, such as a maximum threshold for number of employees or prohibitions against on-site expansion of union plants, do not apply to corporate administrative office space location decisions (Nourse, 1992). Rather, he noted that information about community conditions took on more importance in such decisions. He cited two other general considerations that often guide corporate administrative office space decisions. First, administrative office space may be situated in diverse geographic locations for political reasons. Second, administration may avoid areas with low unemployment levels to prevent the firm from influencing wage rates that could cause economic disruption in the community.[iii] Despite these caveats, his However, decision path for corporate administrative office space locations is very similar to Schmenner's corporate plant location decision path:

1. Initiation of decision to expand or relocate facilities.
2. Determination of size and design of facility.
3. Determination of geographic area to target for search.
4. Search for sites in target area.
5. Evaluation of alternative sites.
6. Negotiation for an option to obtain the preferred site.
7. Submission of capital acquisition request for corporate approval.[iv]

While there are similarities between the sequence of decisions for a production plant and administrative office space[v], Nourse is careful to note there are substantial differences within several of the steps. These differences include how the request is initiated, and who the corporate decision agent is for several of the steps.

Many of the empirical studies on corporate facility location identify site selection as the step that finalizes the location decision. The question of the irrevocability of the location decision comes into play at this point. Purchasing the land is not necessarily an indicator of irrevocability. Risk can by managed by means of options and land banking programs. One author indicates that a subsequent step, the start of the physical development process, may be necessary for a location decision to be relatively irrevocable. [vi] However, the construction of the site improvements and especially the main structure is a better indicator of irrevocability but not an absolute indicator. The size of the investment and the degree of specialization

of the facility affect the degree of revocability. The cost of revocation increases as the decision process proceeds in its course. [vii] For corporate facilities, there are more developmental, site and financing alternatives, so the commitment point is not as clear. In general terms, a commitment is made to facility development when funds are invested in improvements that must be completed and utilized to provide a return. This may occur at the point of site acquisition or construction, or even at the time of a public announcement of the facility, if the company has a strong policy of following through on public commitments.

**A Model of the Corporate Site Selection Process**

Nature of the Decision

A site location decision is characterized by two simple ideas that introduce complex issues. Ultimately, a location decision is the end result of a chain of interrelated decisions made by business decision agents. Each incremental decision requires a series of smaller supporting decisions to move the decision to the point a basic decision to proceed to the next phase of decision making can be made. While the final authority for any decision rests with the Chief Executive Officer and Board of Directors, other corporate personnel are functionally making decisions in specific phases of the location decision process. Whenever a decision is made, the decision agents require specific types of information and normally obtain that information from particular information sources. This chain of decisions can take a relatively long time to organize, sequence, and monitor. Each step of the decision process requires analysis, evaluation and interpretation. In addition, each decision provides a foundation for a subsequent decision and thereby leads to a successful conclusion of the corporate plant site location decision. Depending on the scope of the decision, a region, a local community and a site are eventually selected.

The starting point of site selection analysis can vary, depending on the business' needs, the decision maker's preferences, or the analyst's work habits. Some location decisions start from a macro perspective, beginning with a determination of the region and then focusing in on the search for an ideal site in the targeted community. Other studies start from a micro perspective, accepting a community or market as a given decision, and immediately seeking the optimal submarket location and site, paying attention to the suitability of the site and its availability in both qualitative and economic terms. [viii] This discussion is germane to whichever orientation of the location decision process is adopted by a company or business entity.

As might be expected, a location decision considers many economic and non-economic factors. These factors are also sometimes referred to as financial and non-financial considerations. When financial aspects such as production costs, procurement costs and distribution costs for a production facility, and wage rates and occupancy costs for an office facility render two sites equally attractive or suitable, the ultimate decision often hinges on non-financial factors. In this context, the specialty studies can form the basis for the site selection decision on factors other than the direct costs associated with operation of the business. And, when all other things are equal, non-financial factors (e.g., locational preferences of the decision maker, business climate, quality of life) can become the final facet of the decision.

## Corporate Site Selection Process

Although there is no single way to approach site selection, the corporate facility selection process generally follows a logical path. This path represents a series of separate but highly interrelated analyses and decisions. The typical steps, or the chain of events, involved in finding a location for a new or expanded corporate plant or office facility can be adapted from the real property development literature.[ix] This model incorporates the decision steps identified by Schmenner and Nourse as either an incremental or supporting decision in the corporate facility site selection process. Each incremental decision and the supporting decisions related to it are necessary to move the decision process to the next stage and to the final location decision. The process can be broken into several stages. As noted in Exhibit 1, the location decision process starts with the recognition that a location decision is necessary. This awareness can be triggered by a number of factors (e.g., business expansion, new competition, changing customer needs) that dictate a firm commits to a new, expanded, or relocated corporate plant and/or office facility. Alternatively, the decision can be reversed to help determine which facilities should be retained, and which facilities should be liquidated in the case of consolidations, re-engineering, or downsizing.

