



# Evaluating economic impacts of corporate real estate activities

Evaluating  
economic  
impacts

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## Abstract

**Purpose** – Input-output modeling can accurately forecast the benefits associated with corporate real estate projects. This paper aims to address the economic and employment impact analysis practices used in input-output modeling and identifies resources for corporate real estate executives when working with community groups and public officials. By understanding this topic, corporate real estate executives can more effectively demonstrate the value of corporate activities to a community. An impact analysis case study is presented that includes an example of economic impact report content. Input-output modeling is an effective analytical tool for corporate real estate site selection, facilities expansion, and other community relations projects. This study addresses the major issues in corporate/community relationships and focuses on the corporate need to demonstrate project contributions to community economic vitality. As political, special interest, and public views about business expansion and development harden, corporate real estate executives and specialists need to utilize effective tools to balance the debate.

**Design/methodology/approach** – This study presents a review of input-output economic modeling techniques, application of the model, key terms, a case study of a \$2.1 billion expansion project, and a sample outline of an impact analysis report. This approach provides a good conceptual framework, terms, and the application of an economic and employment impact approach to measuring the total contribution of corporate real estate activities in a community or region.

**Findings** – Demonstrates methods measuring economic and employment multipliers resulting from direct, indirect, and induced corporate project impacts. The findings will assist professionals responsible for corporate/community relations by enhancing their understanding of economic impacts.

**Originality/value** – This paper presents an overview of an effective modeling technique that can be used to accurately estimate the community economic and employment contributions resulting from a new corporate real estate project. Emerging corporate/community relations issues are discussed and resources are identified.

**Keywords** Corporate site selection, Economic impacts, Impact studies, Economic multipliers, Employment impacts, Community relations, Real estate development, Development incentives, Real estate

**Paper type** Case study

## I. Introduction

Corporate real estate professionals face a variety of challenges in demonstrating the contribution of the corporation to a community or region. Working with public stakeholders and local units of government is perhaps one of the most challenging areas of corporate real estate practice. In one instance, public officials will attract a corporation with incentives for locating in their community and shortly thereafter, in response to citizen or special interest group pressure, require unanticipated corporate commitments for public improvements. Corporate real estate executives need tools and facts that demonstrate the economic and employment contributions that a business makes or can make to a community's economic vitality. As political, special interest, and the public's arguments against business expansion and development become severe, corporate real estate professionals must develop effective tools to balance the debate.



The “balance sheet of corporate real estate and community interests” has been subjected to many forms of both rational and irrational analysis. If a corporate real estate decision maker elects to follow that latter approach, future problems will likely surface, generating additional costs, delays, and community relations setbacks. The “balance sheet of corporate real estate and community interests” is not unique to new location site selection, corporate real estate development or facility expansion projects. Corporations face increasing scrutiny by citizens, public officials, politicians, and special interest groups regarding facility operations and the value that the corporation provides to the community. For existing facilities, community and political concerns include the factors are listed as follows.

*Negotiation factors in corporate/community relations*

- Site selection.
- Property acquisition.
- Environmental issues.
- Public incentives.
- Employment.
- Infrastructure support.
- Relationship with area businesses.
- Development controls.
- Expansion or contraction projects.
- Public services and assessment.
- Regulatory approvals.
- Property taxes.
- Traffic and congestion.
- Parking.
- Safety issues.
- Employee housing.

Corporate real estate practitioners face many potentially disruptive issues that can upset the goodwill between the corporation and the community. Many of the issues identified in the above list flow back to the question of the corporation’s economic contribution to the community. With the movement to outsourcing, outside consultants may also play a role in articulating the response to community concerns. I have observed a wide range of skill levels from “experts” assisting corporations in showing their value to local communities. Indeed, as noted by the late Alan Williams, Professor of Economics at York University in the UK:

In the booming business of management consultancy, there is no shortage of glossily packaged analytical techniques of varying degrees of power and reliability being peddled to ill-informed clients by pushful salesmen (Williams, 1977).

