Rethinking the Bottom Line: How Externalities of Private Development Impact the Value Proposition and Negotiation Process

by

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ABSTRACT: In assessing feasibility of a project, developers typically use a classic financial model Discounted Cash Flow (DCF) to forecast the private benefit that accrues to the developer and financial partners. DCF is a rational method to approximate the value of a deal, but the method neglects to recognize that developments are both private assets and also possess some qualities of a public good. Buildings in historic districts, along cultural trails or art corridors are clear examples, but most developments share similar attributes that many individuals, beyond the building's users, enjoy. Most developers already understand this concept intuitively, but one of the goals of this thesis is to create tangible tools to be used in the development/redevelopment process to capitalize on undervalued projects or elements of a project and in a timeframe that is socially optimal. Making these "intangible impacts" explicit will not only help developers identify undervalued projects, but may prove a powerful argument in negotiations with city officials and with capital partners. One of the contributions of this work is to bring disparate bodies of literature together and relate them to the larger questions of total property value and the optimal allocation of scarce resources in real estate.

Thesis Advisor: Lynn Fisher
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This thesis is dedicated to my parents who are forever supportive and loving.

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OVERVIEW

In assessing the feasibility of a project, developers typically use a classic financial model—Discounted Cash Flow (DCF)—to forecast the private benefit that accrues to the developer and financial partners. DCF projections are based on underlying market conditions, demographics, product demand, zoning requirements, programming decisions and investor's criteria. Developers and financial partners expect to be compensated with a commensurate level of return for the costs and risks assumed through a deal. DCF is a rational method to approximate the value of a deal, but the method neglects to recognize that developments are both private assets and also possess some qualities of a public good—qualities that are nonrival and non-excludable. Buildings in historic districts, along cultural trails or art corridors are clear examples, but most developments share some similar attributes that many individuals, beyond the building's users, enjoy. While some developers may intuitively understand that there is social value inherent in these projects and in many cases name these non-market values, there is not often an attempt to leverage this additional value. In some cases, this lack of explicit recognition of total value makes riskier projects untenable—as total private returns do not seem great enough to compensate the costs of the project.

Municipalities mitigate both the negative impacts of development and encourage development where significant social benefit may be realized.[1] While sometimes successful in these pursuits, government intervention is not entirely efficient—as there can be information and coordination problems and administrative and compliance costs that result in an inefficient allocation of

[1] Miles, M. E., G. Berens, et al. (2000). Real estate development : principles and process. Washington, D.C., Urban Land Institute.

resources. In addition, where social value is greater than private value, public entities may be required to contribute financially to a private project to make if feasible. There is, however, another force beyond governmental intervention that may help to moderate the problem of under-supply or underinvestment. Socially responsible investors are actively seeking projects with growth opportunity and social benefit. Many of these investors are not only acting in the interest of "social good," but ultimately base the decision to invest on the economically grounded net present value (NPV) decision rule. To accommodate "total" return and "total" value, these investors use a modified DCF model that quantifies both social and private value. The model projects future benefits that accrue to a wider public as opposed to simply projecting future cash flows that accrue to the investor/owner alone.

This modified DCF tool is relevant to real estate because it makes benefits and costs of a project transparent and creates greater parity of information during negotiations with municipal bodies and capital sources. Municipalities recognize "intangible" social benefits and developers should also identify exactly what kinds of benefits or costs they are producing through a real estate project. Socially minded capital partners will also expect that the developer has some fluency or ability to name the kinds of social benefits of a project.

While this work will be beneficial to many of the stakeholders involved in real estate development, it is intended for real estate developers, in particular. Developers have a tremendous opportunity to invest in projects with potential for significant social benefit and to realize total value if convinced that the traditional metric is not a complete estimate of project value. Some developers already understand this concept intuitively, but one of the goals of this thesis is to create tangible tools to be used in the development/redevelopment process to capitalize on undervalued projects or

elements of a project and in a timeframe that is socially optimal. Making these "intangible impacts" explicit will not only help developers identify undervalued projects, but may prove a powerful argument in negotiations with city officials and with capital partners. City officials will be much more likely to work with a developer when there is a clear explanation of the social benefits of a project. What's more there are now capital sources that seek projects with growth potential and social benefit. If a developer can leverage the capital of social investors, understand their benchmarks and return objectives (i.e. the total return beyond the bottom line), then he/she will have a broader source of capital with which to invest in undervalued projects.

The economic problem enumerated above cuts two ways, this study will focus on one side of the issue: the under provision of socially beneficial projects or elements of a project. The problem of over-provision of socially undesirable qualities is equally important, but is not the focus of this discussion. The choice serves the ends of this study—which is to paint a very clear picture for developers that undervalued opportunities can be both good for the pocket book and the community and that there are people out there willing to invest.

Germaine to the argument set forth in this study is an explanation of key terms. The concept of "total value" sits at the crux of the argument and is informed by several bodies of literature, including economics and finance. It is defined here as:

Total Social Value =	*Private Value (1) + Value of an Asset to Non-Owner (2) + Non-Excludable, Non-Rival Intangible Value (3)*

One, "private value" (1) is the market value of an asset to direct users of a space and is simultaneously the payoff to developer—in the form of the Present Value (PV) of the future stream of rents.[2] This value is well represented by the DCF model. Two, "indirect value of an asset to non-owner users" (2) is the market value result of a project that has unintended benefits/drawbacks accruing to surrounding properties, the city, etc. For example, a new development program that includes a two acre park will benefit abutting property owners and, once built, is priced into the residual value of the land.[3] These impacts are sometimes carefully documented by consultants and specialists to understand the cost and benefits to a municipality (e.g. fiscal impact, traffic studies, school children generation, etc) and are often reflected in land values. Third, there are non-market values (3) that do not accrue to the owner/users of a space alone; these externalities can of course be positive and negative, but again this study will focus on the non market positive impacts.[4] These are projects or elements of a project that relate to the economic, cultural/social and other non-excludable impacts. At present, real estate best practice does not account for this third piece of the "total value" pie; however, it is acknowledged by social investors and, to some degree, by municipalities. It is from this assertion that the thesis proceeds to look at each of the three elements of total value in more detail as related to current real estate best practice. Again, the

[2] Geltner, D. and N. G. Miller (2001). Commercial real estate analysis and investments. Australia ; Mason, Ohio, South-Western Publishing.

[3] "Economic rent of a good is the portion of the price that does not influence the amount of that good in existence…It is a necessary valuation for allocating the good to the highest-valued competing uses. Any lower value would fail to clear the marker supply among those who want some at its current price. Economics long realized that some prices, although not affecting the amount in existence, did affect the particular use the good was allocated." Alchian, A. A. and W. R. Allen (1964). University economics. Belmont, Calif.,, Wadsworth Pub. Co.

See literature on economic rent and hedonic regression analysis.

[4] Non-market positive externalities will alternatively be referred to as "intangible value" or social goods. This term will be described in more detail in Section IV.

intention is to illustrate that the recognition of intangible value can make "riskier projects" more feasible.

One can argue that most real estate projects have some aspect of a public good—if only because one can experience the façade and landscaping of a property in a way that is non-rival and non-excludable.[5] This thesis, however, focuses on specific developments: urban infill, redevelopment, and restoration projects as well real estate located in under served or economically depressed areas. These kinds of opportunities are emphasized for four reasons. One, these developments have a higher marginal growth opportunity because they are the furthest from the true market value; two, these projects demonstrate the greatest potential to achieve full market value; three, these projects offer an opportunity to substantively revitalize a community through a kind of economic multiplier effect; and four, because the confluence of these three pieces can result in the realization of more intangible values, such as community identity, neighborhood imaging, and shared experience value—that is, fostered "cultural identity and social understandings."[6] There are clearly many developers investing in these "riskier" projects—just look at the resurgence in many US inner cities—for this reason this work is aimed at developers who consider such projects unfeasible. Furthermore, the idea is also to examine best practice and to continue to push the envelope of feasible private and public-private developments. This thesis will argue that there are capital sources that chase these kinds of development opportunities because of the long term growth opportunity and because of the social benefit. Municipalities also partner with developers to

[5] Again, the opposite could equally be true, that is, there could be negative externalities associated with the function or use of a building. For example, an abattoir will likely produce a nasty stench and a lot of waste products that will negatively impact the neighbors, but benefit the owner of the slaughter house.

[6] Sable, K. and Kling, R. (2001) "The Double Public Good: A Conceptual Framework for 'Shared Experience' Values Associated with Heritage Conservation". *Journal of Cultural Economics* 25: 77-89

realize the social benefits in these areas. If a developer can articulate the "total social value" of a project by valuing externalities to both municipal and non-traditional finance partners then there may be an improved allocation of scarce resources and an optimal level of public benefits realized.

One of the contributions of this work is to bring disparate bodies of literature together and relate them to the larger questions of total property value and the optimal allocation of scarce resources in real estate. Thinking about the non-market value of social benefits as a subset of the total value of a project will require multiple bodies of literature including: economics, real estate finance, real estate development policy and zoning, and cultural economics. Each of these bodies of literature will be used in support of this thesis and will be explained in greater detail as the argument progresses.

Section Overview

Section I of this study focuses on a familiar economic problem—the discontinuity between the private provision of a social benefit and the unmet demand for that benefit. In the case of real estate, the theory goes that a developer will never meet the demand for a social benefit because that benefit is not economically viable to produce at the socially optimal level. Governmental intervention is one way to correct this market inefficiency and this work will ask if the capital market is another force to incentivise developers?

Section II of the thesis focuses on real estate best practice and the current norms for evaluating project feasibility. The Discounted Cash Flow model as well as the fiscal impact study are explained. The role of the developer and capital partners will also be detailed. The important take home point from this section is that best practice neglects to account for intangible value.

Municipalities play multiple roles in securing public benefit through private development as well as mitigating negative impacts of development. In Section III the role of the government is explored--public private partnerships are a particular focus. The thesis seeks to understand under what conditions government makes a good partner to realize public benefits. And again asks if another "player" would improve the optimal provision of social goods?

In Section IV a new view on the bottom line is suggested. In this section, double bottom line (DBL) investing is defined. This section will also take an in depth look at some of the actors involved in socially responsible investing—ranging from public to quasi-private to private organizations. Section V seeks to accomplish two important things. First, a matrix of social indicators is compiled based on an analysis of the metrics used by social investors as well as cultural economists and economists. Second, a modified DCF model is presented. The model will be explored in some detail and limitations as well as benefits will be discussed.

To conclude, the general implications of this model and indicators will be assessed for relevance ot the real estate industry. Two questions are explored: are these models relevant on the ground, that is, can this model be packaged and used by developers to negotiate with municipal bodies to assume some of the additional cost to make the value proposition of undervalued projects more tenable; and to what degree can capital markets close the gap and improve market inefficiency observed in the real estate industry?

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In a market economy, developers are unwilling to assume additional costs for goods whose benefits are not solely enjoyed by the developer, despite the fact that there is demand for these goods. Who are the institutional actors that affect this situation to secure public goods through private development? How are benefits and costs typically claimed to achieve this additional value? Are there other forces that might act to incentivise developers to produce goods or assets that are publicly valuable?

Norman is a developer and owns several acres of downtown Boston property. He wants to maximize the development—making the buildings as massive and tall as possible so that he can capitalize on the amount of rentable square feet. He is concerned about landscaping in so much as it is a selling point for potential tenants; in areas of lower profile, he plans to invest minimally to improve the landscape. This area of the city has very little public open space and the city would prefer that Norman dedicate some of his land for the benefit of the municipality, but instead, he builds out the site as much as possible.

This scenario illustrates a situation that can befall many developments. It is an e xample of the disjunct between what is optimal for individual private interests and what is optimal for broader social benefit. The developer does not directly benefit in the near term from building a project with lots of public amenities—even though such a development would be widely enjoyed by the city. This is a classic problem in economics and has been enumerated by economists who write about the problems of social cost and the allocation of scarce resources. There are several reasons why a developer might not elect to build a project with associated social benefit. First, the developer may not build anything at all because the project represents a negative NPV deal when total private costs are netted against private benefits even though the social value of the project is positive (the NPV of total social benefits less total costs). Depending on market fundamentals and the kind of rents a project can command at time zero, a developer may also decide to exercise his

option to wait. Meanwhile, a municipality would prefer that the development begin now because the social value of the project is positive (as in the case of Norman Developer's project). Finally, if a project is feasible from the developer's point of view, it may be the case that he does not incorporate all of the socially desirable features in a project because those features imply additional costs that are not associated with sufficient private benefits to warrant their inclusion. In all three cases the developer "under-supplies" the good which is socially desirable.[7]

Public goods

Public goods are "socially valuable commodities whose provision cannot be financed by private enterprise, or at least not at socially desirable prices."[8] A public good has non rival and non excludable benefits—benefits are indivisibly spread among the entire community, whether or not individuals desire to purchase the public good.[9] These unique qualities make the provision of public goods susceptible to market inefficiencies.

There are important implications with regard to public goods. First, public goods are not excludable—anyone can enjoy their benefits without incurring the cost. For example, if Norman Developer spends $10 dollars on a rose garden, passersby are able to enjoy it at no cost. While Norman may want to charge people for enjoying this pleasure, no one would be willing to pay for something that they can enjoy for free. Norman, the private developer, has no incentive to provide

[7] Over supply can also occur if developer does not bear the full cost of production, but all benefits accrue to developer. Thus an over supply of some element of the project results that is not socially desirable and is indeed a negative externality.

[8] Baumol, W. J. and A. S. Blinder (1991). Microeconomics : principles and policy. San Diego ; London, Harcourt Brace Jovanovich.

[9] Ibid.