In effect, the first stage is the problem definition stage. It includes three distinct phases that help establish the parameters of the study. In the first phase, the driving forces behind the need for a location decision are documented. This phase is a critical starting point, since it establishes the goals and objectives that the ultimate decision should satisfy. In the next phase, the firm conducts a self-assessment study that helps it develop workplace strategy and policy statements, and determine the role that real estate will play in the overall business mix. This discussion can help integrate the real estate program with broader

corporate business plan. It can also help ensure that the real estate program is compatible with the firm's vision and mission statements. Based on the rationale extracted from the problem definition phase, the process turns to the quantification and qualification of the spatial requirements in Phase III.

**Exhibit 1: First Stage Problem Definition and Spatial Needs Assessment**

| | Incremental Decision | Supporting Decision | Decision Agents | Information Needs | Information Sources |
|---|---|---|---|---|---|
| Phase I Initiation of the Location Decision | Determine Facility Need | Determine Capacity Shortfalls or Surpluses, Decision to Expand or Relocate | CEO/Board of Directors upon the request of Division Managers | Market and Production Data, Revenue and Expense Data, Profitability Analysis | Internal Accounting Data, Business Plans and Operating Budgets, New Product Plans |
| Phase II Corporate Self-assessment | Role of Real Estate, Workplace Strategy and Policy | Development of Corporate Standards, Quantify Growth Strategy, Establish Benchmarks for Alignment and Incentive Compensation | CEO/Board of Directors, Divisional Heads, Strategic Planning, Infrastructure Managers | Corporate Strategic Plan, Business Lines and Drivers of Value, Life Cycle Stage and Growth, Business-Business-Customer Relationships, Cost of Capital | Corporate Strategic Plan, Aggregate Business Plans, Competitive Market Studies, Industry Outlook Reports, Analyst Reports, Capital Market Reports |
| Phase III Space Requirements & Design Standards | Determination of Facility Size and Design | Program Corporate and Operational requirements, Execute Engineering Program, Prepare Operational Budget and Cost Estimates | Division and Corporate Executives with Real Estate/Facility Planning Personnel | Production Planning Data, Architectural and Engineering Plans, Construction Cost and Budget | Industry Benchmark Studies, Space Requirement Studies, Design and Engineering Plans, Internal Accounting |

Once the problem definition is completed and the spatial needs have been adequately documented, the process can turn to the second stage, which involves the actual search, selection and commitment phases (see: Exhibit 2). As noted, unless the study starts with a given community, the first phase involves the selection of the regional location or geographic target areas for the site selection process to be undertaken. Once the general locational decision has been made, attention turns the development of site-specific criteria that can be used to identify eligible sites based on general considerations that are within the geographic target areas. Based on this screening, the process can focus on the evaluation of alternatives and the determination of candidate sites for in-depth analysis. This in-depth analysis in turn sets the stage for the actual site selection decision, which is from candidate sites analyzed. Assuming an acceptable site is identified, the final stage is to make the necessary commitment to the location by funding and undertaking construction.

**Exhibit 2: Second Stage Site Selection and Control**

| | Incremental Decision | Supporting Decision | Decision Agents | Information Needs | Information Sources |
|---|---|---|---|---|---|
| Phase I Selection of Communities or Geographic Areas | Selection of Regional Location or Geographic Areas for Plant Location Search | Develop Locational Criteria ("Must" List and "Wants" List), Establish Site Selection Criteria | CEO/Board of Directors with Real Estate and Division Personnel | Market Data and Regional Economics, Business Environment, Taxes, Transportation Site Selection | Regional/State Industrial |
| Phase II Identify Alternative Sites | Determination of Acceptable Sites in Target Areas | Identification of Sites for Examination, Assess Political, Social and Economic Characteristics of Communities or Jurisdictions | Real Estate/Facility Planning Personnel | Real Estate Market Data, Community Tax and Service, Community Attitudes, Housing Conditions, Transportation | Real Estate Market Surveys Business Climate Studies Quality of Life Studies |
| Phase III Evaluate of Alternative Sites | Evaluation of Alternatives and Determination of Candidate Sites | Site Visits and Site Evaluations, Community Specific Evaluations, Identification of Financial and Tax Incentives to be Employed | Corporate and Division Executives with Real Estate/Facility Planning Personnel and Key Operating Personnel | Site Specific Data, Community Specific Data, Assistance Programs with Financial and Tax Data | Site Evaluations Business Climate, Quality of Life, Employee Relocation, Property Tax and Assessment, Inducements and Incentives |
| Phase IV Site Selection | Final Site Selection and Acquisition | Negotiations Between Division and Corporate, Option/Acquire Site, Set Tolerance Limits, Financial Approval of Capitol Acquisition Request | CEO/Board of Directors with Real Estate/Facility Planning and Division Personnel | Comparative Site Acquisition Problems and Costs, Financial Feasibility and Compatibility with Corporate Goals, Impact Data | Site Suitability, Economic Impact, Fiscal Impact, Market Value Impact, Infrastructure and Environmental Impact |
| Phase V Funding and Construction | Decision to Fund and Undertake Construction of the New Expanded or Relocated Facility | Approval of the Capital Budget Request, Approval of Final Construction Plans, Approval of Construction Contracts | CEO/Board of Directors with Real Estate/Facility Planning Personnel | Construction Plans, Capital Budget for Construction | Facility Planning/Engineering Personnel, Construction Cost Estimates, Internal Budgets and Financial Plans |

**Types of Studies Related to Site Selection**

Overview

The broad scope of the site selection process, its inherent complexity, and its importance to individual business units as well as the overall company makes it extremely important that decision makers consider its full dimensionality and do not overlook or avoid certain factors in the interest of expediency. Thus, corporate decision-makers and the service providers who work with companies have a need for a variety to community-based studies that provide meaningful local market information. This need is shared by community development agencies and interested parties who ultimately establish the community ground rules regarding the level of attraction or accommodation a community provides to companies (Schweke, Risk and Dabson, 1994). Furthermore, economic development agencies and communities must be able to understand the factors that drive corporate location decisions to determine the actions necessary to attract and retain companies.