Corporate real estate practices have advanced in the areas of strategic planning, globalization, the integration of communications and technology, and assumed

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a stronger role in creating corporate competitive advantage. Similarly, corporate real estate practices in community relations have developed as well. Research in several areas of corporate real estate have, however, been hampered by the lack of reliable data and damaged by little attention to theory and methodology with too much emphasis on anecdote, assertion, and unsound empiricism, as noted by Lizieri (2003). Few areas of business practice have been neglected to a greater degree than techniques demonstrating the economic value that corporations contribute to the communities and regions in which they are located.

The goal of this paper is to provide information and a case study on established, reliable and validated techniques, and methodology demonstrating the economic value of a corporation to the community. Brown and Arnold (1993), in his seminal book *Managing Corporate Real Estate*, identified the following studies as important for corporate community relations and strategic facilities planning: economic impact, fiscal impact, market value impact, infrastructure impact, and environmental impact. Corporate real estate professionals use these and numerous other studies and community surveys to better understand, develop, and foster good corporate/community relationships.

## **II. Community relations as a performance measure in corporate real estate**

The site selection process is the most visible area in corporate real estate that addresses community relations and the need for demonstrating corporate economic and employment benefits to the community. During the site selection process, negotiations will also take place regarding public subsidies. To enhance the subsidies and community support for the project, corporate real estate executives should be well-prepared to demonstrate the economic and other contributions that the corporation can make to a community.

Local and regional units of government also conduct corporate economic impact studies. Rabianski *et al.* (2001), in their evaluation of how communities determine what “package” to present to existing and potential companies, identified an array of variables including the corporate impact on area labor, taxes, fees, fiscal impacts, assessments, quality of life, and community attitudes. The capstone of these public sector studies leads to the determination of the incentives offered to the corporation. The degree of activity of the public sector in pursuing corporate economic impact studies (Musil, 2006) is lower than one might think and a national study of the USA municipal economic development officials found that only 42 percent of economic development officials in US cities usually or always conducted economic impact studies.

Three factors are critical to point out in the context of understanding the relationship between economic impact studies and corporate real estate decision making. First, local and regional units of government are often ill-equipped and do not have the time necessary to perform a complete analysis of community economic benefits associated with a corporate site selection or an expansion project. Second, the more desirable communities that can help a business facilitate employee retention and recruit technical, engineering, and management personnel (factors contributing to competitive corporate advantage) are sometimes hard negotiators. And third, there is a growing and more active movement strongly opposed to corporate subsidies and development.

Site selection and project expansions are not the only components of corporate real estate that can be impacted by community relationships. Corporate real estate performance measures are wide ranging and some performance measures can be hurt

if problems exist between the corporation and the community. The most serious real estate-related community relationship problems may lead to decreased employee performance and reduced financial results from limitations or time delays on facility expansion, change in use, and regulatory approvals. Indeed, using the balanced scorecard approach to benchmarking facility performance, Lindholm and Nenonen (2006) identified the atmosphere of the community as a tactical performance measure.

In their discussion of performance measurement in corporate real estate, Jordan *et al.* (2009) cite seven business objectives (cost management, strategic relationship management, performance excellence, quality of service, talent management, risk management, and value creation) that should be on the operational dashboard of corporate real estate. Two of these objectives, strategic relationship and risk management have direct linkages to community relationships.

Corporate real estate executives must understand both the facts and the dynamics of local regulatory and political decision making and develop their own data on community and regional economic impacts resulting from corporate development and operations. The process of developing community relationships that will engender successful outcomes include transparency to counter the “behind closed doors” perception that the general public or elected officials may hold about corporate decision making processes. Carl and Kelly (2004) interviewed a wide range of commercial developers, consultants, and lobbyists as well as representatives from environmental groups, local government, and community activists regarding the changing dynamics between business and community interests. Carl and Kelly found that:

- There is a growing influence of community leaders, government organizations, citizen action groups, and smart growth movements that can stop projects.
- There are an estimated 28,000 activist and non-government organizations watching business behavior, not including community groups that organize *ad hoc* around a particular project.
- There is a more intense involvement from a larger sphere of individuals and groups than can influence project outcomes than ever before, and the cost of complying with greater and more complex government regulations continues to rise along with the cost of litigation and experts.
- As activists and organizations have become successful in building coalitions and adept at using the media, they have also been able to exert increasing influence in changing regulations and the permitting process.