, Samuelson, P. A. and W. D. Nordhaus (1998). Economics. Boston, Mass, Irwin/McGraw-Hill.

this service at cost to himself alone. Private entities do not often give away such services or experiences for free, thus the provision of public goods is left to the government. The second important implication of a public good is that it cannot be exhausted by an additional user. The marginal cost of an additional user is zero—which is one of the basic tenets of a public good: anyone who wants to use them is able to without cost. Any price above zero would discourage people from using a public good which would be inefficient as the marginal cost of an additional user is zero.[10] In summary:

> It is usually not possible to charge a price for a pure public good because people cannot be excluded from enjoying its benefits. It may also be undesirable to charge a price for it because that would discourage some people from benefiting, even though using a public good does not deplete its supply. For both of these reasons, government supplies many public goods. Without government intervention, public goods simply would not be provided.[11]

This phenomenon can be represented by the following graphic.

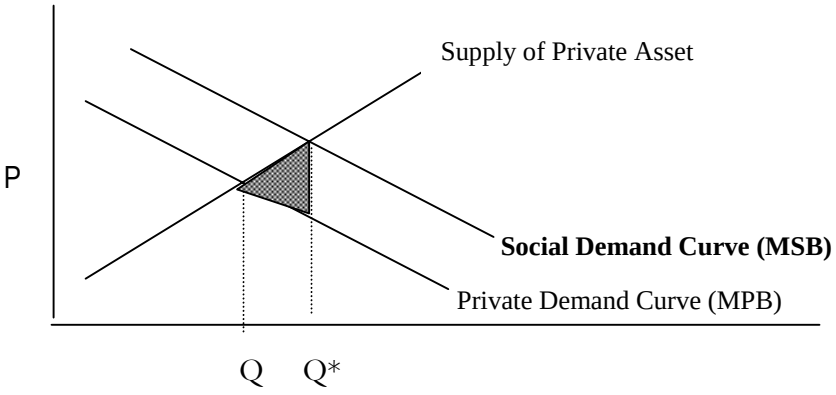

Figure: Positive Externality

[10] Baumol, W. J. and A. S. Blinder (1991). Microeconomics : principles and policy. San Diego ; London, Harcourt Brace Jovanovich.

[11] Ibid.

The positive externality is created because the marginal private benefit (individual's demand curve) is less than the marginal social benefit (society's demand curve). Therefore, society would like a quantity Q*, while the individual would prefer quantity Q. Imagine an individual bears the costs of fireworks in the park that anyone in town can come and see. Demand for this benefit will be great and unless the individual can charge admission to the park there is no incentive for the "show to go on." The opposite is also true: there can be over production of a good that exceeds the social demand curve. Pollution is often cited as an example. Producers of coal create an energy source, but the byproduct is a pollutant that affects non-users of this product.

It should be clear from the above equation that the private value (1) to an individual is represented by the MPB curve. That is, a private developer (MPB) will not meet the socially optimal demand unless some other force (s) intervenes. And indirect value (2) and intangible value (3) are represented by the social demand curve.

Total Social Value =	*Private Value (1) + Value of an Asset to Non-Owner (2) + Non-Excludable, Non-Rival Intangible Value (3)*

It is not in the best interest of the private individual to provide the optimal social value because there is greater marginal cost associated with such provision and not enough marginal benefit. In a free market system, *devoid* of other regulatory forces, all plays are made and defined by private individual's interest. That is, part (2) and (3) are not realized unless another entity intervenes. Of course, in the real estate industry, government does intervene to secure some benefits from private

development. There are regulatory groups that shape the boundaries of development and ensure that total social value is optimized as much as possible.

The landscape of actors involved in real estate development is varied from private developers, to financial partners, to public partners (as in public private partnerships), to city planners, to neighborhood interest groups. The chart below lays out some of the key players who have some interest in a project, either directly or indirectly.

Who benefits? Who pays? Who cares?[12]

Stakeholders	Direct	Indirect
Those who enjoy some direct private (excludable) benefit from the asset under consideration.	Developer and Partners (Private financial partner or public municipal partner)	If developer partners with public muni partner→ developer and neighborhood community
Those who enjoy some beneficial externality or (non-excludable) public good benefit from the asset.	Owners and users of the asset	Neighboring properties and developer
Those who bear some direct cost associated with the asset, for example through contributing personally to the cost of upkeep, renovation and so on.	Developer and tenants (if NNN lease)	Public partner
Those who bear part of the cost of upkeep, renovation and so on, when that cost is borne collectively, for example through tax expenditures.		Neighboring community, public partner
Those who assume or are charged with the responsibility of making decisions relating to a particular asset or to policy influencing that asset more generally.		City planners, and other municipal agencies

While it is difficult to predict with great accuracy the true socially optimal level of public benefits,[13] striving to achieve the most efficient allocation of resources makes good economic sense. The

[12] Hutter, M. and I. Rizzo (1997). Economic perspectives on cultural heritage. New York, St. Martin's Press.

This chart is based on the work of the cultural economist, David Throsby.

actors mentioned above are important forces in achieving greater public benefits. The following two sections will look more closely at the way in which a developer and traditional capital partner determine project value and also the role of municipalities to achieve greater social value.

Let's return to the earlier scenario regarding Norman Developer. Recall he had the option to build out the entire development parcel or to create a public amenity, in this case a park. The earlier scenario at the beginning of this section hypothetically posited that Norman built out the property, but in reality this mysterious Norman is actually the visionary Norman Leventhal, founder of the Beacon Companies.[14] Leventhal purchased the vacant Federal Reserve Bank of Boston located in downtown Boston in the early 1980s. He renovated the building as the Hotel Meridien (now the Langham hotel) and also bought an abutting office tower. His investment in this project was considered speculative by many in the industry given market conditions at the time, however, the national spotlight focused on another aspect of the project. Along with the purchase of the Federal Reserve building, Leventhal also controlled a two-acre parcel "improved" only by a concrete parking structure. Instead of building another office tower or hotel on this site, Leventhal, with the support of business and civic leaders, razed the structure and developed a seven level garage as well as a first class public park.[15]

Today, the "park below, park above" slogan describes the amenities of the site well and is incredibly popular with commuters and the downtown office community. Many credit Leventhal's

[13] And there are many cases in which municipal exactions have made projects economically unfeasible. There is legal precedent (*Penn Central v New York City 1978, Dolan v City of Tigurd 1994, Lucas v South Carolina Coastal Commission 1992, Tahoe Preservation Council v Tahoe Regional Planning Agency 1992*) based on the Fifth Amendment, that states that "private property shall not be taken without just compensation."

[14] Urban Land February 2005. The Beacon Companies is a Boston-based real estate firm that develops and manages office buildings, hotels, and housing.

[15] Ibid

vision, along with the support of the business and civic communities, with turning around the financial area of downtown Boston and with creating an invaluable asset for the City of Boston in the form of the Park at Post Office Square.[16]

Why is Norman Leventhal any different than average Norman Developer mentioned earlier? Why would Norman Leventhal consider dedicating so much valuable land for *free* public enjoyment? There are several economic reasons. For example, the office building and hotel benefit from the cachet associated with the Post Office Square address and the park front property is priced into the value of the land. There are also political reasons. This project has sealed Leventhal as a friend of Boston and will likely improve relationships with key city officials (i.e. planning body and permitting agencies). But there are other intangible benefits that Leventhal clearly recognized. The Post Office Square project was a decisive force in the revitalization of downtown Boston—at a time when few others were willing to take on such a risky project. The Park also created an identifiable symbol for Boston. More than a marketing scheme, Leventhal valued the intangible benefit of the park and appreciated that these "soft" benefits would impact the bottom line over time.

Unfortunately, Norman Leventhal alone cannot change the way in which developers value projects. Beyond visionary developers, there also needs to be institutional bodies in place to act in the interest of social good, or at least to bear it in mind. The following two sections will look more closely at the way in which total value is achieved by developers and traditional capital partners and the ways in which municipalities operate to achieve optimal social goods. The question will then be asked, are there other institutional forces that might also impact real estate development to generate similar benefits as the municipality?

[16] Post Office Square website: http://www.posquare.com/services.html

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Developers forecast private value (1) and indirect value (2), but this is only a piece of the "total social value" equation—many social benefits (and costs) are excluded. Some developers may intuitively understand that there is additional value being created, but there are few institutional forces in place to encourage the recognition and optimization of these benefits and to assume some of the necessary cost to claim this social value. Most developers do not realize that there are other sources of financing that move beyond the DCF analysis to think more broadly about growth opportunities. This section will look at real estate best practice and suggest other institutional forces—municipalities (writ large and as public partner) and a segment of the capital markets (social investors)—that act in the interest of social good.

Financial analysis is an important decision-making tool to determine the shape and quality of a real estate development. The analysis is based on several key inputs: market data, capacity analysis, and prevailing construction costs. In assessing project feasibility, developers look to market fundamentals—vacancy rates, absorption, rent per square foot—zoning requirements—height restrictions, set backs, FAR, permitted use—and construction costs—cost of steel, underground parking—to generate a series of future projected cash flows. These are net cash flows that are a private benefit and accrue solely to the developer/owner and financial partners. Current real estate best practice suggests that the classic Discounted Cash Flow (DCF) analysis is an adequate financial tool to determine feasibility. This chapter highlights the "nuts and bolts" of the DCF model, emphasizes key inputs and resulting outputs, and, finally, outlines the benefits and limitations of the model—especially when applied to key cultural/social projects.

The "discounted cash flow" model is just that—the model projects a future stream of net cash flows from a property and discounts these cash flows back to time zero. As such, DCF can be parsed into two steps: generating net cash flow stream and determining the appropriate opportunity cost of

capital.[17] The first analytical step is based on a series of inputs such as market data, zoning requirements, and construction costs. The projected costs of the development, hard and soft costs, are deducted from the projected benefits. The net cash flow accruing to the developer is then discounted back to time zero. The second analytical step is to arrive at an appropriate discount rate with which to discount the cash flow. Professor David Geltner, a real estate finance expert, outlines several methods for determining discount rates which will be discussed shortly, but first, there will be an analysis of the cash flow inputs. The DCF model is well represented by a simple equation that accounts for net cash flow in the numerator and the appropriate discount rate in the denominator.[18]

$$V_0 = \frac{E_0[CF_1]}{1+E_0[r]} + \frac{E_0[CF_2]}{(1+E_0[r])^2} + \Lambda + \frac{E_0[CF_{T-1}]}{(1+E_0[r])^{T-1}} + \frac{E_0[CF_T]}{(1+E_0[r])^T}$$

See Geltner, Commercial Real Estate and Investments

Where:

CF= net cash flow generated by property in period t
V_t= Property value at end of period "t"
$E_0[r]$ = Expected average multi-period return
T= Terminal period of holding period.

Notice that this equation projects *expected* future cash flows. The cash flow inputs and outputs will be enumerated in more detail, as will the discount rate.

[17] Geltner, D. and N. G. Miller (2001). Commercial real estate analysis and investments. Australia ; Mason, Ohio, South-Western Publishing.
[18] Geltner, D. and N. G. Miller (2001). Commercial real estate analysis and investments. Australia ; Mason, Ohio, South-Western Publishing.

Questions to Ask to Generate Key Inputs for Pro Forma Analysis

1. Preliminary Site Assessment:

Is this site appropriate for development? What are the physical limitations of the site: size, configuration, environmental conditions? What are the lessons to be learned from the previous work done by the BRA, developer, or neighborhood groups?

2. Market analysis:

Considering economic conditions, relevant sales data, and other industry sources, what is the optimal mix and amount of uses that can be marketed at this location? What are the going rents/sales data for these product types? What is the market being considered?

3. Zoning/entitlement process and municipal programs:

What is the required public process? Where is the site in terms of entitlement process? What are the implications of zoning on development of the site?

4. Capacity analysis/development scenarios:

What is the optimal configuration and mix of uses to create the highest and best use given zoning/physical conditions? Are there land assemblage/optimum configuration/gaming issues-in terms of developing 1st, 2nd, 3rd. Potential physical programs based on optimal use will be developed. Also, a construction timetable will be thought through based on programming decisions.

5. Financial Analysis:

Using a DCF model, do the inputs generated by the previous analyses make financial sense? If no, go back and rethink the program and mix of uses. If yes, build.

Figure: Schematic of Development process to determine key inputs.[19]

The above schematic paints an overall picture of the early stage of a development project, including decision-making points and determination of project feasibility. The resulting model inputs are relatively straight forward. Developers conduct market studies to estimate the economic trends that will impact the potential gross income of the property, vacancy rates, and time to absorption of units or square footage. This information is gathered across several product types: office, retail, hotel, residential; class of space: class A/B/C office, luxury/market/affordable housing; and varied levels of ownership: for sale or rental. These inputs are used by developers to optimize the final program such that profits will be maximized. Often times, in the case of mixed use development, relevant product types will not be excluded because of a poor market. Rather it will be included in the overall program and be phased in the later stage of development. That is, it will be built at a later date when the market has improved.

While the programming decisions are very much based upon market fundamentals, there are other considerations as well. For example, the developer may have a particular expertise in one product type and thus have a competitive advantage in that area. Steve Karp, of New England Development—a Boston development firm specializing in retail—is an excellent example. He has cultivated a particular expertise in retail development and understands how to maximize profits, make a project run efficiently, and keep a strong customer base. As such, Karp would maximize the amount of retail on any project he considers. Steve Karp is involved in a large development in South Boston's Fan Pier. He along with his partners, The Related Companies and Boston

[19] This model is based on the development process taught in the spring of 2004 in course 11.303 *Real Estate Development* at MIT.

Properties, placed a bid of $2.5 million on the 21 acre site controlled by the Pritzker family. An individual involved in the Fan Pier deal candidly said that the New England Development team allowed the period of consideration to lapse because the partners involved could not agree upon the right mix of uses. The site is permitted for 134,420 square feet of retail space and it is rumored that Karp wanted more retail permitted on the site. Unwilling to go through the long permitting process again, New England Development's partners backed out of the deal leaving the $2.5 million dollars on the table.[20]

Another very important consideration is zoning and the entitlement process. Entitlement is critical to development feasibility because it impacts the extent of development—height, building setbacks, FAR. As discussed in Section I, these requirements can make or break a project unless deals can be negotiated to make the project desirable from the municipality's perspective and from the developer's perspective. In the case of Boston, the entitlement process can take years and can be quite costly both in terms of soft costs and opportunity costs. There are several layers of federal, state, and local government agencies that must approve the design, amount of space, parking, open space allocation, etc. In the case of Fan Pier there were eighteen layers of approval to maneuver through before the site was permitted for three million square feet of space; it took almost 20 years to be approved.[21] With that kind of process, a site that is already permitted is quite valuable. But an undeveloped and permitted site is ideal and developer's need to account for the opportunity cost of the permitting process depending on the municipality or town.