On the surface, it might appear that information needs for corporate users could be satisfied by concentrating on "company-oriented" studies and ignoring the variety of "community-oriented" studies. Several considerations argue against such a narrow focus. First, despite their different perspectives, both companies and communities share a common economic foundation. That is, cash solvency of the various parties is a common denominator that drives all sides of the real estate process, with one side having a profit margin, and the other operating at breakeven. (Graaskamp, 1972) Second, companies and communities should both look beyond initial capital costs associated with a new location decision, extending the question to the sustainability of the cost/benefit equation. Thus, from both perspectives, real estate activities and projects should be treated as cash cycle operations that link the spatial and economic dimensions over time. This is especially true in light of the capital-intensive nature of real estate decisions and their enduring nature which makes such decision multi-period by definition. Furthermore, individual attributes and their relative importance can be expected to change over time. Thus, single period decision and pricing models would render a myopic conclusion that, when viewed in terms of proper time period or duration of probable operation, could result in suboptimal results. Third, since real estate enterprise decisions have a material impact on the "physical terrarium of our society," such analysis must include both quantitative and qualitative attributes view through both the private and public perspectives (Graaskamp, 1985).

Once one begins to look at real estate decisions in a multi-period sense, then basic investment analysis and risk management concerns dictate that the sustainability of benefits or costs that can be revealed in various specialty studies must be factored into the process. That is, by mastering discounted cash flow models, analysts can solve for the cash solvency position for each of the key parties, using their respective costs of capital, risk tolerances, expectations, and economic drivers. From a company's perspective, the failure to consider the durability and future availability of promised benefits could draw them into a situation that could dramatically erode over time. This situation has caught a number of companies drawn by the allure and marketing of some new pro-business initiative by a newly elected mayor or city council off-guard, with the incentives evaporating at the whim of the voters in the next election. Similarly, a number of communities have created attractive front-end concession packages to attract businesses, only to find the beneficiaries jumping ship at the next possible opportunity. This situation is analogous to apartment tenants who hop from one complex to another to take advantage of free-rent or other incentives, creating the illusion of an income stream that will quickly evaporate. To manage such risks, community leaders must understand the risk associated with various prospects to ensure that proper checks and balances are factored into the arrangement.

As noted earlier, corporate site selection has received significant attention in the literature. Most of this attention has emanated from economic or financial perspectives of the firm, with limited input from real estate researchers. However, the real estate literature published in the late 1960's and early 1970's that dealt with types of information required for real estate feasibility decisions provide a useful framework for classifying types of location research (Downs 1966, Graaskamp 1972, 1985). It should be noted that studies performed to choose community locations are part of the feasibility and location decision process for corporate facilities. These studies have become an important part of a process companies use to plan for corporate facilities.[x] Considerable attention has been paid to such items as business climate studies and quality of life studies in the professional and industry literature for corporate real estate.[xi] What is not well recognized is the host of other information requirements and studies companies typically use to examine alternatives for corporate facilities. An understanding of the nature and content of these studies involves consideration of the objectives, major topics and the uses of each study with the various community characteristics.

For purposes of discussion, the types of community studies that support site selection decisions can be grouped into two categories: company-oriented studies; and, community-oriented studies. These studies can be referred to as "specialty studies" to better communicate their nature and scope. The major

differences between the two categories of specialty studies lie in their target audience, and in the primary decisions they are intended to support. In the case of "company-oriented" studies, the focus is on the needs of corporate space users and decision makers.

In addition, these relevant studies can be broadly divided into three categories: non-economic studies, economic studies, and capstone studies (see: Exhibit 3). The non-economic studies focus on the general issue of what it's like living or operating in a community, incorporating a number of quantitative and qualitative factors. On the other hand, economic studies focus on items such as revenue generation, production costs, occupancy costs, distribution costs, procurement costs and travel costs. Capstone studies synthesize and integrate the non-economic and economic factors into a comprehensive study that quantifies the various considerations. It should be noted that, despite their labels, financial considerations are often at the core of all three types of studies.

**Exhibit 3: Classification of Specialty Studies**

| | Non-Economic | Economic | Capstone Studies |
|---|---|---|---|
| Company-Oriented Studies | Business Climate,<br>Quality of Life | Property Tax and Special Assessments,<br>Planning and Regulatory Environment,<br>Employee Relocation | Total Cost of Business |
| Community-Oriented Studies | Infrastructure Impact,<br>Environmental Impact | Economic Impact,<br>Fiscal Impact,<br>Market Value Impact | Locational Inducements and Incentives |

Key Community Factors and Attributes

As might be expected, a wide variety of factors and individual attributes should be addressed in site selection decisions. This diversity of factors and the sheer number of attributes can be overwhelming, especially for companies who have moved away from tactical decision support to more strategic, have outsourced real estate location decisions, or are headed by financially oriented leaders with little training in real estate fundamentals. Before the types of specialty studies used in corporate site selection are introduced, it is useful to identify the major community factors and characteristics identified in the literature on community and site selection.[xii] Exhibit 4 presents the major factors and the key attributes under each that could be considered in the various specialty studies.