When working on developing a new facility, a facility expansion project, and other endeavors where the value of the corporation to the community is discussed, the corporate real estate executive is faced with a community/corporate relationship in which outcomes may likely depend more on politics than on facts, reason, law, and economics. Clearly, zoning laws and ordinances supporting the corporate position are inadequate if one cannot also win politically. Indeed, as noted in Thomsett’s (2004) book on *Not in My Back Yard (NIMBY)*, opposition group tactics of arguing that development “destroys” the community often succeed without any evidence to support such claims. One of the best methods to counter unsupported fears in a community – in addition to well-developed planning and design, effective comprehensive lobbying, and information programs to win community support – is to develop an input-output

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model that accurately forecasts community economic and employment benefits from the project.

The applications of input-output modeling in corporate real estate are straightforward. An input-output model, by its most basic definition provides the ability to accurately forecast industry-specific spending and the economic manifestation of that spending in other industries, wages, and employment within a community. The ability to accurately forecast corporate economic contributions to a community provides the corporate real estate executive with a powerful tool in negotiating with a variety of community stakeholders because the economic value that a corporation brings to a community can be accurately predicted. The application of input-output data is critically valuable in the negotiation of corporate/community relations factors identified previously in the list “Negotiation factors in corporate/community relations”, with the largest contributions in the areas of incentives, development controls, assessments, and taxes.

It is important to note that input-output modeling is one of the many tools that can be used by corporate real estate executives working with community stakeholders. There are many instances where non-economic measures should be at the forefront of corporate/community discussions. The emerging issues of sustainability, smart growth, and developing partnerships for development (Sanders, 2008; Madsen, 2005; Hughes and Spray, 2001) cannot be minimized. Additionally, building relationships with stakeholders at all levels must occur to assure success in corporate/community relationships.

### **III. Using input-output modeling to forecast corporate economic contributions**

Initial forecasts of what a corporate project will contribute to a local or regional community’s economic health is comprised of two basic components. All projects have a construction phase that generates local economic activity (labor and materials) and when construction is completed, operations begin – both activities have measurable economic activity within a community, region, or state. Both activities generate wages and material purchases on three levels: direct, indirect, and induced. The development and operation of office, industrial, and retail real estate form the basis of economic output, job creation, personal earnings, and an array of other community economic benefits. An input-output model is based on the theory that when new money enters a community through investment, income, or revenues, some of the money is re-spent, thereby creating additional economic and employment multiplier impacts.

An input-output model forecasts the economic contribution of a business activity by using a matrix breakdown of a local or regional economy to predict the economic impact of changes in one industry on other industries, suppliers, government, and residents of a defined area. The basis of the matrix reflects the inter-industry and consumer transactions resulting from a new business activity. Wassily Leontief (1905-1999) developed input-output modeling and won the 1973 Nobel prize in economics for this work. The model shows how an output of one industry is an input to other industries and the population of a community. The value of this modeling is that the inter-industry relationships can be measured in a geographic context and stratified by community, region, state, or nationally.

An input-output model accurately forecasts the distribution of sales and purchases of each sector of the economy related to the direct input of a new facility or expansion project. Any legal economic activity can be evaluated for economic and employment impacts. The model considers the flow of wages, business sales in industrial sectors and sales to the final demand categories of households, investors, and government. The input-output model also forecasts the circular flow of expenditures and the multiplier effects throughout an economy utilizing the structure of direct, indirect, and induced expenditures that result. Consequently, it is not surprising that input-output modeling is used as a forecasting tool by economists, planners, and economic development officials. Corporate real estate executives should be knowledgeable about this powerful tool and recognize its basic capabilities and its potential for misuse.