[20] Palmer, T.C. "Karp team won't buy Fan Pier for 2D time in less than two months, a deal for site fails." Boston Globe: November 9, 2004.
[21] Voorhis, S. V. "Fan Pier lot may get cut into pieces." Boston Globe: November 16, 2004.

Finally, the DCF method also accounts for the hard and soft costs of development such as, construction costs, environmental remediation, permitting, tenant improvements, leasing commissions, etc. Some of these costs might be absorbed by the tenant as negotiated in a net, net, net lease (NNN), but if a development is done speculatively without a pre-signed tenant then these costs will also be projected.[22] These cash outflows are subtracted from cash inflows—net cash flow from rent—the resulting residual value is the amount that can be offered for purchase of the land if the developer does not own the land, otherwise the residual value is the profit accruing to the developer alone. The figure below is a portion of a developer's *pro forma.* Cash inflows are marked in black, cash outflows in red.

Projection of Property Before Tax Cash Flow				
		Purchase Price	Jan-02	Feb-02
Gross Rental Revenues				
AGI			$125,000	$125,000
Margolis			$52,083	$54,688
Margolis			$41,667	$41,667
Expenses to AGI				
Less TI			($25,000)	$0
Less Leasing Commissions			($174)	($174)
Profit Margin from Sublet			($14,757)	$12,847
Sublet profit to Landlord assuming 50% split			$0	$6,424
Effective Gross Income			$177,083	$186,111
Total Revenue	$2,260,676			
Expenses				
Less Operating Expenses			($41,667)	($41,667)
Less Property Taxes			($29,167)	($29,167)
Property management			($3,542)	($3,722)
Other			($500)	($500)
Total Expenses	($829,880)		($74,875)	($75,056)
Net Operating Income		$15,000,000	$102,000	$111,000
Purchase Price				
Year Total Net Income				
Reversion	$1,430,000			
Property Before Tax Cash Flow		($15,000,000)	$102,000	$111,000

Figure: Partial pro forma showing monthly cash flow.

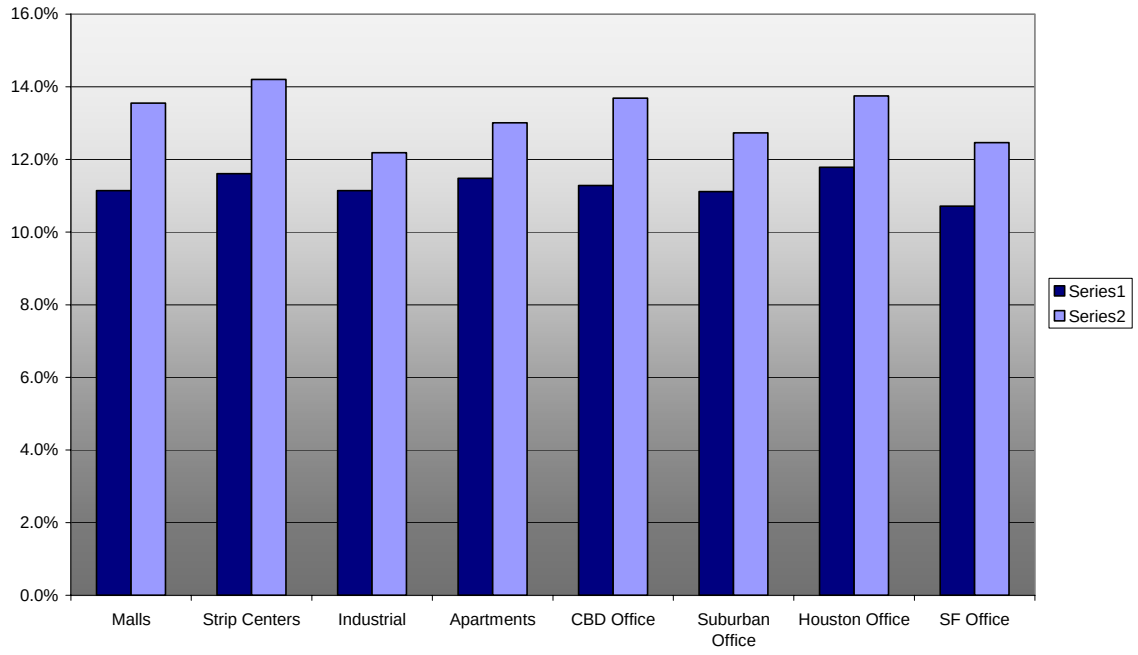
[22] Geltner and Miller 2001

Discount Rate

The discount rate—or going-in IRR—is the number in the denominator of the valuation equation in the DCF equation. The discount rate can be represented as the risk free rate of return plus the risk premium. The riskfree rate is measured as the return on 10 year T-Bills because most real estate investors have a 10 year projection period and T-Bills are government backed and, therefore, very unlikely to lose value as a result of default. The risk premium corresponds with the risk in the projected cash flows in the numerator. Ideally, these cash flows will be separated to indicate the varying kinds of risks inherent in the product type, phasing, etc. However, more typically, there is one blended rate that is used to discount the cash flows back to time zero.

The discount rate is also the opportunity cost of capital—that is, the rate of return investors could earn on other investments with similar risk profiles. Thus a discount rate of 12% might be similar to the return on an investment portfolio, and the risk would also be commensurate in both cases. The result is that for projects of mixed use—discount rates will vary. The Korpacz survey is a useful measure of how investors total return expectations change with different product types and locations. A good example is the result from the 1999 1st quarter survey illustrated below. The product and location is not only important for cash flow, but also helps to determine the appropriate risk and return.

Investor Total Return Expectations for Various Property Types
(Source: Korpacz Investor Survey, 1st Quarter 1999)



	Malls	Strip Centers	Industrial	Apartments	CBD Office	Suburban Office	Houston Office	SF Office
Institutional	11.1%	11.6%	11.1%	11.5%	11.3%	11.1%	11.8%	10.7%
Non-institutional	13.6%	14.2%	12.2%	13.0%	13.7%	12.7%	13.8%	12.5%

NPV Decision Rule

The DCF model is a powerful investment decision tool when combined with the net present value (NPV) decision rule. Net present value is the present value of the benefit (to the investor) minus the present value of the cost.

$$NPV = PV(Benefit) - PV(Cost)$$

Again, the present value is determined by discounting the cash flow back to time zero, using a discount rate that is appropriate to the level of risk in the investment. As David Geltner explains, a solid microlevel investment decision is based on maximizing the NPV across all mutually exclusive

alternatives and never choosing an alternative that has an NPV less than zero.[23] The objective is to maximize the developer's wealth—choosing the project that will put the most money in her pocket. Alternatively, the developer may have a particular hurdle rate that each investment must meet or exceed. The hurdle rate decision rule is to "maximize the difference between the project's *expected* IRR and the required return and also to never do a deal with an expected IRR less than the required return."[24]

Limitations of the DCF

The Discounted Cash Flow model is quite good at approximating the financial feasibility of a project as of time zero. The model is popular among developers. It is simple to use and easy to understand and requires the developer to be aware of her decision criteria—such as the cap rate that the property is likely to sell for 10 years in the future. While DCF is a good property valuation method, there are also drawbacks. Professor David Geltner recognized an inherent weakness in the DCF model—something he has termed "GIGO," garbage in, garbage out. The idea is that inaccurate or unrealistic inputs—inflated rent roll projections, capital improvement expenditures are projected to be too low, the discount rate is too high—can go undetected. Mistakes in both the numerator and denominator of the valuation equation can cancel one another out, thus the mistakes go unnoticed. Also, the DCF is limited in terms of valuing optionality.[25] Developers, who own an unimproved piece of land, have the right but not the obligation to build today. The DCF simply projects cash flows from time zero, but it does not allow one to understand the trade-off involved in waiting to develop. And, importantly, DCF does not account for the costs and benefits

[23] Geltner and Miller 2001.
[24] Ibid, p230. Note: when comparing two projects, if the NPV decision rule yields a conflicting result with the hurdle decision rule, then the NPV decision rule always takes precedence.
[25] Ibid.

that impact everyone else. The DCF model and the NPV decision rule are structured to give the developer a sense of the best wealth maximization strategy from the project. Finally, because the benefits of a project are worth more today than they are tomorrow, it is difficult to "vision" the future and plan for long term growth. The DCF analysis is somewhat short sighted in this sense.

Using the discounted cash flow method, developers can accurately quantify the private cost and benefit of a development and, also, make decisions between investing in one of two projects based on the NPV decision rule. However, many developers are less sophisticated when it comes to articulating the social cost and benefit of their project to the wider community—this is something that is not projected by the DCF, but is relevant. To ameliorate this, fiscal impact, traffic, and environmental studies are often commissioned by developers to determine the cost of a project to the community as well as the benefits. But these analyses do not quantify important benefits that impact both the public good and the developer in the long term—such as the long term benefits of revitalization. For example, in a typical fiscal impact study level of service usage, traffic increase, school children generation, and environmental impact would be counted among the costs while increases in the tax base would be chief among benefits.[26]

Looking back at the initial assumption about "total project value" it is clear that developers are forecasting private value (1) and indirect value (2), but this is only a piece of the total project value—many social benefits (and costs) are excluded. While some developers may intuitively

[26] Burchell, R. W. and D. Listokin (1978). The fiscal impact handbook : estimating local costs and revenues of land development. New Brunswick, N.J., Center for Urban Policy Research.
, Burchell, R. W. and D. Listokin (1980). Practitioner's guide to fiscal impact analysis. New Brunswick, N.J., Rutgers University, Center for Urban Policy Reserch.
, Burchell, R. W. and Urban Land Institute. (1994). Development impact assessment handbook. Washington, D.C., Urban Land Institute.

understand that there is additional value being created, there are few institutional forces in place to encourage the recognition and optimization of social value. Traditional sources of capital are one force to incentivise developers to recognize this value, however this will not trump other decision points such as, return, financial viability of the developer/partner, and growth potential which are paramount to any social benefits of a project. Very few developers realize that there are other sources of financing that are moving beyond the DCF analysis and that are thinking more broadly about growth opportunities. This study will look at two institutional forces, municipalities (writ large and as public partner) and a segment of the capital markets (social investors) that act in the interest of social good.

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> *Municipalities use a variety of tools, such as incentives and regulations, as points of leverage to achieve greater net benefits in underinvested areas. In many cases, city government partners with private developers to achieve these ends and assumes some of the associated costs with creating social value, but there are inefficiencies related to government intervention.*

Recall the earlier discussion in Section I regarding the under provision of a social good despite the demand for that good. This idea is represented by the following graphic:

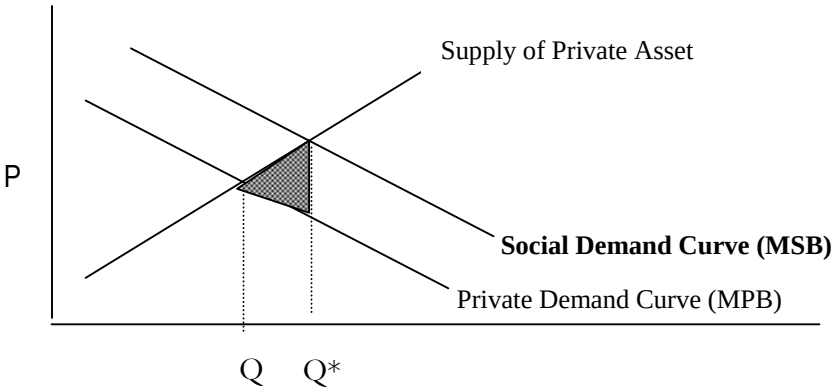


Figure: Positive Externality

In this case, the socially optimal level of public good is not reached and will not be reached unless there is some intervening force. Since the early 20th century, government has been the usual candidate to guide the private development process and ensure that the public interest is well represented. Land use lawyers, Robert Wright and Morton Gitelman, note:

> In the early part of the 20th century, municipal governments were legally imbued with the power to regulate development and with the power to require the private provision of public goods. The validity of such authority is predicated upon police power—"*the power to regulate for the advancement and protection of health, morals, safety or general welfare of the community*"[27]

[27] Wright, R. R. and M. Gitelman (2000). Land use in a nutshell. St. Paul, Minn., West Group.

Most states enacted enabling legislation in the 1920s and 1930s in the US.[28] And while the work of municipalities is important for safeguarding public interest, there are limits to police power. For example,

> [if the use of this power] is unreasonable, arbitrary, and capricious…if it deprives the property of all or practically all reasonable economic use, then it will be invalidated on the basis that it is unreasonable and that it constitutes a taking of the property without just compensation.[29]

There is an extensive history of legal precedent regarding land use cases. Many of these cases address the murky line between municipal actions that are "*for the advancement and protection of health, morals, safety or general welfare of the community*" and municipal actions that render a site economically unviable as a result of exactions and impact fees—in other words a "private property taking" as described under the Fifth Amendment. While this is not the place to discuss these cases in detail, the legal issues are quite relevant to understanding government's role.