**Exhibit 4: Key Community Factors and Individual Attributes**

| Factors | Individual Attributes |
|---|---|
| Labor Force Factors | wage rates; occupational composition; productivity; educational level; availability of required skills and training available; unionization |
| Property Taxation | tax rates and assessment practices; tax abatements, concessions and other incentives; personal property tax; special tax districts; tax increment financing |
| Corporate Income Taxation -State and Local | rates; allowable deductions; credits and concessions |
| Other Forms of Taxation - State and Local | unemployment premiums; workmen's compensation premiums; inventory tax |
| Fees, Charges and Special Assessments | impact fees; water and sewer hookup fees; applications and permit charges; special assessments |
| Regulations and Development Controls | zoning requirements ; subdivision regulations; construction codes; occupancy codes and licensing requirements; growth management restrictions (e.g., utility extensions, sewer moratorium, development or population caps, timing controls); and policies and practices regarding rezoning, variances, special use permits |
| Utilities and Public Infrastructure -Quantity and Quality | street system; public mass transit; public utilities such as electric power and natural gas; and water, sewerage, waste management and other public or private facilities and systems |
| Public Services -Quantity and Quality | fire and police services; educational facilities for both employees and their families; medical facilities; parks and recreation facilities; and public cultural facilities |
| Transportation Services | trucking, railroad and air cargo services; air transport; port or barge facilities; mass transit; congestion, condition and plans for regional thoroughfares; and rate structure |
| Cost of Living Considerations | housing availability and occupancy costs including property tax and utility charges; state and local income tax; price level for necessities |
| Quality of Life Considerations | recreational amenities; cultural amenities; quality of public services such as schools and parks; quality and quantity of entertainment amenities such as restaurants and theaters; climate and weather |
| Community Factors | name recognition of community and/or industrial area or business park; age and condition of industrial area/business park; compatibility of neighborhood land uses; absence of negative externalities such as litter, noise, odor, dust and air pollution; and safety of the area for both employees and property |
| Community Attitudes | receptivity of political and community leaders and the business community in general toward the firm and staff; and policy and practice regarding the enhancement of existing , and the provision of expanded public services and facilities |

Cross-Correlation of Community Factors and Specialty Studies

As suggested by Exhibits 3 and 4, the site selection decision process could easily get bogged down in detail, overwhelming decision-makers with unrelated facts. Some might argue that it is not necessary to consider all the details, contending the site selection process can be more strategic and focus on one or two key drivers. While many companies approach the process in such a manner, the increasing

complexity of the decision, the capital-intensive nature of the commitment, and the rising importance of real estate and the workplace to the mission of a company argue that such decisions could be shortsighted. Indeed, in most situations companies would lose by trading off expediency and simplicity for validity and durability. What is needed is a decision framework that can help organize the process, helping ensure that companies do not ignore certain dimensions or place too much emphasis on some of the more obvious, but insignificant, considerations. The balance of this article consolidates the various community factors and specialty studies and indicates how they can be used to support corporate site selection and related decisions. Exhibit 5 provides the link between the six types of Company-Oriented Specialty Studies and the major community factors. As noted, a number of the factors appear in multiple studies, although the combination of factors and the nature of how they are reported differ among the studies. In addition to helping determine the dimensionality of the various studies, this framework can also be used to identify where a decision maker could expect to find certain information. Additionally, missing data could suggest that important information has not been factored into the decision. This checklist application should be especially useful to firms that outsource such decisions, or ones in which resource limitations constrain full-blown analysis.

**Exhibit 5: Community Factors and Company-Oriented Specialty Studies**

| | Business Climate | Quality of Life | Employee Relocation | Property Tax | Planning & Regulation | Capstone: Total Cost of Business |
|---|---|---|---|---|---|---|
| A. Labor Force Factors | x | | x | | | x |
| B. Property Taxation | x | | | x | | x |
| C. Corporate Income Tax | x | | | | | x |
| D.Other Taxes on Corporations | x | | | | | x |
| E. Fees, Charges and Special Assessments | x | | | x | | x |
| F. Regulations and Development Controls | x | X | | | x | x |
| G. Utilities and Infrastructure | x | X | | x | x | x |
| H. Public Services | x | x | | x | x | x |
| I. Transportation Services | x | x | | | x | |
| J. Cost of Living Factors | | x | x | | | |
| K. Quality of Life Factors | x | x | x | | x | x |
| L. Community Factors | x | | | | | |
| M. Community Attitude | x | x | x | | | |
| N. Other Factors | | | | x | | x |

Company-Oriented Community Studies

From a company's perspective, the selection of communities begins with some pool of candidates, and then filters down to a decision. These studies may include regional and statewide studies performed by others (e.g., development agencies, government agencies, financial institutions, and utility companies). These regional studies would cover such issues as the economy; labor availability, wage structure, and unionization; material and input prices; land and property prices; tax environment and assistance

programs; physical and environmental conditions; and other generally available information.[xiii] At the community level, company-oriented studies include non-economic (e.g., business climate, quality of life) and economic (e.g., employee relocation, property taxes and special assessments, planning and regulatory environment, and locational inducements and incentives).[xiv] Exhibit 6 presents the objectives, major topics and uses associated with economic studies (Rabianski 1990). In effect, such studies provide answers to the general question of what it will be like to operate in a community, and what it will be like for employees to live in the community.