There are a variety of input-output modeling programs for several countries. In the USA, models are based on the North American Industrial Classification System (NAICS) ([www.census.gov/epcd/naics07/](http://www.census.gov/epcd/naics07/)) but also reference the old Standard Industrial Classification codes as well. This paper contains a case study of the economic impacts of a project which is based on the input-output model (database and software) developed by Minnesota IMPLAN Group ([www.IMPLAN.com](http://www.IMPLAN.com)). IMPLAN is derived from impact analysis for planning. The IMPLAN model incorporates 528 industry or producing sectors on a national level. Data are adjusted at the county level to reflect corresponding local conditions and include, by industry sector, data on outputs and inputs from other industry sectors, value-added, employment, wages, taxes, imports, and exports, demand from households, demand from government, marketing margins, and inflation factors (deflators).

Corporate real estate practitioners should not be intimidated by the complexity of the mathematical underpinnings or vast databases used in input-output modeling. The development of input-output modeling is the domain of regional economics and, consequently, much of the literature generated in this area reflects the model's process of organizing and reconciling formulas and data interrelationships of economic activity. The mathematical notation (matrix algebra) can quickly confuse and intimidate an end-user of the modeling program. An excellent source for assistance in working with input-output modeling can be obtained from university-level applied economics programs; business or public administration programs; state, regional, and local economic research institutes; and, in many cases, municipal, regional, or state planning agencies. There are several consulting firms that use the models as well. It is important to note that when working internationally, the most productive assistance one may find will be with one of these sources. Internationally, resources may be identified through the International Input-Output Association ([www.iioa.org](http://www.iioa.org)); Bureau of Economic Analysis, US Department of Commerce ([www.bea.gov/regional/rims](http://www.bea.gov/regional/rims)); Office of Economics, US International Trade Commission ([www.usitc.gov/research\\_and\\_analysis/](http://www.usitc.gov/research_and_analysis/)); or the Institute of Developing Economies, Japan External Trade Organization (2010) ([www.ide.go.jp/English/](http://www.ide.go.jp/English/)) which develops and maintains input-output data for Asian economies. Also, input-output data was first collected in 1974 by the Department of Economic Forecasting, State Information Center, People's Republic of China (Zhang and Kun, 2004) and has been collected at five-year intervals since 1987.

From a corporate real estate development perspective, the input-output modeling from the above sources (Asian sources in particular) have developed research studies

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that examine supply chain interrelationships (Wang *et al.*, 2009) and the value added to products in the East Asian production network.

#### IV. Input-output terminology

Area of analysis – the geographic region or area political units for which economic, fiscal, and demographic information is reported.

Direct effects/direct impacts – the local economic benefits from direct spending or direct impacts such as construction employment, the purchase of construction materials, and the sales of goods and services. Direct impacts represent new spending resulting from a new project. All direct effects reported by an input-output model are net of any “economic leakage” that occurs when goods and services are imported from outside the study area.

Economic impacts – new spending and employment within an area created by business investment.

Indirect effects/indirect impacts – the additional economic benefits of increased sales, income, or employment as a result of area businesses responding to demand created by the direct impacts. Indirect impacts represent the re-spending by businesses involved in providing goods or services to support the direct impact activities. Indirect impacts are measured as a multiplier of the direct expenditure of new business investment, construction, operations, and employment.

Induced impacts – the increased economic activity from household spending within an area that is a result of the new income earned in direct and indirect affected industries.

Multiplier – a ratio that identifies the secondary effects or compound value of changes in economic activity as a result of direct impact expenditures. Multipliers reflect the degree of interdependency between sectors of the economy as money remaining in the area from the direct expenditure is re-spent in the community. For example, if the total multiplier effects for a new factory worker are 1.8 then 0.8 additional jobs across several industry sectors will be generated in the area under study. Total effects multipliers generally range from 1.5 to 2.5 and are calculated by dividing the total of direct, indirect, and induced impacts by the amount of direct impacts.

Total effects – the total impact of direct, indirect, and induced employment or economic effect within the area under study.

An excellent source of input-output terminology is provided by the US Bureau of Economic Analysis ([www.bea.gov/papers/pdf/IOmanual\\_092906.pdf](http://www.bea.gov/papers/pdf/IOmanual_092906.pdf)).