There are myriad tools of governance (Hood 1983; Salamon 1989; Schuster and de Monchaux 1997) ranging from government subsidy, incentive, legal ordinance, information campaigns, and definition of property rights, regulation, grants, loans, guarantees, tax expenditures, social regulation, and government enterprise. Until the 1970s, the public and private sector had distinct roles in real estate development in the US. The public sector acted as the regulator of private development and the provider of needed facilities and infrastructure—i.e. providing the necessary maintenance of roads, sewerage, and sanitation, operating schools, and supplying fire and police protection.[30] Private developers determined appropriate market conditions for development or

[28] Ibid
[29] Ibid
[30] Sagalyn, L. in Miles, M. E., G. Berens, et al. (2000). Real estate development : principles and process. Washington, D.C., Urban Land Institute.

acquisition. Under this scenario, the public did not assume risk related to a project and as a result had little control in regards to as of right development.[31] However, in the 1970's a new development paradigm emerged in the United States.[32]

Conventional public sector involvement in the development process expanded as the state began to view development as a strategy for revitalization.[33] During the 1970's, cutbacks in federal urban aid forced municipalities to consider other forms of revenue to fund local programs. Raising new taxes or getting voter approval for new bond issues was a political risk that many city officials were unwilling to take and municipal land holdings became increasingly more appealing. Land values rose in many cities during the 70's development became a strategic resource for municipalities in a time of fiscal conservatism. Land holdings were used to revitalize downtowns, capture hidden land values, finance needed infrastructure, stimulate economic growth, and create local jobs.[34] Eceeeonomist Timothy Bartik understands this strategy,

> Net benefits of economic development policies are most likely to be positive in areas of high unemployment and for programs that have large effects on business location, expansion, and start-up decisions per dollar of government spending.[35]

Municipalities began to use ownership, incentives, and regulation as points of leverage in attracting private partners to invest in development deals. Urban economist Lynn Sagalyn sums the tools of

[31] Ibid
[32] Ibid
[33] Sagalyn, L. in Miles, M. E., G. Berens, et al. (2000). Real estate development : principles and process. Washington, D.C., Urban Land Institute.

[34] Ibid
[35] Bartik, T.J., 1991, *Who Benefits from State and Local Economic Policies*, W.E. Upjohn Institute for Employment Research: Kalamazoo, MI.

government well; the matrix below details the kinds of specific tools considered under each of these four categories.[36]

Direct Financial Assistance Land Assembly—Acquisition; Demolition; Relocation; Write-downs Capital Improvements—Infrastructure; Parking garages; Open space and amenities; Programmatic facilities Grant Assistance—Cost sharing of private improvements; Payment for predevelopment studies Debt Financing—Direct loans; Below-market interest rates; Credit enhancements	Indirect Financial Assistance Zoning or density bonuses; TDR; Transfer air rights; Regulatory relief from zoning and building codes; Reduced processing time for project approvals; Quick take by eminent domain; Design coordination in public/private projects; Below-cost utilities if publicly owned; Arbitration of disputes that might arise; Governmental commitments to rent space
Financing Strategies Intergovernmental grants— Community development block grants Local Debt Financing–General obligation bonds; Revenue bonds; Industrial development bonds Off-budget financing—Lease/purchase agreements; Ground leases; Land/building swaps; Property tax abatements. Dedicated sources of local funding—Special district assessments; Tax increment financing; Earmarked sales or special-purpose taxes	Enhancing Risk/Return Preferences Reduce capital costs; Absorb demands for new and improved infrastructure; Lower operating costs; Increase opportunity for development; Reduce debt service burden, reduce predevelopment risk of approval; Enhance availability to private capital

Figure: Government tools as outlined by Sagalyn 2000

While the matrix is by no means exhaustive, it gives a sense of the kinds of public involvement in public/private development. The range of tools at the disposal of a municipality is extensive and allows for sophistication in choosing the rights tools for the project. Some of these tools will be explored in more depth in the London Docklands and Barcelona case studies. In both examples, the success and shortcomings of the government intervention are highlighted.

Public private partnerships differ from private development in several distinct and important ways. First, agreements between private firms and the public sector specify terms and conditions of

[36] Miles, M. E., G. Berens, et al. (2000). Real estate development : principles and process. Washington, D.C., Urban Land Institute.

development and involve the private sector in the public planning process much earlier than is normally the case. Second, limited public resources are used to entice larger amounts of private capital to benefit community and economic development. As a result of the commitment of public funds, there is demand for public accountability and a greater level of transparency. The public expects commensurate returns for the financial risks assumed in a deal. Third, the involvement of the public sector creates a much more complex process—for example, communicating financial language in plain terms requires more time and energy on the part of public officials and may demand an uncomfortable level of transparency from the private partner. And finally, public goals—such as affirmative action, hiring local labor, negotiating designs with the community—must be considered as well as private objectives.[37]

In what follows, two cases of public private partnerships will be explored to illustrate two very different ways to invest in economically depressed areas and ensure public benefits. The London Docklands case is an example of market driven redevelopment, while Barcelona is an example of redevelopment in the context of a large international event. Do these partnerships change stakeholder's incentives because of a shared interest (i.e. shared cash flow)? Social costs are now borne by both private and public developer and the notion of asking for more of something is simultaneously tied to a cost. Thus, requests asked of public private partnership are not assumed unless they are determined to be value added. While this seems clear enough the following two cases will illustrate some of the pitfalls of these partnerships.

[37] Ibid

London Docklands—Market Driven Development

The Docklands

The Docklands is located in east London along the banks of the River Thames; it was an active port from the mid-19th through the mid 20th century. In 1902, the disorganized wharfage and docklands companies threatened the efficient nature of the port and prompted the first significant state intervention. At the turn of the century a Royal Commission recommended that a single authority take responsibility for the administration and regulation of dock labor and the ownership of hundreds of acres of land and docks. The Port of London Authority (PLA) assumed responsibility.

After recovering from the severe damage caused by the Blitz during WWII, the port was rebuilt and thrived through the mid-1960s. In 1966 cargo shipments leaving and arriving in the port amounted to 91 million tons and hundreds of vessels were using the docks per day. But cargo handling methods evolved as logistics improved, minimizing the need for a central port. By the late 1960s the first dock closures released large areas of PLA land and the central government began to take an interest in the economic future of docklands. There was little early interest from property and financial capital in the docks especially since expansion of the financial core and a boom in the office property market in the early 1970's were easily accommodated without excursion beyond the financial center.[38] Speculative interest in the Docklands was restricted initially to the fringe sites close to the City of London, but these developments signaled that overspill from the commercial core might ultimately impact the future of East London.[39]

[38] Meyer, H. (1999) City and port: Urban planning as a cultural venture in London, Barcelona, New York, and Rotterdam: Changing relations between public urban space and large-scale infrastructure, Rotterdam: International Books.
[39] Ibid

The London Docklands Development Corporation (LDDC)

The LDDC is a public entity that was formed in 1981 and was charged with creating the "appropriate" conditions to entice investment in the Docklands. The LDDC strategically affected the redevelopment and redesign of the docks. It sought to maintain a fluid environment for development by minimizing master planning and typical regulatory planning processes inherent in most large-scaled developments. Traditional planning procedures and democratic public involvement through local voter approval was circumvented. Early in the redevelopment process, the LDDC failed to generate information regarding redevelopment thus creating an opaque process removed from a critical public eye. Ultimately, a flexible planning process and a developer friendly environment encouraged speculative development and investment without public scrutiny.

A 1990 report by the Docklands Consultative Committee critically reviewed the effort of the LDDC in the redevelopment of the Docklands. The resulting report cites "priming the pump," leveraging public capital, creating enterprise zones, and releasing publicly-held land at favorable prices promoted rapid redevelopment, but failed to address the needs of the local community.

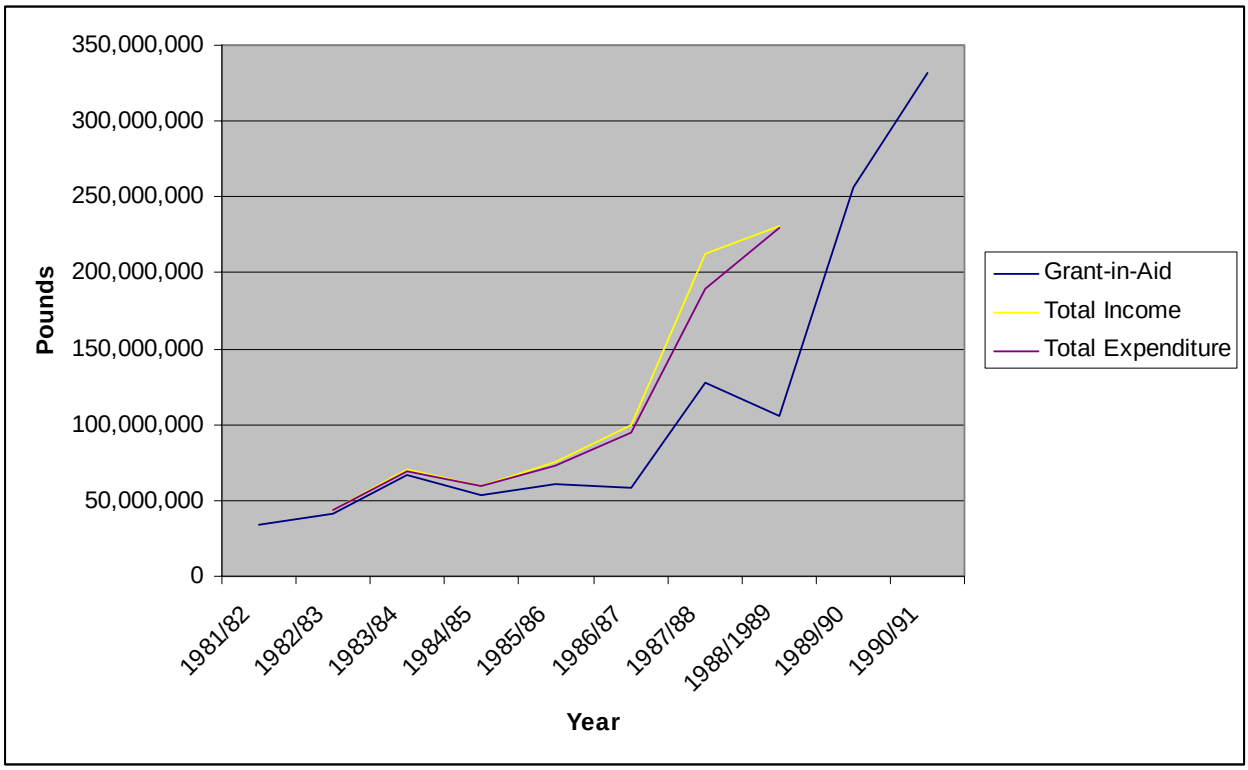
Pump Priming

In the early 1980's, then Chief Executive of the LDDC, Reg Ward, described the value of pump priming as compared with heavy government funding to development in the Docklands. He said,

> The optimum returns in every sense of the word, are achieved by maintaining short-term high front end loading, falling sharply to a very low level of on-going public funding support…there is a very sensitive level at which pump-priming expenditure has to be

> maintained, over a relatively short period, to avoid reducing the leverage ratio and lowering the momentum of development.[40]

While the original intention was to slowly decrease funds to the development of the Docklands after a "short period," public funds, nevertheless, continued to support growth and steeply during the late 1980's early 1990's.



Source: LDDC Annual Report and Accounts 1981/82 - 1989/90

Additionally, much of the income was generated by land sales.[41] The PLA and later the LDDDC controlled close to 80% of the Docklands.[42] Despite the sale of land, the government grant was not reduced and, in fact, expanded quickly between 1989 and 1991 as evident in the above graph.

[40] Docklands Consultative Committee. (1990) The Docklands Experiment: A critical review of eight years of the London Docklands Development Corporation.
[41] Ibid
[42] Ibid

Some of the expense was directed towards transportation infrastructure. The LDDC with the Department of Transportation had committed to dedicate funds to the construction of the Docklands Light Railway, the Jubilee Line extension, and the East London River Crossing. But the amount of transportation and infrastructure needed to support the boom in development was too little. Even while transportation needs were almost entirely determined by the needs of development—there remained a very low level of service.

Leveraging Public Capital

The LDDC measured their success by a growing leverage ratio, claiming that the metric indicated more private investment in the Docklands and more good to the public. For example, in 1985, the LDDC published a leverage ratio of 5.5:1—so for every £1 of public expenditure generated from government grants or LDDC land sales, £5.5 was invested by the private sector. Overtime the leverage ratio increased from 9:1 in 1987 to 12.5:1 in 1988 to 21:1 in 1990.[43] The Docklands Consultative Committee commented on the trend in a 1990 report and pointed to some questionable reasoning on the part of the LDDC. If the "development momentum" accelerated to a point whereby private development was investing more than twenty times the public sector contribution, as was the case in 1990—was there really a need to continue "priming the pump?" And secondly, the report notes that the LDDC leverage ratios include only grants and land sale revenue, but does not account for Enterprise Zone rate allowances, capital allowances, Department of Transport expenditures on infrastructure and road improvements for the docks. The LDDC also does not account for the social cost attributed to an inflationary land market. The local community, unable to compete with developers and unable to afford the rising cost of their land,

[43] Ibid

were forced to sell and relocate as new housing was out of the reach of most of the local community.

Enterprise Zones

Enterprise Zones (EZ) were established in 1982 by the Department of Environment. The purpose of EZ was to enable commercial and industrial activity by the dispensing with certain tax burdens and by relaxing administrative and regulatory processes. In particular the EZ included the following incentives:

> exemption from rates on industrial and commercial property, 100% allowances for corporation and income tax purposes for capital expenditure on industrial and commercial buildings, faster and more simplified Customs procedures, exemption from industrial training levies, a greatly simplified planning regime with planning permission waived in many instances, and speedier administration of controls remaining in force.[44]

The capital allowance was a major financial benefit that brought in a lot of speculative office and commercial development. Capital allowances are public subsidies awarded to developers. The exact amount of capital allowance is unknown, but the Docklands Consultative Committee estimates that the Canadian developer, Olympia and York received nearly £1.3 billion in public monies for the Canary Wharf development. And yet, as the real estate market soured in the late 1980's, even such large public subsidies could not maintain the health of one of the largest, international developers; Olympia and York went bankrupt as a result of their heavy investment in speculative development of Canary Wharf.[45]

[44] Ibid
[45] Ibid

Release of Public Land

The LDDC was the single agency to absorb public land, which in 1981 was about 80% of the Dockland total acreage. Land ownership granted the LDDC greater control over the type of development to be undertaken and over the structure of the disposition of land. A common problem in public private development is that the public sector may not be able to visualize the long term value of a land asset and instead opt for the short term sell.[46] In the case of the LDDC, they did both deals—leasing and selling land. To Olympia and York they leased 20 acres of the Canary Wharf for £400,000 at a 200 year lease term. The market value of the land was £3million.[47] In many other cases, land was sold outright at highly reduced prices. In either case, many agree that land deals were mishandled and that the public lost on a valuable asset.