**Exhibit 6: Non-Economic Company Oriented Studies**

6-A: Business Climate Study

| | |
|---|---|
| Objective: | To determine attitudes exhibited by government officials, business leaders, and the general public toward the firm and its key personnel. |
| Major Topics: | • Existing property tax assessment policies<br>• Existing public service and utility provision<br>• Acceptance of similar firms and their management staff in the community<br>• Judgment concerning community acceptance of the specific firm and its personnel in the community |
| Uses: | • To evaluate the impact of tax assessment policies as well as utility and public service provision on the cost structure.<br>• To evaluate community attitudes on the ability to retain key personnel. |

6-B: Quality Of Life Study

| | |
|---|---|
| Objective: | To determine the differential in personal satisfaction that current key personnel will experience by making the move along with the firm. |
| Major Topics: | • Analysis of managerial and key employee housing options -- quality, price and availability.<br>• Analysis of nonhousing cost of living differentials.<br>• Analysis of housing related factors such as neighborhoods, public services, school system quality, etc.<br>• Analysis of journey to work costs<br>• Analysis of employee preferences for cultural, entertainment and recreational amenities. |
| Uses: | • To evaluate the relative attractiveness of the new location to key personnel and thereby assess their willingness to move.<br>• To assist in determining the effect on the wage/salary structure of the firm. |

With respect to company-oriented economic studies, the underlying objective is to identify and quantify the factors that impact on the cost of doing business in a particular community. These results should address the current situation, as well as the likely environment over the probable holding period or duration of the real estate commitment. Exhibit 7 provides and overview of these types of specialty studies including, Property Tax and Special Assessments, Planning and Regulatory Environment, and Employee Relocation.

**Exhibit 7: Economic, Company-Based Community Studies**

7-A: The Property Tax And Special Assessments Study

| | |
|---|---|
| Objectives: | • To determine the differential for property taxes and special assessments among communities being evaluated as a location for a corporate facility.<br>• To determine the property tax bill and the amount of special assessments the company will experience by locating a corporate facility in a particular community. |
| Major Topics: | • Analyze assessment procedures and the assessed value for corporate facilities.<br>• Analyze the community property tax base.<br>• Identify the amount and impact of property taxes and special assessments on the firm.<br>• Identify methods and level of difficulty of appealing unfair or unwarranted tax charges. |
| Uses: | • To provide information for comparing and evaluating taxes in communities being considered as potential locations for corporate facilities.<br>• To ascertain property tax information used in determining the financial feasibility of a new or expanded corporate facility. |

7-B: The Planning And Regulatory Environment Study

| | |
|---|---|
| Objectives: | • To determine the planning procedures used to evaluate and forecast community needs and to prepare plans.<br>• To identify specific plans for providing public services and facilities as well as public amenities.<br>• To identify types regulatory measures in force, standards for compliance and enforcement procedures. |
| Major Topics: | • Analyze the planning process and provisions of the comprehensive plan utilized in the community.<br>• Evaluate specific plans and proposals that affect that location and operation of corporate facilities in the community.<br>• Analyze the requirements and costs of compliance with the community's site-specific regulations, including zoning, subdivision regulations and construction and occupancy codes. |
| Uses: | • To provide information about costs and benefits of the community's comprehensive plans and development regulations as an input to community selection.<br>• To provide specific information about costs of compliance as an input to financial feasibility. |

7-C: Employee Relocation Study

| | |
|---|---|
| Objectives | To determine the cost of moving key personnel but not including wages, salaries and cost of living |
| Major Topics: | • Analysis of home equity loss caused by a necessary sale of the employee's principal residence.<br>• Analysis of the direct cost of moving the family and its belongings. |
| Uses: | • To evaluate the full costs of moving key personnel.<br>• To quantify the cost of replacement personnel in the event of employee turn-over |

Once the key economic considerations have been identified, they should be incorporated into a capstone study that includes some form of discounted cash flow analysis. This analysis will reduce the trade-offs to a common denominator, allowing the decision-makers to focus on the present value of the various options. Exhibit 8 presents a "Total Cost of Business" framework that can feed into such a model. By extending the model over time, the analysis could be particularly revealing, helping quantify future costs

of production. In addition to the cost factors contained in the respective specialty studies, this cash flow modeling can incorporate some of the revenue enhancing potential that the various alternatives offer. For example, with respect to business-business activities, this revenue enhancement can stem from favoring sites that are in proximity to manufacturing operations that favor just-in-time delivery. On the other hand, business-networking opportunities associated with proximity can help capture additional sales and firm up business-business relationships. With respect to the business-consumer revenue potential, the establishment of operations in key locations can increase exposure, and exploit the "local" market preference of many consumers.