Input-output modeling provides a variety of techniques and methods for evaluating how corporate projects provide economic change and new vitality in a community, region, or state. The most important consideration in any input-output study is the validity of the assumptions made about the new facility or expansion development costs, estimated employment, wages, estimated operating costs, and estimated production and sales levels. Also, great care must be taken in identifying the area(s) selected for analysis, data collection, identification of the intended audiences, information security, and responsibility for final public report writing. A good example of a professional association collecting economic data to demonstrate industry contributions to a community can be found in the publication: *How to Calculate the Economic Contribution of Office, Industrial and Retail Real Estate to the Local*

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*Community*, published by the National Association of Industrial and Office Properties (Fuller, 2005).

Because of the complexity and detailed results generated by input-output models of corporate projects, it is easy for both analysts and business executives to provide strong economic impact data that, unfortunately, is not convincing and is confusing to decision makers and stakeholders. The way in which data are presented is just as important as the economic and employment impacts identified in the study.

Common mistakes that are made in estimating economic impacts include the following:

- Community, area, or region boundaries studied do not always equal functional economic regions.
- Regional definition should consider location of support industries and labor force.
- Input-output models only measure changes in expenditures or output.
- Economic studies must tie into broader stakeholder issues whenever possible.

There is no ideal format that can be identified for conveying economic impact data and reports to decision makers and stakeholders. Unfortunately, many analysts and corporations that purchase reports view the value and quality of the reports on a “by the pound basis.” The following is a case study and sample report outline that identifies the major components of an economic impact study.

## **V. Input-output case study: Mall of America expansion**

### *Overview*

The Mall of America (MOA) is located in Bloomington, MN, a Twin Cities suburb (Musil, 2010). The first phase of the MOA was completed in 1992 and has a gross area of 4.2 million square feet containing 2.5 million square feet of retail space with 20,000 on-site parking places ([www.mallofamerica.com](http://www.mallofamerica.com), 2010). The MOA attracts more than 40 million visitors annually.

An expansion is planned for the 42-acre site immediately to the north of the existing mall. The estimated project cost is \$2.1 billion and it is estimated that \$927 million in annual sales and revenues will be generated by the expansion when operations are stabilized. Development approvals are in place and allow for building a maximum of 5.6 million square feet of mixed use space. Plans include the development of retail space, hotels, high end fashion shops, a dinner theater, a health spa, a water park, a museum, an ice rink, and restaurants. Additionally, development plans call for energy saving green design with an energy co-generation plant on the site and an 800 car on-site parking ramp. The expansion is projected to increase the number of businesses in the MOA by 270 to a total of just over 800 for the entire mall.

The MOA currently employs 11,000 people (13,000 during the summer months) on a full- and part-time basis and MOA officials estimate the number of employees will grow to more than 20,000 when the proposed expansion is completed. MOA attractions include an indoor theme park in the center of the mall with roller coasters and other rides, an underwater aquarium, flight simulations, and a 14-screen movie theater. The MOA has 520 shops including anchor stores Bloomingdale’s, Macy’s, Nordstrom, and Sears.



The primary retail trade area of the MOA is within an adjacent 150-mile radius. Approximately, 32 percent of mall shoppers live beyond the 150-mile radius. Annually, more than 12,000 tourist groups arrive at the MOA on bus tours and more than 1.5 million visitors to the MOA are from foreign countries. MOA research (Simon Consumer Research Corporation/SPG Research, 2005) has found that shoppers beyond the 150-mile radius spend 43 percent more than resident shoppers within the radius area. Furthermore, MOA research found that tourist parties spend an average of \$530 outside of the MOA during their trip to the MOA.

### *Construction impacts*

The construction of mall expansion (\$2.1 billion) is estimated to take four years, from 2009 to 2012. The construction cost estimates used in the input-output modeling were based on data supplied by the developer and general contractor. The construction schedule was broken down by quarters for each of the four years and costs and impacts were reported in 2007 dollars. Pre-development costs of \$11 million were included in the impacts for the first year. Of the total construction costs, approximately 55 percent were dedicated to building materials and 45 percent for labor. Table I summarizes the annual construction budgets.