Impact of the public private partnership

It is clear that the needs of developers were given priority over social and community needs. The wheels of development were greased and bureaucracy and administrative procedures were relaxed or ignored. Local consultation fell prey to marketing and image-building—community involvement was all but ignored. In general, it appears that public resources were inefficiently allocated.

Favorable conditions offered by the LDDC, rising rents, substantial subsidies, and generous Enterprise Zone packages encouraged developers to enter an overheated market and build speculatively.[48] Demand could not be met by the supply being built and when the market crashed in the late 1980s, the billions of public funds invested in the project deflated. In some sense, it

[46] Sagalyn 2000; Bartik 1991
[47] Dockland Experiment 1990
[48] Ibid

could be argued that the development that occurred during the 1980s in the Docklands was not market driven—because there not the demand to meet the supply and developers would have been risk averse to speculative development in such a market. Instead, planning and social concerns were marginalized in favor of "creating" the environment for development to dot the east London skyline with recognizable symbols of progress.[49]

Equity issues became a serious consequence as well because the public private partnership prioritized the concerns of developers over all other considerations. A lack of strategic planning and consensus building process marginalized the voices of local residents and laborers.[50] And rising land values and the new construction of market rate housing forces many residents to relocate. Market driven development seemed to exclude public benefits when set in isolation with little information or regulatory control on the part of the LDDC.

Barcelona— Olympic Games: A Strategy for revitalization?

Poble Nou was a 19th century industrial area bordering the Mediterranean Sea and located between Parc de la Ciutadella and the Avenida Litoral. Despite being situated on one of the cities central axes, Poble Nou experienced steady decline during the 1960's as many local factories closed or moved away, leaving a populous area of apartment housing, smaller factories, and warehouses.[51] The industrial area was hemmed in by two rail lines that created an impenetrable physical barrier and severed the connection to both the city and sea. Over time Poble Nou became a dumping ground for effluence and household garbage. Surrounding neighborhoods that had once been neatly aligned

[49] Ibid
[50] Ibid
[51] McNeill, D. (1999). Urban change and the European left : tales from the new Barcelona. London ;New York, Routledge.

along Cerdá's orderly grid lines had lost continuity as later developments were built, inattentive to the existing street pattern.[52] Olympic planners considered Poble Nou an urban void—making it an ideal place to redevelop for the Olympic Games. The urban design team of Josep Martorell, Oriol Bohigas, David Mackay, and Albert Puigdomènech (MBMP) was selected by Mayor Pasqual Maragall to prepare plans for Poble Nou which would be repurposed as the site of the Olympic Village.

The city had a long term vision for redevelopment and hosting the Games would facilitate that vision, but not command it. Maragall had a basic development criterion which was that Barcelona must benefit from the Games long after the event ended. The expense of the Games coupled with intentional, concentrated development barred construction of "extraneous" structures, that is, places that would not be used after the sixteen day Olympic event. Indeed, 40% of development needs were met by adaptive structures that were often situated in ephemeral locations or, otherwise, rented structures to be temporarily repurposed.[53]

Two overarching goals drove development: one, to re-image Barcelona and project that image on an international stage and two, to systematically renew the dilapidated city. The design also had several core planning and "image" objectives: i) to redefine neighborhoods; ii) to reclaim the waterfront; iii) to improve infrastructure; and iv) to reimage the city.[54] First among the planning goals was an attempt to redefine and reimage neighborhoods and also to focus on urban morphology by connecting city patterns—streets, squares, and blocks—between neighborhoods. Another objective was to reclaim the

[52] Martorell Codina, J. M. (1991). La Villa Olímpica, Barcelona 92 : arquitectura, parques, Puerto deportivo = The Olympic Village, Barcelona 92 : architecture, parks, leisure port. Barcelona, GG.
[53] Botella, M. (1992). The Means: Objectives, resources, and venues. Official Report of the Games of the XXV Olympiad Barcelona 1992, volume II. Barcelona, COOB.
[54] Nello, O. (1996). "The Olympic Village of Barcelona '92." In Olympic Villages: Hundred years of urban planning and shared experiences. Eds. Miguel de Moragas, Montserrat Llinés, and Bruce Kidd. International Symposium on Olympic Villages. Lausanne, International Chair in Olympism.

waterfront between Las Ramblas and Barceloneta. A final physical planning goal was to improve infrastructure. The underlying theory behind the plan was that it would be possible to "reconstruct the European city by attending to its traditional morphology, and therefore avoiding fragmentation and peripheral sprawl."[55] The city devised both planning and image objectives.

Parc de Mar plan—The Olympic Village

During the early 1980's—before the bid for the Games was officially submitted— the city adopted a revitalization policy that focused on restoring much of Barcelona through small scale projects. Three aspects were central to this policy: the 'airing' of the old city through the process of *esponjament*—clearing small pockets of blighted areas*;* the redefinition and revival of the city's traditional districts; and the 'monumentalization of the periphery' a process by which cheaply made, mass produced housing on the outskirts of the city would be redesigned. The old city is comprised of four major districts (Barri Gótic, Casc Antic, Raval, and Barceloneta) and was prioritized for redevelopment by the government because many cultural institutions (museums, archives theaters, and performance halls), entertainment spots (clubs, restaurants) and city administration buildings (the Ajuntament and the Generalitat) are located there.

By 1986 Barcelona had won the Olympic bid and the central core of the old city had been improved. City officials and planners decided that—given the opportunity for large scale redevelopment—situating the Games outside of the historic city between Cerdá's 19th century *Eixample*[1] and the peripheral sprawl would maximize regeneration of the wider city. It was determined that the master plan would be organized around four nodes— the areas of Montjuïc,

[55] Ibid, p92

Diagonal, Vall d'Hebrón, and Parc de Mar—forming a quadrangle shape situated just outside of the old city.

Planners and designers took six specific actions to accomplish the Olympic planning objectives for the Parc de Mar (formerly the Poble Nou) site. Three of these actions addressed the reclamation of the waterfront from industrial wasteland to a space for public use and enjoyment. First, the beach was salvaged by clearing effluence from one kilometer of beach in front of the Olympic Village. A series of piers were also built to protect the newly recovered beach and harbor from a strong east-west stream. Once the Olympic Harbor was completed it had a capacity for 700 boats in the water and 300 ashore, with 75% public space (bars, restaurants, commercial spaces, discoteques, etc).[56] Second, a 30 meter seaport promenade was built along with cafes, restaurants, conference facilities, commercial zones, retail, and office space. And finally, two 100 meter high towers—one zoned for office/commercial the other for hotel uses—as well as other smaller buildings were constructed along the waterfront.

The fourth action focused on infrastructure. The rail line was part of the reason why Poble Nou declined in the 20th century and planners wanted to be sure that the new design would not make a similar mistake of cutting off the area physically and visually from the city and waterfront. Integrating the Coastal Bypass (the area of highway along the waterfront in Poble Nou) into the ring road system to accommodate high traffic intensity (120,000 vehicles a day) without creating a new barrier, posed both a both physical and visual challenge. The solution was to build the expressway underground (in galleries or trenches), leaving an arterial road with more moderate traffic flow above ground.[57] Along with the road infrastructure, the coastal rail lines (4 km) were also removed and placed underground

[56] Martorell Codina 1991
[57] Nello 1996

to fully open up the city to the waterfront. The infrastructure project supported the reclamation of the waterfront, increased efficiency, and was central to ensuring the success of the overall plan for the Games. Planners brilliantly set the four Olympic venues around the outer city, but at a distance from one another—necessitating that the ring roads be completed. Without the impetus of the Games, the completion of these roads would have taken much longer.

Fifth, planners sought to integrate the city with the larger urban nucleus. The idea was to link new residential areas with the traditional forms of the city such that the 2,000 new housing units in the Olympic Village would parallel the 19th century *Eixample* (extension) plan designed by engineer Ildefons Cerdá. These units were of mixed architectural typologies and were intended to draw investment and the middle class back to the city.

A final sixth action was a system of open spaces that connected the Olympic Village between Parc de la Ciutadella to the Parc de Poble Nou. Creating a system of open spaces also presented the opportunity to fill them with public art. Donald McNeill describes the public art program as affirming underlying democratic values of the city, "The sheer diversity of Barcelona's public art programme defies quick and dismissive charges of elitism, its portfolio is so heterogeneous that sweeping statements about hegemony are difficult to sustain."[58]

Planning Process: Financing Development

In the early 1980's Narcís Serra, then Mayor of Barcelona, officially announced that the city would make a bid to host the 1992 Games. As mentioned previously, the city had initially set forth small development plans focused on revitalizing the old central city and Gothic quarter. Once awarded

[58] McNeill 1999

the honor of hosting the Games, the city departed from small scale, patchwork redevelopment, and instead created a global vision for the city. The magnitude of the project would be the largest since Cerdá constructed the *Eixample* around the old city in 1854 and those involved in planning the area wanted Parc de Mar to have just as much impact. This was the city's opportunity to reclaim the waterfront, rid the beaches of effluence, and again become a city of the Mediterranean. One important aspect of the redevelopment was the public private partnership.

By mid-1985 the MBMP design team began to actively plan the development of Parc de Mar in Poble Nou. The team had a high profile, in part because Oriol Bohigas was an architect of significant renowned and had experience working with the city government. MBMP was selected by Olympic Planners including Maragall, the mayor of the city and the head of the *Ajuntament de Barcelona (*Barcelona City Council), the Barcelona Olympic Organizing Committee (COOB '92) and HOLSA (Barcelona Holding Company, S.A.) to design the Olympic Village.

While the city had made earlier attempts to revitalize the Poble Nou area, their efforts were every time stunted. For much of the last century Barcelona was a socialist stronghold, and throughout the Franco years many residents of the city—especially in the working class neighborhood of Sant Martí where Poble Nou is located—opposed speculation and were skeptical of private sector interests. Fearing displacement, gentrification, and loss of public space, protests frequently emerged whenever new development was proposed. Many were accustomed to the years of *Porciolismo*—a time when speculators were in cahoots with Mayor Porciole, the two more interested in capital flow than appropriateness and context of new developments. The city sprawled during the Porciole years as developers rolled out concrete and shabby housing along the outskirts of the city.

Given recent history, leery residents continued to question the intention of these private/public partnerships, even under a democratic government. And while past neighborhood victories against developers had guarded the old industrial area, the international scope of the Olympics seemed to overwhelm opposition. Needless to say, critics of Maragall infamously related the Olympic Village to Francoist city planning—that is, the social dominance of finance capital; rebirth of land use cases defeated in the 1970's, use of zoning regulations of questionable legality, and the construction of massive infrastructure projects.[59] Yet, without the use of public private partnerships and "finessing" zoning regulations, the Olympic Village might not have been realized—a trade off the city was not willing to make with the impending 1992 deadline.

HOLSA (Barcelona Holding Company, S.A.) is a public body constituted by the city council and central government. The organization played a central role in pushing forward the construction of the city ring roads, sewer networks, and sports facilities, as well as attracting investment from other public bodies such as railway and telecom companies. HOLSA along with the public management firm VOSA (Vila Olímpica Societat Anonimà) vetted investors and created a capital structure to fund the construction of the Olympic Village. VOSA had a particularly important on the development end because it was capable of bringing in private investors to create limited partnerships. VOSA also had a public stake in the redevelopment of Poble Nou and while the local community did not wholly trust VOSA—there was more trust than if a private entity operated alone. The goals to be achieved by VOSA included: obtaining land (by expropriation), demolishing some 200 firms and 157 housing units in the Poble Nou neighborhood, creating a drainage system, coastal protection, and replacing demolished housing with affordable units. To attract private

[59] Ibid

investors VOSA conceived of NISA (Nova Icaria Societat Anonima), a development firm whose shares were distributed as follows: 40% VOSA; 40% real estate developers; 20% banks.

NISA was organized such that investment came from the privately owned partners, while the design and management of the operation was mostly public (i.e. VOSA). The private stakeholders involved in NISA did, however, impose some constraints on the designs for the project. In one case, NISA cancelled important research into new housing models and instead insisted on more classically designed homes—a typology that was out of step with the changing nature of the average household size. The firm also set the price of apartments which would be sold at the conclusion of the Games. While the city had originally intended a portion of this housing be reserved as below market rate, the private interest—which comprised the majority of NISA—set the apartment prices well above market rate.[60] In response to public outcry, the municipality defended NISA's decision. The city argued that public housing need not be near the city center and that it was more important to have opened the city to the sea, gaining more open space and beach for use by many more people than to discuss the ultimate owners of the Olympic Village residential apartments.[61]

Impact of the Games

The master plan crafted for the '92 Olympic Games was quite successful. Barcelona already had an exceptional urban form by any measure, though years of economic and physical decline had taken their toll on the city. Olympic planners used the Games to resurrect many of its dilapidated

[60] Nello 1996
[61] McNeill 1999

neighborhoods. Placing Olympic venues at the four corners of the city was a clever scheme to maximize the overall impact of the Games. Long term infrastructure projects were realized in the near term; the waterfront was reclaimed; the urban fabric knit back together; and open spaces extended. The plan accelerated Barcelona's development landing it among the top echelon of European cities—and even recently being named among Europe's ten most desirable places in which to work.[62] Investment flowed to the city; development has continued; there has been growth of the service sector; and tourism has increased. The city has become more international, attractive, central, productive, and competitive. Economist Ferranti Brunet estimates the total economic impact of the Games to be $26.048 million dollars. Unemployment fell between 1986 and 1992 from a historic high of 127,000 to more than half that figure. Economists even argue that the Games held off the slow-down of the European economy in the early 90's.