**Exhibit 8: Total Cost of Business Capstone Studies**

| | |
|---|---|
| Objectives: | • To estimate the total cost of operating a business in a community<br>• To quantify the revenue enhancement potential of locating in a particular community<br>. |
| Major Topics: | • Labor force availability, costs and productivity.<br>• Gross business tax burden: income, inventory, real estate, employee-related<br>• Availability, eligibility and implications of incentive and economic inducement programs.<br>• Revenue potential for additional sales and services due to business-business and business-customer linkages.<br>• Availability, reliability and costs of services; infrastructure and other service support |
| Uses: | • Development of model of total costs of business to feed discounted cash flow-like trade-offs<br>• Business planning, budgeting and forecasting models<br>• Demonstrate value-add of real estate decision to Wall Street and investor community to increase and/or stabilize shareholder values |

Community-Oriented Community Studies

Community-Oriented studies can be sub-classified into economic, non-economic and capstone. Exhibit 9 presents the community factors that are typically incorporated in the community-oriented studies. A number of these factors occur multiple studies, differing in terms of perspective and relative importance.

**Exhibit 9: Community Factors and Community-Oriented Specialty Studies**

| | Infrastructure Impact | Environ-mental Impact | Economic Impact | Fiscal Impact | Market Value Impact | Capstone: Location Inducement |
|---|---|---|---|---|---|---|
| A. Labor Force Factors | | | x | | | x |
| B. Property Taxation | | | x | x | x | x |
| C. Corporate Income Tax | | | x | x | | x |
| D.Other Taxes on Corporations | | | x | x | | x |
| E. Fees, Charges and Special Assessments | | | x | x | | x |
| F. Regulations and Development Controls | x | x | | | | x |
| G. Utilities and Infrastructure | x | x | x | x | | x |
| H. Public Services | x | x | x | x | | x |
| I. Transportation Services | x | x | x | | | |
| J. Cost of Living Factors | | | x | | | |
| K. Quality of Life Factors | | x | | | x | |
| L. Community Factors | x | x | | | x | |
| M. Community Attitude | x | x | x | x | x | |
| N. Other Factors | | x | | | x | x |

As in the case of the Company-Oriented studies, local agencies or authorities typically conduct a number of Community-Oriented studies. These studies can be grouped into three categories: non-economic, economic, and capstone. In association with other analyses, these studies provide the basis for developing the economic development and inducement decisions formally presented in a capstone study. Furthermore, community-based decisions regarding the relative attractiveness of corporate facilities are best analyzed from a multi-period perspective, looking at the cost/benefit equation over time. This discounted cash flow analysis is particularly important in establishing economic incentives, to avoid providing excess benefits to companies that are not justified or commensurate with ancillary benefits to the community.

**Exhibit 10: Non-Economic Community-Oriented Studies**

10-A: The Infrastructure Impact Study

| | |
|---|---|
| Objective: | To determine the effects of a new production facility on the physical capacities and service levels of public services and facilities. |
| Major Topics: | • Identify and describe types of public services and facilities available and quantify the capacity of each.<br>• Analyze operating conditions, standards, requirements, and excess capacity for each public service and facility.<br>• Identify existing service level and expansion needs and costs for each public service or facility impacted by the corporate facility. |
| Uses: | • To estimate the impact on service levels of existing public services and facilities and the amount of improvements and costs to meet needs of the new corporate facility.<br>• To generate information on impacts and potential benefits the new corporate facility will have on public services and facilities in the community to use as a public relations tool to overcome public concerns about negative impacts. |

10-B: The Environmental Impact Study

| | |
|---|---|
| Objectives: | • To determine potential environmental impacts of the new corporate development when needed for compliance with environmental standards or regulations.<br>• To determine actions required to avoid, ameliorate, or resolve adverse environmental impacts. |
| Major Topics: | • Describe in a checklist fashion current environmental conditions in the community.<br>• Identify probable environmental impacts on each environmental element from the development of the corporate facility.<br>• Analyze alternatives, if any, to the project along with short-term versus long-term costs and benefits of each alternative.<br>• Identify mitigation measures that can be taken to resolve adverse impacts.<br>• Identify any growth inducing impacts of the new corporate facility. |
| Uses: | • To comply with any legal or regulatory requirements for environmental analysis or identification of mitigating actions.<br>• Potentially useful as a public relations tool to show compliance with environmental standards and corporate attitude toward environmental goals. |

**Exhibit 11: Community-Oriented Economic Studies**

11-A: Economic Impact Study

| | |
|---|---|
| Objectives: | • To determine the increase in total jobs and total income caused by the operation of the facility.<br>• To allocate the increase in total income to the local retail activity.<br>• To estimate the effect of the increased employment on the demand for housing. |
| Major Topics: | • Analyze the direct employment of the facility.<br>• Estimate the magnitude of the local economy's multiplier.<br>• Calculate the total change in local employment and income.<br>• Determine the percentage of the household budget spent on various categories of retail goods and services. |
| Uses: | • To estimate the economic benefits that can accrue to the local economy from the operation of the corporate facility.<br>• To generate information that can be used in a public relations campaign in the local community to overcome negative impressions about the facility. |