The IMPLAN (Minnesota IMPLAN, 2007) industry sector definitions for construction included businesses primarily responsible for the construction of commercial and institutional buildings and related structures (including new work, additions, alterations, maintenance, and repairs). Included in this industry sector are commercial and institutional building general contractors, commercial and institutional building operative builders, commercial and institutional building design-build firms and commercial, and institutional building project construction management firms.

The direct expenditures for labor and materials for the four years of construction resulted in the direct, indirect, and induced impacts for the state identified in Table II.

Year	Materials expenditures (\$)	Labor expenditures (\$)	Total (\$)
2009	124,410,000	101,790,000	225,200,000
2010	308,275,000	252,225,000	560,500,000
2011	304,700,000	249,300,000	554,000,000
2012	332,585,000	272,115,000	604,700,000
2013	76,340,000	62,460,000	138,800,000
Total	1,146,310,000	937,890,000	2,083,200,000

**Table I.**  
Direct total construction  
materials and  
employment  
expenditures by year

Year	Direct impact (\$)	Indirect impact (\$)	Induced impact (\$)	Total impact (\$)
2009	218,654,876	73,593,283	105,720,222	397,968,381
2010	532,964,724	182,653,048	261,272,485	976,890,251
2011	519,469,888	190,865,595	268,714,610	979,050,090
2012	557,960,576	205,007,983	288,625,297	1,051,593,854
Total	1,829,050,064	652,119,909	924,332,614	3,405,502,576

**Table II.**  
Total statewide  
construction impacts  
2009-2012 (2007 \$)

It is important to note that approximately \$115 million was lost from the total construction expenditure direct impacts in the state due to leakages (construction-related expenditures made outside of the state).

Input-output modeling identifies direct, indirect, and induced impacts by geographic region. Because the mall is located in the Twin Cities Metropolitan Area, a comparison was also made statewide and in a 13-county metropolitan region, producing the results in Table III.

The input-output modeling also enabled the forecasting of direct, indirect, and induced employment resulting from the construction. The employment impacts (IMPLAN does not differentiate between full- and part-time jobs) resulting from construction are identified in Table IV on a statewide basis and in Table V, which shows a comparison between the 13-county Twin Cities Metropolitan Area and the state as a total.

*Operations impacts*

The expansion project is designed to accommodate 273 tenants. Tenant square footage ranges from a low of 610 square feet for a specialty food store to a high of more than 550,000 square feet for a water park (Mall of America, 2007). Of the project's 5.6 million gross square feet, 3.5 million square feet will be leased space. Table VI provides a breakdown of the tenant mix by square footage.

Forecasting of merchant and business revenues for the expansion project was based on the per square foot sales levels of similar businesses operating in the existing mall. Business and retail categories were aligned to the NAICS (United States Census, 2007). If a proposed new business for the expansion did not match an existing MOA's NAICS

**Table III.**

Annual total direct, indirect, and induced construction impacts by geographic distribution (2007 \$)

Year	13-county metropolitan area (\$)	Statewide (\$)
2009	387,039,311	397,968,381
2010	949,899,758	976,890,251
2011	951,364,826	979,050,090
2012	1,021,857,218	1,051,593,854
Total	3,310,161,113	3,405,502,576

**Table IV.**

Construction and construction-related jobs created by year for~ the statewide

Year	Direct employment	Indirect employment	Induced employment	Total employment
2009	1,847	544	861	3,253
2010	4,699	1,382	2,233	8,313
2011	4,926	1,450	2,296	8,672
2012	5,291	1,558	2,466	9,315

**Table V.**

Annual construction and construction-related jobs

Year	13-county metropolitan area	Statewide
2009	3,085	3,253
2010	7,655	8,313
2011	7,990	8,672
2012	8,582	9,315

category, the business or merchant’s pro forma projections were used to forecast sales for the first year of operation. The ability to obtain accuracy in pro forma projections was aided by pre-leasing activities.

Table VII presents a breakdown of existing tenants and projected new tenants. The current mall employs approximately 11,000 full- and part-time workers (13,000 during the summer months) and with the expansion project, an additional 7,200 jobs are estimated to be created. In addition to the direct employment of 7,200, the input-output modeling estimated that an additional 546 jobs will be created outside of the MOA.