Yet, along with climbing investment and a booming economy came an increased cost of living. For a city which was at one time relatively inexpensive, Barcelona proper housing prices climbed between 1986 and 1992, respectively, 240% and 287%. Furthermore, the city reneged on its promise to provide affordable units when the Olympic Village apartments were sold. Instead the municipality argued that "the Olympic Village was not that important as an extension of the housing stock. It was, however, much more important as a strategic element in terms of rehab the coastal façade." While there is something to the argument that many more benefit from reclamation of the waterfront; there nevertheless was deception on the part of the public/private partnership, something that will likely be remembered when the city plans future housing developments. The city also neglected an important

[62] Brunet, F. (1995). "An economic analysis of the Barcelona '92 Olympic Games: Resources, financing, impact." In The Keys to success: The social, sporting, economic, and communication impact of Barcelona '92. Eds. Miguel de Moragas and Miguel Botella. Barcelona, Universitat Autònoma de Barcelona.

piece of industrial heritage. Despite the fact that MBMP documented existing conditions in Poble Nou, all of these structures were razed in favor of more modern towers and other lower rise buildings. It is unclear why the structures were not incorporated into the final design, but it is a curious decision and out of step with the municipality's goal of maintaining a sense of history and place.

The Games provided the international stage, capital, and timeline needed to launch a strategic revitalization program. Olympic planners used the opportunity to affect urban form in a way that could not have been implemented a decade earlier under Franco. The Games served the city—the urban fabric was spoken for, improved upon by the vision of civic leaders, architects, designers, and engineers. While residents of the city would reap some of the benefits of redevelopment, their interests were not directly considered in the plan. Designing the Games in Barcelona was hierarchical, bureaucratic, and demanding leaving little room for local interests to be substantively counted among constituents of the master plan. Once the city was awarded the Games, redevelopment quickly steamed through the streets of Poble Nou bound for the '92 deadline.

Tensions in Public/Private Partnerships

The experience in London and Barcelona, although somewhat different, share some similar tensions. For one, there is difficulty in shared decision-making. While the municipality assumes more risk in the development partnership, there is an increased expectation of control. Working with sophisticated private partners who are likely reluctant to cede control to a public entity is a challenge in any such partnership. The example of the new housing typology study in Barcelona is a good example of the shortfall of shared decision making and is evidence of different priorities in redevelopment. There are also conflict and accountability issues. Several questions are raised

given that the public sector has a commitment to secure benefits for the public good and also aims to create a lucrative development. Some of these questions include: Is the city overlooking longer-range public interest goals in lieu of short-term returns? Is it possible for planners to negotiate on behalf of the public interest successfully when dealing with sophisticated private partners? Are valuable regulatory concessions ceded too readily? Do planners focus on short-term real estate developments as opposed to longer-range comprehensive planning?[63] For example, in the London case it was clear that the LDDC was shortsighted in selling and leasing land under favorable terms to developers and foregoing potential longer term investments.

While the imperative to conspicuously share the terms of a deal with the public—the return, risks and costs— is critical to ensure an equitable and democratic process, development is nevertheless complex and not always transparent. It is difficult to account for all expenditures and all benefits. There are some very clear costs and returns –design amenities, subway improvements, and below-market loans can be valued by referencing market equivalents, however, there are other intangible costs, such as broader employment opportunities, that are not quantifiable.[64] These shortcomings are difficult to track because the development balance sheet for public/private developments is not a transparent accounting document.

Nevertheless, urban economist Marc Weiss argues that leveraging public assets in a public/private development can be powerful under certain conditions.

- An individual urban community can only be improved if it is connected to and benefits from the larger economic dynamics of the entire metropolitan region;

[63] Sagalyn 2000
[64] Ibid

- The key to generating and sustaining economic value is building on strength by investing in the fundamental assets that make a community special and competitive, and the most important asset is the people who live and work in that community;
- Promoting new development must be tied to attracting and retaining businesses and jobs, and to attracting and retaining a mixed-income residential population. Thus quality of life issues such as a safe and attractive environment, good schools and homeownership, good transportation and communications, may be more important than financial incentives for encouraging private investment;
- The best way to attract and retain businesses and jobs is by fostering and sustaining the growth of dynamic industry networks or clusters that generate productivity and innovation. Incentives should be expressly targeted to move forward such an agenda, rather than simply subsidizing any and all types of business and property development activities.[65]

To understand how these conditions are played out, a brief example will be offered. While this is less an example of public private partnerships, it is a useful policy to explore because of its potential to mitigate some of the tensions raised by the Barcelona and London examples. A striking difference between the cases is that FPC is redeveloped at a much slower pace—allowing for community involvement and also the redevelopment is facilitated with the help of current inhabitants.

Fort Point Channel[66]

Fort Point Channel had humble beginnings as tidal marshland. The area was filled beginning in 1836 by the Boston Wharf Company to accommodate a port to serve the booming maritime trade. Using earth and rubble from the Boston fire of 1872—buildable land materialized. Initially the area was used as a port and also storage space. Sugar and molasses from the Caribbean were stored in the first buildings constructed on the peninsula. Masonry buildings began to go up in the 1880's as the Boston Wharf Company moved away from wharfage to real estate development. Fort Point Channel was connected to Boston by several bridges: the earliest Mount Washington Bridge.

[65] Weiss, M. (2003)"Leveraging Private Financing for Community Development." Organization For Economic Cooperation and Development (OECD) publication on Private Finance and Economic Development: City and Regional Investment.
[66] Fort Point Channel Web Site: http://frameboston.com/Articles/fpointart.htm

By the 1920's FPC had become much more industrially diverse—manufacturing and storing iron, glass, brick, machinery, wagons, soap, elevators, and beer. As with the departure of other downtown firms after WWII, industry also began to move south. Many of the existing warehouses remained vacant for many years or were razed to accommodate parking.

Artists discovered Fort Point Channel in the 1970's. As word spread of the abundance of affordable, open plan studio space, an enclave of artists began to develop. By the 1980's artists grip on the area was heralded by the neighborhood's first Open Studio. The trend for artists to move into industrial districts has become a trend in the City of Boston and is evident in other neighborhoods as well—such as the South End and particularly along Washington and Harrison Street areas.

To encourage this trend, the city has added another programmatic layer to the affordable housing requirement. The "Artist Space Initiative" is directed by Mayor Menino and the Boston Redevelopment Authority and is intended to ensure that artists 80% below the median income have access to housing in the city. The City of Boston believes that,

> Artists help make Boston a more livable city – a city of people and neighborhoods, a center of cultural life, and a vital economic center. They function as small businesses by providing jobs and services for Boston residents. Since the late 1960s, artists have helped transform marginal neighborhoods into dynamic communities. Frequently, festivals, galleries, small performance spaces and small retail spring up in these same areas through the work of resident artists, generating a vibrant street life that acts as a deterrent to crime, dramatically enhancing the quality of neighborhoods for both the people who live there and people who visit.[67]

[67] BRA website, http://www.ci.boston.ma.us/bra/

Artists herald the economic recovery of underinvested and dilapidated areas. Time and again the "gentrifiers" trail the paths blazed by artists.[68] And while artists are typically bumped out of the area due to increasing taxes and rents, the City of Boston is assuming an aggressive stance to preserve the work of artists in these communities. An artist certification program and the affordable requirement guarantee that artists will remain an integral part of the neighborhood fabric. The city has constructed a series of goals for artist housing including:

- are permanently dedicated to artists through deed restrictions or similar legal mechanisms;
- are located in buffer zones between industrial and residential neighborhoods in locations that do not support traditional family housing; and
- offer live/work spaces (space where artists combine their residence with their work area, typically in an open floor plan offering large, flexible work areas) or work-only spaces (where residential use is not allowed) for rent and for purchase at a variety of prices with a preference for Boston residents.[69]

According to Boston's zoning bylaw, artists in live/work studios are the only residential group permitted to live in industrial areas. The city has also developed urban design guidelines for commercial and non-profit developers interested in building artists live/work space (i.e., live/work units must be at least 1,000 square feet).[70]

This is a very different type of redevelopment process, one that is somewhat less urgent in time horizon than London or Barcelona. Not only has the city embraced the hip, progressive image that "art" seems to imbue, but also has encouraged the redevelopment of much of the economically depressed area and "transition areas." It is quite clear that artists are "positioned" in transition neighborhoods to bring about revitalization and reimage an area to attract reinvestment from more

[69] Art Space Initiative Program, Boston Redevelopment Authority web site: http://www.ci.boston.ma.us/bra/econdev/EconDev.asp
[70] Ibid

affluent residents. The city has dedicated time and money to develop policies and institutionalize the needs of artists, but it is also using artists as a tool to bring about slower paced economic development. Recognizing that the trend of gentrification is often begun by artists, it can be assumed that Boston is using such knowledge to encourage reinvestment by middle to upper income earners. Clearly, the challenge here is how to ensure that other lower income families are not excluded from affordable housing and that the 10% affordable gap is not closed by artists.

As evident by the previous cases, there are many ways that a public body can encourage economic development. In each case a system of guiding governmental policies affected the resulting urban design and planning process. In the case of London, the priority of the Thatcher government was to improve the physical environment, and make the Docklands productive. Shorn of a strong social agenda, the local east Docklands community struggled to maintain their homes and jobs in the face of redevelopment. In Barcelona, there is clearly an effort to improve the physical environment as a means to create an image and promote an identity. After so many years of neglect during the Franco dictatorship, the Olympic Games was used as vehicle to elevate Barcelona and to once again claim a place among Europe's great cities. As mentioned previously, zoning regulations and other land use policy and favorable development terms made reclaiming the city a smoother process—a necessary byproduct of a looming deadline.

In each of these examples there are some public goods extracted from private development, but there are social equity pitfalls that seem to beset both projects. The urban design of the built environment seems to be attended to without much consultation from the local community and in the end does not meet the needs of that group. It seems clear that a tension between the public interest and development are difficult to mitigate in the case of London and Barcelona—although

the FPC example and the work of Weiss and others suggest that community assets can be leveraged to claim benefits of private development.

In addition to these issues, there are other more basic problems with government intervention. As mentioned earlier, pure property rights is a murky notion as buildable space is determined ex ante negotiations with the community, municipality, the developer/owner, and other stakeholders—leaving room for under exactions or over exactions. Also, there are coordination problems between stakeholders and also through the permitting process. For example, a recent project in Fort Point Channel in Boston required 18 agencies to permit three million square feet of mixed use ground-up development. Information problems can also emerge between these agencies as well as between the developer and land owner. Real estate is not an informationally efficient market. Assumptions can be made ex post based on sales data, but it is difficult to predict market fundamentals in such a market. Also, municipal intervention can create inefficiency. It is very difficult to measure socially optimal outcome from a development.[71]

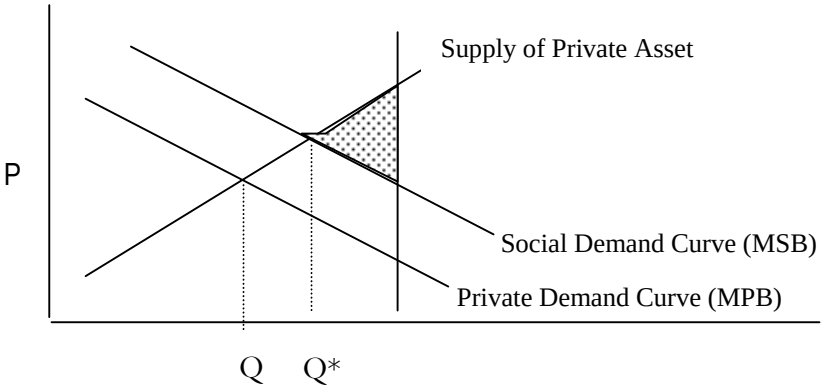


Figure: Market failure addressed by government intervention.

[71]Throsby, D in Hutter, M. and I. Rizzo (1997). Economic perspectives on cultural heritage. New York, St. Martin's Press.

Finally, there are also administrative costs as well as compliance costs associated with municipal intervention; for example, formulating standards, monitoring and enforcing them, setting up and operating machinery to collect taxes and dispense subsidies, expenditures undertaken by firms to meet regulatory requirements.[72]

Even while social costs are borne by both public and private entities, there are clearly cases in which outcomes favor one side over another. In Barcelona and London, the private entities were favored. Government has primarily been the intervening force in real estate development, beyond market forces, and while government intervention has been successful in many cases, there is also room for other intervening forces. In addition to the work of municipalities and public private partnerships, other entities may create an environment whereby total social value is maximized. In the following two sections the work and role of social investors will be explored as well as investment decision tools. Is it possible for private capital to incentivise developers to invest in projects to maximize social value and realize greater individual returns?

[72] Ibid

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Social Investors are another force that can share in the benefits of social goods and also assume some of the additional cost for providing this value. Social investors are different from traditional funding sources in the sense that the typical social investor makes considerations beyond traditional financial metrics and assesses the social and environmental impact of an investment without sacrificing return on an investment. From the developer's perspective this is an interesting funding source because the interests of the investors are aligned with those of the city which will allow the developer to build local political capital through the recognition of public benefits and the developer will also benefit in the long run from the economic ripple effect that may result. While this capital source is particularly appealing at the moment, it should be viewed with some skepticism as a long term capital source because of the current investment climate. For example, in many markets cap rates are compressed and it may be the case that "undervalued" deals seem more attractive as a result. In markets where these conditions are not so favorable, there might be much less social investment.

Using the discounted cash flow method, developers can accurately quantify the private cost and benefit of a development and, also, make decisions between investing in one of two projects based on the NPV decision rule. However, developers are less sophisticated in a modeling sense when it comes to articulating the social cost and benefit of their project to the wider community, although they are typically shrewd about knowing about the benefits desired by a community. These are benefits that are difficult to account for, but are important to consider in the negotiation process. Revitalization, design, and imaging or branding an area or neighborhood are among the social or public benefits that are often named, but not always quantified. While municipalities are often successful at encouraging these public benefits, this kind of intervening force is not a panacea for achieving socially optimal benefits from a private development. It is unlikely that a social optimum will ever be reached (or even accurately measured), but social investors may prove to be a powerful incentive for socially responsible development.