11-B: Fiscal Impact Study

| | |
|---|---|
| Objectives: | • To determine the increase in property tax revenues generated by the facility for the local jurisdiction[s] in which it is located.<br>• To determine the increase in public service cost generated by the facility for the local jurisdiction[s]. |
| Major Topics: | • Analyze the historic and current tax assessment practices and the assessments on comparable properties.<br>• Determine the current millage rate that would apply to the facility and estimate its future levels.<br>• Determine the use of public services/facilities by the corporation.<br>• Calculate the direct net cost/benefit to the local jurisdiction's operating budget from the operation of the facility.<br>• Calculate the indirect and induced net cost/benefit to the local jurisdiction's operating budget from the facility's effect on the housing stock and retail establishments. |
| Uses: | • To estimate the economic benefits that can accrue to the local economy from the operation of the corporate facility.<br>• To generate information that can be used in a public relations campaign in the local community to overcome negative impressions about the facility. |

11-C: Market Value Impact Study

| | |
|---|---|
| Objective: | To determine the potential impact of the facility on property value in the local community. |
| Major Topics: | • Identify the characteristics and attributes of the facility.<br>• Identify comparable properties and analyze their location attributes in the community in which they exist.<br>• Analyze the impact of the comparable facilities on the property values in their respective communities. |
| Uses: | • To estimate the net economic costs or benefits that can accrue to the property owners in the local economy from the operation of the corporate facility.<br>• To generate information that can be used in a public relations campaign in the local community to overcome negative impressions about the facility. |

The capstone "Locational Inducements and Incentives" study is the culmination of the various Community-Oriented studies (see: Exhibit 12). As in the case of the capstone Company-Oriented study, the objective of this study is to establish the level of inducements and incentives that are warranted to attract and/or retain companies. Once again, this decision is best made on a multi-period basis, drawing on some form of discounted cash flow modeling that can compare the present value of the benefits against the present value of the costs. In this analysis, both the direct and indirect costs and benefits should be recognized. An example of indirect benefits would be the ability to capture even more companies than the targeted companies, as the agglomeration and clustering affects identified in the literature search kick in. That is, many companies will migrate toward locations in which complementary and competing companies are domiciled, in hopes of benefiting from some of the synergies and spillover affects. In addition, on-going outlays for training and education of a labor force to provide adequate pools of talent for desired industries can have a synergistic affect on a market, with success begetting success.

**Exhibit 12: Locational Inducements and Incentives Capstone Study**

| | |
|---|---|
| Objectives: | • To determine types and conditions of community programs available to defray costs or provide other assistance in developing corporate facilities. |
| Major Topics: | • Identify and evaluate types of financial assistance programs.<br>• Identify and evaluate any tax incentive or tax abatement programs.<br>• Identify and evaluate land and space acquisition or provision programs.<br>• Identify and evaluate labor force training programs.<br>• Identify and evaluate programs that provide incentives or assistance in achieving or complying with pollution or environmental controls. |
| Uses: | • To provide information about potential benefits of economic development programs designed to attract industry and employment to a community, used as input to the financial feasibility study. |

**Conclusion**

The article presents a comprehensive look at the corporate site selection decision process. It began with a review of some of the business trends (e.g., consolidation, globalization, e-business revolution) that raise both the importance, and the complexity, of the site selection decision. It then explored some of the key industry trends (e.g., declining real estate budget allocations, growth of outsourcing, and financial myopia) that are making it more difficult to provide the high level of decision support such changes dictate. Based on this anecdotal material, the literature surrounding the site selection process was reviewed. The objective of this discussion was to explore what researchers have concluded regarding the importance of the process, as well as identify some of the key factors that have been found to be important to firms in site selection. The results of the literature search revealed that the site selection process typically follows some systematic process, and that agglomeration affects, event studies, and individual case examples can provide useful insights.

Using the preliminary work as a foundation, the article stepped back and presented a framework individual firms and community development groups can use to determine the best way to approach site selection problems given their particular situation. The discussion recognized that

the notion of cash-solvency is an overriding consideration that spans both the corporate and community decision. In effect, all real estate-related decisions should be reduced to some form of discounted cash flow analysis, using time-value of money calculations to bring them back to a common denominator. Based on this conceptual foundation, the discussion explored how such decisions should be approached, identified the key variables that should be considered, and introduced some decision modes that can be applied. It concluded with a review of the individual community-specific variables that firms may consider in making site selection decisions. This latter stage is intended to help ensure that firms consider the key dimensions of site selection problems and approach them in a disciplined, systematic manner commensurate with the importance of the underlying decision. This discussion should help firms avoid making hasty or shortsighted decisions that can prevent them from arriving at optimal real estate mixes. In addition, it should help communities develop rationale incentive programs that make sense in an investment context.

Going forward, it should be noted that companies should continuously evaluate the efficiency and profitability of their production and distribution operations. Whenever change occurs in the product market, the labor market, and/or production technology, companies must make a location decision even if the decision is simply to maintain the status quo. These changes could affect the production capacity and the scale of operation of the plant, input requirements, application of new production technology, distribution patterns, or some other form of facility-based activity. The facility location decision determines where and how to modify an existing facility or locate a new production or distribution facility in a manner that complements other corporate operations and achieves corporate objectives. Each location decision needs to be based on pertinent information obtained from specialized studies that are well recognized and discussed in the literature. These Company-Oriented and Community-Oriented specialty studies can be as important as the production and distribution studies associated with a location decision and can affect achievement of profits and other corporate goals.