For an economic impact to be realized in the local economy, the economic stimulus must begin with expenditures from outside of the primary region or study area used in an input-output model. Accordingly, in the case of the MOA and the proposed expansion, two factors were considered. First, the estimated shopping expenditure of visitors who reside outside of the State and amounts spent by these visitors in other area activities such as food and lodging.

The City of Bloomington, Minnesota (2008) reported that the MOA clearly contributed to the city’s construction of 1,831 hotel rooms valued at \$230 million. Mall research (Simon Consumer Research Corporation/SPG Research, 2005) found that 32 percent of MOA shoppers resided outside of the 150-mile radius and that tourist parties spent an average of \$530 outside of the MOA during their trip to the Twin Cities. They also found that out-of-area shoppers had the following characteristics:

Tenant-leased space (square feet)	Number of tenants
600-1,000	45
1,001-5,000	151
5,001-10,000	38
10,001-30,000	26
30,001 or more	13
Total	273

**Table VI.**  
Tenant mix by  
square feet

Job categories	Phase I		Phase II	
	Number of jobs	Percent of total (%)	Number of jobs	Percent of total (%)
Mall management and operations	415	4	105	1.5
Amusement and attractions	775-800 <sup>a</sup>	7	120	1.5
Retail: department stores and small shop retailers	9,330-11,300 <sup>a</sup>	84	4,635	65
Restaurants and food service	480-520 <sup>a</sup>	4	525	7
Hotel (lodging)	0	0	200	3
Office building	0	0	1,465	20
Performing arts center	0	0	35	0.5
Museum	0	0	25	0.5
Ongoing construction	150	1	100	1
Total	11,150	100	7,200	100
	13,000			

**Table VII.**  
Projected total  
employment for Phase I  
and Phase II

**Note:** <sup>a</sup>Overall employment grows to an estimated 13,000 during the summer

- The amount of money that non-resident shoppers spend outside of the mall increased significantly (22 percent) between 2002 and 2005.
- Non-resident shoppers spend 43 percent more than resident shoppers within the 150-mile radius of the mall.
- Residents from other states comprise 30.6 percent of MOA shoppers.
- In 2005, the average income of non-resident shoppers was 49 percent higher than the average income of resident shoppers. Note: the variance in income to a large extent is a result of age. The average age of non-resident shoppers is 41.5 while the average age of resident shoppers is 30.7.
- Of the non-resident shoppers surveyed, 42 percent stated that they were in the Twin Cities primarily due to the MOA.
- Approximately, 4 percent (1.6 million) of visitors to the mall are from foreign countries.

The above findings of MOA research dovetails with other state tourist surveys. Scenic touring is the highest rated activity from travelers visiting Minnesota. Statewide, the estimated traveler expenditures total \$11.8 billion, with about 49 percent, or \$5.8 billion, spent in the Twin Cities Metropolitan Area (Davidson-Peterson Associates, 2006).

Assuming that the expansion project's initial occupancy was 70 percent (30 percent vacant or unfinished) the input-output model estimated that non-state residents would generate \$172 million in total economic impacts resulting from MOA expansion area sales and \$131 million in tourism impacts for activities outside of the MOA. Table VIII summarizes the new impacts at a 70 percent occupancy level.

*Case summary*

The preceding case presents a much shorter version of an input-output impact study that evaluates the construction and operation impacts of an expansion project. The following sample report outline provides the reader with a sense of the greater depth of an actual impact study. With an expansion project of \$2.1 billion, the economic and employment impacts are estimated to be substantial.

The most significant economic and employment impacts emphasized in the executive summary of the report and in all meetings with decision makers and stakeholders include the following impacts:

Total construction impacts:

- Total construction economic impact statewide: \$3,405,502,588.
- Annual construction economic impact statewide: \$851,375,647.
- Average annual direct construction employment: 4,192 jobs.
- Indirect and induced employment: 3,196 jobs.

**Table VIII.**

Non-Minnesota resident economic contribution from expansion operations at 70 percent occupancy

Area	Non-state resident Contribution to expansion economic impacts (\$)	Non-state resident Contribution to tourism impacts (\$)	Non-state annual Total contribution economic impacts (\$)
Statewide	172,125,262	131,370,180	303,432,443

- Total construction sales taxes: \$74,510,150.
- Total construction income taxes: \$40,286,270.