Social investors, academics, and some real estate professionals are pushing beyond the bottom line to explore the intangible externalities of a real. This chapter catalogs the work of some of these

groups and outlines social value metrics that could impact real estate development more directly. While this catalog attempts to be comprehensive it is not possible to include every group that is working at the boundary of the "bottom line".

Social Investing

Social investing is defined by Webster's dictionary as:

> Limiting one's investment alternatives to securities of firms whose products or actions are considered socially acceptable. For example, an investment manager might decide to eliminate from consideration the securities of all firms engaged in the manufacture of tobacco or liquor products. Also called ethical investing or green investing.[73]

This definition is narrow and other social investors may qualify this investment strategy differently; for example, not all social investments are securitized some investments are directed at specific projects in local neighborhoods. Social investing is very broad. Investors, mission, metrics and models that account for successful investing can vary; as such five groups of social investors will be described: social indices, pension funds, urban investment funds, social entrepreneurs and venture philanthropists, and community development funds.

While every social investor may have a distinct mission statement that defines social goals and outcomes differently, there are commonalities among social investors. Most social investors make considerations beyond traditional financial metrics, beyond the "bottom line", and instead assess social and environmental criteria during the decision making process. These investors look for opportunities to make a good return on an investment, as well as opportunities to improve the lives of others and the environment. They tend to invest in entities that have a diverse workforce, a

[73] Dictionary.com

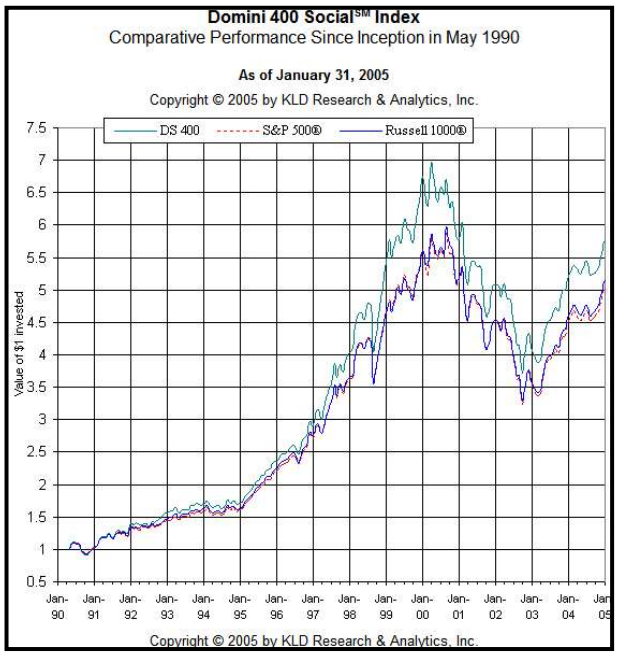
strong environmental record, and good community relations and avoid companies engaged in less desirable practices such as "the manufacture of tobacco or liquor products." Social investing has alternatively been called "double bottom line" investing—that is looking beyond cash flow returns to optimize environmental and social returns. Section V will look at one model, Social Return on Investment (SROI), in depth.

Social Indices: Domini Social Fund

> What is the strongest force on the planet? It's you and your investment account and me with my investment account. What I'm arguing here is that, at some fundamental level, the people that move the money move society. We need to take responsibility for that impact. The way you make money makes a difference.
>
> *Amy Domini*

Social indices emerged in the late 1980s as stockbrokers increasingly were asked by clients not to invest in companies with negative social or environmental impacts such as, tobacco companies, firms with large military contracts, or companies with a poor environmental record.[74] At the time there were also a handful of mutual funds and shareholder activists aggressively looking for investment opportunities in socially responsible companies. However, many investors were skeptical. Amy Domini, an experienced stockbroker, used the Standard and Poor's 500 as a benchmark, and sought to understand if there was a cost/benefit to investing in socially responsible companies. In 1990, she created the Domini Social Index an index of 400 primarily large-capitalization U.S. corporations, roughly comparable to the S&P 500, selected based on a wide range of social and environmental criteria.[75]

[74] Calvert is another prominent social investment fund with the nation's largest socially responsible mutual fund. http://www.calvert.com/
[75] Ibid



The fund is informed by a research group, KLD Research & Analytics, Inc. The goal of the firm is to research S&P 500 companies and measure them against a series of social issues and controversial business issues and rate them accordingly. Each company in the S&P500 index, along with companies listed on the Russell 3000 index, has a profile that is searchable on an online database, *Socrates.* It is designed for investment professionals and presents analysis on a range of issues impacting the company, such as community relations, corporate governance, and diversity. There are currently more than 3000 US company profiles included in the database, each with a social ratings evaluation.

Since its inception the index has performed as well as the S&P 500, if not better. The index illustrates that social and environmental criteria do not limit the performance of an investment and may even lead to higher returns. The performance of the Domini 400 Index is encouraging to investors with social goals because this kind of screened investing

yields target investment horizons.

Pension Funds: CalPERS, CalSTRS

Institutional level investors, such as pension funds, have begun investing in urban neighborhoods—both to realize competitive returns and to affect positive economic development of

depressed areas. Leading the charge are California pension fund managers. Under the direction of Philip Angelides, California's State Treasurer, California's pension funds — the California Public Employees' Retirement System (CalPERS) and the California State Teachers' Retirement System (CalSTRS)— will invest billions of dollars in various financial vehicles, such as State programs and the State's pension and investment funds in emerging California markets.

Portfolio managers advocating this strategy argue that California has over $5 billion invested in overseas markets. And while these investments are important to the economic development of these nations, the returns "showed annualized losses in Indonesia of minus 29 percent; in Malaysia of minus 24 percent; and in the Philippines of minus 25 percent."[76] Given the risky and volatile nature of these investments and the difficult situation facing many of California underdeveloped communities, the State understands that opportunities exist for the "financially prudent investment of capital in our own emerging markets."[77]

The investment initiative began in 1999 as the chasm between "have and have not" expanded in California. Faced with a growing underclass and a booming economy Angelides argued in a 2000 report that the State has the opportunity to mobilize financial capital in "new and innovative ways" while upholding high standards of fiduciary responsibilities.[78] The initiative draws on the public sector to make investments that will have broad economic opportunity for California's "at-risk communities."[79] And also asks the private sector to join the public sector to find and make investments that will reignite these more downtrodden neighborhoods. The initiatives outlined in

[76] Ibid
[77] Ibid
[78] California State Treasure's' Office. (2000) "The Double Bottom Line: Investing in California's Emerging Markets." See web site: http://www.treasurer.ca.gov/publications/dbl/dbl.pdf
[79] Ibid

the state's report, *The Double Bottom Line: Investing in California's Emerging Markets,* directs eight billion dollars of investment capital to create economic growth and development in California neighborhoods. This funding is a pool of money that will be reinvested as transactions are completed and returns realized.

The Double Bottom Line is under girded by five strategic policies[80]:

- Public pension funds and investment pools can lead the way in a new era of "Double Bottom Line" investment — achieving successful investment results and broadening economic opportunity. [They also have tremendous influence over other funds and investments who seek their investment capital].

- Public pension funds must broaden their pool of investment to capitalize on California's "emerging market" (growth opportunities) opportunities.

- Public financial resources and assets should leverage capital investment in economically struggling communities.

- State government — in partnership with local governments, educational institutions, foundations and the private sector — should spur capital investment in historically overlooked communities by funding critically needed market research.

- Private sector and foundation capital must join in partnership with the public sector in a new commitment to investing in California's struggling communities.

The initiative is buttressed by mounting evidence that urban reinvestment is a successful strategy. Retailers are profitably re-entering inner-city markets and lenders are finding new opportunities in traditionally underserved communities. For example, Bank of America has a growing Community Development division with more than $350 billion committed to community reinvestment across the nation.[81]

[80] Ibid
[81] Bank of America web site: http://www.bankofamerica.com/community/index.cfm?template=overview

Urban Investment Funds: Goldman Sachs

There are private funds dedicated to investing in minority-owned enterprises and urban areas. Goldman Sachs, Lehman Brothers and others are dedicated mid-term capital partners in areas that have been typically underserved by traditional sources of capital. In particular, Goldman Sachs Urban Investment Group (UIG) makes corporate and real estate investments of up to $25 million across industries, project types, and financial structures.[82] UIG offers clients the benefit of human capital, flexible financing, network of relationships, long term partnerships (5-7 years max), and years of investment expertise.[83]

UIG partners with "entrepreneurs and leaders – people who will likely become catalysts for business development in minority and urban communities."[84] Similar, to the aforementioned investors, UIG sees urban markets as an untapped resource that would benefit from the engine of the capital market and at the same time offer returns based on commensurate risk. The selection criteria for investment in corporate and real estate project include:

1. Emerging or transitional areas of major cities nationwide
2. Residential, commercial, or mixed use projects in underserved urban areas
3. New construction, rehabilitation and conversion projects

Social Investment Funds: New York City Investment Fund

There are also philanthropic investment funds that are founded with the intention of revitalizing a community, neighborhoods, or city. New York City Investment Fund is a private fund with such a broad civic mission: to generate benefits for the city of New York and its communities. The Fund was established in 1996 and was initially capitalized by one million dollar contributions from sixty-

[82] Goldman Sachs web site: http://www.gs.com
[83] Ibid
[84] Ibid

seven individual and corporate investors. These investors do not expect financial gains, but rather invested for the good of the city. Returns are reinvested in other qualified projects as in other so called "evergreen funds"

NYCIF is now capitalized by more than $95 million (gross growth of $32 million)[85]. Selected project investments typically range in size from $500,000 to $3 million. NYCIF provides equity or debt, structured to meet the needs of the project. It will invest at any stage of business development, but is seeking to exit in about five years.[86] To date, the fund has invested in over sixty projects grouped in five distinct sectors: communications, information technology, media and entertainment, healthcare and sciences, and retail and tourism.[87]

The criteria for investment are broad, but all investments are limited to the New York City area. These criteria include "job creation, revitalization of distressed areas and innovative ideas or products that position New York at the cutting edge of growth sector industries."[88] This is the kind of incentive investors seek in "marginal places" these are also the places with the potential for growth and returns. NYCIF does not make grants, but will provide below market financing for not-for-profit projects that advance its mission, it does not make long-term real estate investments nor does it invest in real estate for housing, it will provide short-term real estate financing for projects that have a significant impact in terms of permanent job creation, new business development or

[85] New York City Investment Fund web site: http://www.nycif.org/about.asp
[86] Ibid
[87] Ibid
[88] Ibid

revitalization of a community.[89]

For example, Bradhurst Court is a development project that NYCIF was involved along with the Related Companies, Leewood Real Estate Group, and Salama Developing and Consulting. Bradhurst is a 260,000sf mixed-use project in Harlem. The development includes a large Pathmark supermarket (47,000sf) and other local retail, 129 moderately-priced residential condominiums, and a parking garage. The project was financed by New York City's Housing Development Corporation and the Department of Housing Preservation and Development, and primary lenders—Citibank and Carver Savings Bank. NYCIF made a construction loan to the Bradhurst development. NYCIF recognize the importance of this development to the economic development of Northern Harlem. Project proponents, including NYCIF, argue that the project brought needed affordable housing, retail services, and new jobs.[90]

NYCIF has a flexible investment structure—providing subordinated debt to leverage other private capital or to maintain maximum ownership for management of minority-owned companies. In cases when the Fund invests in a venture capital project, returns expectations are expected to be commensurate with other at-risk parties. Investment funds come from three different sources:

- About one third of the Fund's assets are owned by a limited liability company, with investors who have effectively made an interest free, unsecured loan to the Fund for a period of fifteen years. ($67 million initial contribution)
- Another third of the assets are held by the Civic Capital Corporation, a public charity established to administer tax exempt contributions that have been donated to the Fund. These investments are restricted to investment in eligible charitable activities such as economic development.

[89] Ibid
[90] Ibid

- The balance of assets are held by the New York Small Business Venture Fund, a certified capital company that was organized to participate in a State program that provides tax credits to insurance companies that invest in eligible activities. These funds are primarily for early stage venture capital investments.[91]

Community Development Funds and Organizations: LISC

Community Development Funds are locally organized investment funds that are dedicated to reinvesting in underserved, inner city neighborhoods. There are several examples in California of such funds. For example, the Genesis LA Real Estate Investment Fund focuses on development in Los Angeles neighborhoods, the Bay Area Family of Funds is targeted to creating smart growth and economic prosperity for the residents of 46 low income neighborhoods in the Bay Area, and Local Initiatives Support Corporation helps resident-led, community-based development organizations transform distressed communities and neighborhoods into prosperous ones. These organizations operate in various ways, but often provide financing and capital, technical know how, and hands on training and information in support of the creation of affordable housing, commercial, industrial and community facilities, businesses and jobs.[92]

LISC, for example, operates intensive community development programs in 35 areas of concentration involving hundreds of national Community Development Corporations (CDCS).[93] LISC offers grants, loans, and equity investments to CDCs. LISC is a large institutional organization and is backed by a National umbrella entity. When a local LISC branch invests in a

[91] Ibid
[92] Local Initiative Support Corp web site: www.lisc.org
[93] Community Development Corporations (CDC) are locally controlled nonprofit firms that promote economic development in depressed areas. CDCs are capitalized through several entities and organizations—this theme will be discussed in detail shortly.

project, the locally raised funds are matched by the national LISC. The CDC then has the discretion to distribute the funds to optimize the best outcome for a community.

LISC has three main roles in community redevelopment. First it provides assistant to CDCs. Second, it helps to improve the economic health of a community through incremental reinvestment—this is achieved through the creation of cooperative partnerships between the local LISC programs, community organizations, local foundations, private industry, and state and local governments. Finally, LISC strengthens national support for CDCs through the national umbrella organization. "As an advocate of CDCs, LISC strives to enhance the visibility and credibility of neighborhood-based development, and to influence public policy decisions affecting the community development industry."[94]

LISC has worked out an interesting series of "social metrics" that will be used as a base to be further developed. These indicators include:[95] job creation, small business development, non profit office space, income generation, etc. The matrix will be outlined at the end of the chapter.