Some corporate real estate executives and community development professionals may dismiss the need for a business climate or a quality of life study, or they may seek this type of support for a location decision already made. Knowledge of the contents and use of the community-specific studies examined in this article indicate these executives are misguided with respect to the studies' importance and timing. The location decision should seek to ascertain whether the key

personnel will be interested in being moved to a new community in a plant relocation, and if they will be content with their new life style enough to stay with the company in the long run, as an integral part of the decision process. From the perspective of the community, incentive programs should be approached as investments, applying traditional discounted cash flow modeling to various programs. The end result will be more efficient and enduring locational decisions that create a win-win situation for companies and communities.

**End Notes**

i. Schmemmer, R.W., *Making Business Location Decisions*, Englewood Cliffs, NJ: Prentice Hall, 1982, pp. 37-38.

ii. Schmenner, Ibid., pp. 16-21.

iii. Nourse, Hugh O. "Selecting Administrative Office Space," *Journal of Real Estate Research* (Vol. 7, No. 2), Spring 1992, pp. 142.

iv. Nourse, Ibid., p. 142.

v. Nourse's and Schmenner's first steps are nearly identical, but Nourse combines Schmenner's steps 2 and 3 into a single step 2, and he combines Schmenner's steps 3 and 4 into a single step 3. Nourse's steps 4 and 5 match Schmenner's steps 6 and 7, but Nourse's step 6 (negotiation for optioning the chosen site) is not present as a separate step in Schmenner's model. Finally, Nourse's step 7 and Schmenner's step 8, the decision that finalizes the site location decision process, are very similar but not identical. Miles, Mike Edward. "A Conceptual and Computer Model for the Analysis and Management of Risk in Real Property Development." Ph.D. dissertation. University of Texas at Austin, 1976. Schmenner, Op. Cit., and Nourse Op. Cit., comprise the two major empirical studies dealing explicitly with corporate plant and office facility location decisions.

vi. Earlier academic and professional literature modeling non-corporate location decisions by real estate developers have a rough similarity to corporate location decisions. Kaiser and Weiss modeled the residential development process as a sequence of decisions made by raw land owners, residential developers, and housing consumers. The residential location decision is depicted as a multi-stage process where the final site selection/land use decision occurs when the developer becomes financially committed and physical development begins, so the development becomes irreversible unless work stoppage provokes a financial wipe-out. Miles modeled the speculative commercial site selection and development decision as a sequence of decisions managed by the developer with critical supporting decisions made by lenders, equity investors, tenants/occupants, and public officials. The location decision is finalized by the commencement of the physical development process.

vii. These points about irrevocability were raised by an anonymous reviewer.

viii. The material presented in Exhibit 1 starts with the analysis of the business needs and then proceeds to an analysis of the region followed by an analysis of alternative sites. However, Exhibit 1 could have been designed to analyze alternative sites across various regions followed by a detailed analysis of the regions after the best sites are discovered.

ix. Schmenner, Op. Cit., and Nourse Op. Cit., comprise the two major empirical studies dealing explicitly with corporate plant and office facility location decisions.

x. The relative importance of these community specific studies is depicted in the practitioner/professional literature, such as Industrial Development.

xi. See, for instance: Rabianski, Joseph. "How to Specify a Quality of Life Study." Industrial Development January/February 1989), pp.18-21. Reprinted in: Site Selection Japan (Fall 1989).

xii. As examples of the community selection literature that is published in textbook form consider the following publications: Kinnard, William N. Jr., Stephen D. Messner and Byrl N. Boyce, Industrial Real Estate, third edition, Washington, D.C.: Society of Office and Industrial Realtors, 1979, fourth edition, 1984; Hunker, Henry L., Industrial Development: Concepts and Principles, Lexington, Mass.: Lexington Books, 1974; Schmenner, Roger W., Making Business Location Decisions, Englewood Cliffs, NJ: Prentice-Hall, Inc., 1982; Thompson, James H. Methods of Plant Site Selection Available to Small Manufacturing Firms;, Howard, D. [editor], Guide to Industrial Development; Mandell, L. Industrial Location Decisions, Joint Committee of the Society of Industrial Realtors and the National association of Industrial and Office Parks, Guide to Industrial Site Selection, Washington, D.C., 1979.

xiii. These studies are principally used to assess the plant's production costs, input procurement costs, product distribution costs and the market factors that show up in revenue or sales forecasts for the plant at the new location. They are the first and generally the major thrust of the location analysis used to make a location decision. The literature in regional and urban economics, regional science and economic geography is extensive. To generate an extensive bibliography, the researcher can use key words such as "industrial location" and "site selection."

xiv. These studies are typically viewed as secondary studies that provide valuable information on matters of concern that can affect the success of the plant in the new location. They can cause the location decision maker to choose one site and/or community over another. They can provide information that allows the decision maker to select the optimum site/community from a list of financially feasible communities.

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