Full operations phase 2013 + (95 percent occupancy):

- Total annual economic impact statewide: \$849,249,748.
- New on-site employment: 7,200 jobs.
- Off-site (indirect and induced) employment: 663 jobs.
- Total jobs: 7,863 jobs.
- Annual state sales taxes (6.5 percent): \$40,049,286.
- Annual state income taxes (4.3 percent): \$5,952,429.

*Sample impact report table of contents*

- (1) Executive summary (this is what is read – must include major project benefits to the community).
- (2) Project overview.
- (3) Study research approach:
  - Economic modelling.
  - Geographic distribution of impacts.
- (4) Project construction impacts:
  - Annual construction costs.
  - Construction impacts.
  - Construction employment.
- (5) Operations impacts:
  - Estimated annual sales or production.
  - Estimated permanent employment.
- (6) State and local tax impacts:
  - State income taxes for construction employment.
- (7) Non-economic project impacts.

*Sample appendices and exhibits*

- Appendix A. Industry sector definitions
- Appendix B. Employment summary
- Appendix C. Researcher's curriculum vitae

*Exhibits*

- Exhibit 1. Site plan
- Exhibit 2. Elevation or rendering
- Exhibit 3,4,5. Renderings

- Exhibit 6. Adjacent zip code areas studied
- Exhibit 7. Maps of areas studied
- Exhibit 8. Estimated 2009 construction costs
- Exhibit 9. Estimated 2010 construction costs
- Exhibit 10. Estimated 2011 construction costs
- Exhibit 11. Estimated 2012 construction costs
- Exhibit 12. Construction materials and employment expenditures by year
- Exhibit 13. Gross output of construction impacts by year
- Exhibit 14. Value-added construction impacts by year
- Exhibit 15. Total direct, indirect, and induced construction impacts by geographic region
- Exhibit 16. Construction and construction-related jobs created
- Exhibit 17. Annual construction and construction-related jobs metropolitan region and statewide
- Exhibit 18. Tenant mix by square feet
- Exhibit 19. Tenant mix by product or service
- Exhibit 20. Employment summary
- Exhibit 21. Operating impacts
- Exhibit 22. Construction-related sales taxes and income taxes
- Exhibit 23. Annual sales, taxes, income taxes, and property taxes

## **VI. Conclusions**

Corporate real estate executives and specialists should understand that the use of input-output modeling is both an art and a science. On the one hand, economists will focus on the empirical analysis of the modeling and often neglect to ask questions beyond their specific role. On the other hand, business executives will often look for one easily explainable impact multiplier or area economic impact contribution that shows the value of the corporation's development or expansion plans. Clearly, as this paper demonstrates, both input-output modeling knowledge and effective communication skills are required for corporate real estate executives to be effective in working with community and special interest groups.

The changing dynamics surrounding the development and expansion of corporate real estate projects demand more insightful research on project impacts. Future studies will face a higher level of public scrutiny and face opposition to certain projects. Good neighbor agreements and community benefit agreements are emerging as strong forces in the dynamics of community/corporate real estate relationships. This is especially true in projects with public incentives and those requiring regulatory changes.

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For corporate real estate, corporate/community relationship trends and issues defined in the following list will be critical to understand and effectively address in the future. Input-output modeling is a useful tool to address community economic issues and employment impacts associated with corporate real estate. The issues listed below will require a closer working relationship between corporate real estate, operations, management, legal, and administrative units in developing impact studies to address the needs and questions of decision makers and stakeholders.

#### *Corporate/community relationship issues*

- Living wage jobs.
- Displacement of residents.
- Mixed use projects.
- Displacement of local businesses.
- Job training programs.
- Brownfield remediation.
- Affirmative action contracting.
- Targeted hiring.
- Green building requirements.
- Cluster development.
- Space set asides for community needs.
- Good neighbor agreements.
- Traffic congestion.
- Community benefit agreements.
- Adaptive reuse of existing facilities.

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