Beyond Good Will: Public Policy, Undervalued Opportunities, and Strong Local Relationships
Many of these investors invest in socially beneficial ventures for the "feel good" effect of their commitment to social and public benefits, but that is not the end of the story. There are many incentives that motivate such good work and encourage investors to look beyond the bottom line. *The Double Bottom Line* report issued by the California State Treasure's Office illustrates this point.

> • "A 1999 Housing and Urban Development (HUD) study showed that the retail purchasing power of America's inner city markets exceeds by nearly $9 billion annually the retail sales in those markets. In Watts alone, the gap is nearly half a billion dollars a year — showing that retail investment is needed and can be successful.

[94] LISC web site
[95] LISC web site

> • Retailers are finding that underserved markets can represent highly profitable opportunities. A study by the Boston Consulting Group found that inner city supermarkets can generate sales per square foot up to 40 percent higher than regional averages. Sears Roebuck stores located in central cities are grossing triple the company average and the Super K in Oakland has sales that are 50 percent higher than comparable stores in the chain.36 The Pension Consulting Alliance (PCA), in a report to CalSTRS, stated, "*The booming economy, falling urban crime and retail crowding in the suburbs have emboldened a handful of companies to set up shop in historically neglected neighborhoods. These companies have found that developing modern retail facilities in these urban neighborhoods is simply good business."*
>
> • Ethnic and minority markets — often centered in traditionally underserved communities — are growing dramatically. The Hispanic consumer market has gone from $208 billion in 1990 to an estimated $383 billion in 1999, and the revenues of companies listed on the Black Enterprise 100 have increased from $470 million in 1972 to over $13 billion in 1997.
>
> • The market for Low Income Housing Tax Credits has evolved dramatically over the past decade and a half. While investors initially sought returns of 20 percent plus due to perceived risk, investors now receive returns in high single digits or low double digits, with demand by investors exceeding the supply of tax credits available for purchase. But it is perhaps the results of the Community Reinvestment Act which are providing some of the best evidence of the market opportunities that exist in communities too often neglected by capital markets."[96]

These are some of the positive results of investing in ventures that do not have a "traditional" profile. Counted among the incentives are public policies such as the Community Reinvestment Act (CRA), Community Development Financial Institutions (CDFIs) New Markets Tax Credits programs, recognition of undervalued opportunities in urban areas, and the long term benefits of earning political capital through building strong local relationships.

The Community Reinvestment Act is a law passed in 1977 by Congress that requires banks, crediting agencies, and other depository institutions to meet the needs of the community that they are chartered to serve, particularly low and moderate income communities, while ensuring sound operations. In 1995, the CRA was further strengthened by setting stricter and more rigid

[96] California State Treasure's' Office. (2000) The Double Bottom Line: Investing in California's Emerging Markets. See web site: http://www.treasurer.ca.gov/publications/dbl/dbl.pdf

requirements to be met by banks and crediting agencies—i.e. the disclosure requirements of loan and recipient characteristics, publicly disclosing CRA ratings, and refining how regulators assign CRA ratings.[97] What this means on the ground is that the CRA has helped expand access to credit for low-income individuals and small local businesses.[98] More and more, investors are looking to reinvest in underserved areas, in part because of the success of the CRA over the past 40 years, but also because of increased market knowledge about distressed communities. Uncertainty around economically depressed areas is being exposed and clarified and capital has begun flowing to these areas.

Along with the CRA there are other financial programs with similar objectives. For example, Community Development Financial Institutions (CDFIs) promote economic development in struggling areas, both urban and rural, that are underserved by traditional financial institutions. The primary role of CDFIs is to provide financial services in their local, target areas—"including mortgage financing for home buyers, financing for the rehabilitation of rental housing, financing for the building and rehabilitation of community facilities, commercial loans to small- and micro-enterprise businesses, and financial services needed by low-income households and businesses in the target areas".[99]

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[97] Community Reinvestment Act Government website: http://www.ffiec.gov/cra/history.htm

[98] "The Community Reinvestment Act: Its Impact on Lending in Low-Income Communities in the United States" Michael S. Barr, Lynda Y. de la Viña, Valerie A. Personick, and Melissa A. Schroder, Banking and Social Cohesion: Alternative Responses to a Global Market, Christophe Guene and Edward Mayo, eds., 2001.
"The 25th Anniversary of the Community Reinvestment Act: Access to Capital in an Evolving Financial Services System" Joint Center for Housing Studies, Harvard University, Cambridge, Massachusetts, March 2002.
"Bigger, Faster...But Better? How Changes in the Financial Services Industry Affect Small Business Lending in Urban Areas" Dan Immergluck and Geoff Smith, The Brookings Institution Center on Urban and Metropolitan Policy, September 2001.

[99] Domini Social Index website: http://www.domini.com/community-investing/What-Is-A-/

CDFIs include[100]:

- Community Development Banks: provides needed capital to help rebuild economically distressed communities through targeted lending and investment.
- Community Development Credit Unions: provides affordable credit and financial services to low-income and minority communities.
- Community Development Loan Funds: typically raise capital from socially responsible investors at below-market rates and then re-lend the money to nonprofits that build housing and community facilities in struggling urban and rural areas.
- Community Development Venture Capital Funds: provides start-up capital for real estate and new business development in economically distressed areas.
- Micro-enterprise Loan Funds: provides loans and technical assistance to low-income people starting very small businesses.

Similar to the CRA and CDFIs, the New Markets Tax Credits (NMTC) program is designed to generate new investment capital in low-income and distressed communities. More specific than the aforementioned program, the NMTC has a finite life and a clear goal: over the next six the program seeks to generate $15 billion of investment capital. Under served communities benefit by the infusion of capital, investors earn an increased return on investment through tax credits (39%: five percent for each of the first three years of a qualified investment and six percent for each of the next four years)[101], and the developer benefits from a below market loan financed with a CDFI.

In addition to public policy and legislative incentives, groups such as Goldman Sachs UIG, CalPERS, CalSTRS also recognize undervalued and unexploited opportunities in lower income areas. In a conversation with Alicia Glen of the UIG at Goldman Sachs she noted that the decision to invest in a mutually exclusive project with the same NPVs is, when all is said and done, a normative one. She said that the criteria for investment beyond what can be deciphered through traditional analyses, is estimated "by gut". In terms of economic returns, Glen compared two

[100] Ibid
[101] Uckert, C. "A Primer on New Market Tax Credits." The Real Estate Finance Journal, A Thomson/West Publication. Spring 2005

hypothetical projects, all things equal "if there is a condo project on Upper West Side with a 20% return versus a project in the South Bronx with more market risk but a 20% return,"[102] UIG would invest in the South Bronx. "Social good is preferred, but not at expense of economic return."[103] NYCIF seeks similar investment opportunities, but has clear objectives beyond the bottom line that are part of the Funds charter. In the case of a potential investment opportunity, Maria Gotsch, Co-President and Co-CEO, notes that a standard business screen—product quality and marketability, management, salability, credit, payment history of business/owner, trends in industry, projected return and financial feasibility—is primary concern and then a social value screen is employed—how the investment affects and relates with the neighborhood, job creation, etc.

Securing capital from social investors seems promising; however there are important caveats to consider. One, are investors such as Goldman Sachs investing in projects with social value because of current investment climate. For example, in many markets cap rates are compressed, there is more money out there, and maybe these deals seem more attractive as a result. In markets where these conditions are not so favorable, there might be much less investment in the areas—except for the purpose of diversifying a portfolio with riskier projects.

All of the social investors catalogues here dance around defining and quantifying non-market value—none can explicitly cite which valuable social good is being created and how the costs and benefits associated with that value will be claimed. There is no mechanism to account for or quantify externalities such as "shared experience value." The field of cultural economics has posited that additional value is created beyond the physical asset and beyond the indirect or

[102] Conversation with Alicia Glenn, Vice President of the Urban Investment Group of Goldman Sachs. February 2, 2005.
[103] *Ibid*

"second impact" of investment in underserved areas. Cultural economists argue that investment returns gained from an asset are affected by both “tangible financial flows” – the economic value of the land and building, and “intangible cultural capital” – the community’s valuation of the asset as culturally and historically valuable. (Throsby 2001, 1999, 1995; Klamer 1995, Koboldt, 1995; Sable and Kling 2001). Several models have emerged from the discipline of economics that attempt to capture such value including the double public good function that is based on the Bergson-Samuelson social welfare function, and contingent valuation method. Both are explored here.

Once an intangible good can be priced by the market there is no longer inefficiency; that is, the marginal social benefits from provision of that particular public benefit is equal to the marginal social cost of providing that public benefit.[104] Proximity to parks is one such example. Once a park was determined to improve property value, hedonic regression models could be created to closely approximate that value. For example, a secure park is a valuable amenity that has been priced into the value of abutting properties; several studies have measured such an effect.[105] Similarly, option demand and existence value, public accessibility, and shared experience value might also be incorporated. The following model, Double Public Good, attempts to quantify these externalities and ultimately price them into property values.

Double Public Good

Economists Karin Sable and Robert Kling (2001) conceive a model that recognizes intangible public benefits. The model offers a "formal presentation of the full spectrum of value, from private

[104] Samuelson, P. A. and W. D. Nordhaus (1998). Economics. Boston, Mass, Irwin/McGraw-Hill.

[105] Miller, A. R. (2001) Valuing Open Space: Land Economics and Neighborhood Parks. Center for Real Estate: Master of Science in Real Estate Development Thesis.

market values to social non-market values."[106] The work is based on the notion that many types of "cultural assets or activities," produce non-market externalities. The authors use cultural heritage as a case, but note that it has wider application to other cultural assets. Sable and Kling model preserved historic built resource as a pure public good and base the optimal extent of preservation on the general equilibrium model of social welfare a la Bergson-Samuelson. Through this theoretic modeling the authors seek to illustrate the "simultaneity" of externalities—the double public nature of the benefits side of the equation and the notion that both demand behavior and supply behavior generate externalities and that "shared experience" is of value to each.[107]

In their article, *The Double Public Good: A conceptual framework for "shared experience" value,* Sable and Kling play out a typical argument between some economists and preservationists. From the perspective of the economists the argument is that there is an overprovision of preservation incentives by governments and that the result is an inefficient stock of historic buildings that are costly to preserve and maintain and do not produce adequate revenues. Preservationists respond to this cost benefit argument by emphasizing the larger economic impact (job creation, wage increase, crime reduction, and increase in property values), but Sable and Kling argue that a very important argument is ignored. The authors observe that non-market values (aesthetics, cultural, option, bequest, and existence values)[108] are only referenced in passing, but could be used to make the preservationists argument more persuasive. This line of thinking is very similar to the thesis of this paper and while this paper is looking at intangible benefits from development projects writ large, the lessons learned from the Sable and Kling paper are very relevant.

[106] Sable and Kling 2001
[107] Ibid
[108] Sable and Kling 2001

Sable and Kling build off of the Bergson-Samuelson social welfare function, W, to understand the optimal provision of historic preservation to maximize social welfare. The model is modified by defining

> both public and private benefits of households' production of individual heritage experience, which in turn depends on the stock of historic assets (a public good) and access effort (a private good). The public benefit of private experience arises from "shared experience [that fosters cultural identity and social understandings].[109]

The modified social welfare function is as follows:

$$W = W[u^1(\cdot), u^2(\cdot), \ldots, u^n(\cdot)]$$

$$u^i = u^i[y^i, x^i, x, H] = u^i[y^i, g^i(a^i, H), \sum_{j=1}^{n} g^j(a^j, H), H]$$

where:

y^i	=	private goods consumed by household i
x^i	=	private "consumption" of (built) heritage, where $x^i = g^i(H, a^i)$
$g^i(H, a^i)$	=	the ith household's production function for heritage experience
H	=	stock of preserved historic capital
a^i	=	physical and intellectual access by household i
$x = \sum_{j=1}^{n} x^j$	=	the aggregate level of joint consumption, representing the magnitude of "shared experience", with $x^j = g^j(H, a^j)$.

The goal of calculating non-market value of externalities is a bit like hitting a moving target. Theoretic models like that suggested by Sable and Kling advance the effort to value these externalities, but there are limitations when applied to real estate. For example, the data that Sable and Kling use is *ex post*, thus it is difficult to predict the future impact of a development on a particular neighborhood and more importantly for a developer to use this data to convincingly

[109] Sable and Kling 2001

suggest that additional value is being created and that the cost of supplying that value ought to be shared by those who benefit.

If it is true that you reap what you sow, then investing in projects with clear social benefits makes sense for building political capital and creating long term relationships with a community and a municipality, regardless of whether a "total value" can be calculated. Understanding how a development benefits the public good is important marketing for future deals and developments that are replete with public amenities or that create jobs. Developers should leverage such a project to solidify institutional and community partnerships that will reduce risk and increased approval timelines.[110] Private developers also stand to benefit in the long run. For example, investing in an underserved market can have great economic ripple effects which will come back to the private developer a few years down the road.

Identifying social value metrics is very important for a developer to articulate well fiscal and social benefits of a real estate project to potential social investors. Fiscal impact studies capture some of these metrics such as job creation. However, many of the other metrics are not included and that is due, in part, to the difficulty in measuring these indicators. If we were to put these indicators on a sliding scale several of them would fall under a category of "intangible" benefit and many, including economists, struggle to arrive at a method to approximate these values and account for them in cash flow projections.

[110] Sacks, S. (2005) "Double Bottom Line Real Estate Equity: A Good Funding Source for New Century Cities?" MIT: unpublished paper.

Below is a summary matrix[111] of social value indicators that are gleaned from the survey of social investors. These indicators are grouped as "indirect" and "non market value." The indirect values are very similar to indicators used in fiscal impact studies, while the intangible externalities are more difficult to quantify and not done so by most professionals in real estate valuation. These values are not included in a quantifiable way by any of the social investors, but many cultural economists argue that they are real production externalities. This list of social value indicators is not complete, but it does give a sense of some of the variables that measure social benefit and the list goes beyond typical line items in a DCF analysis.

[111] The list is based in part on a matrix developed by LISC and by Sable and Kling. Asterisk line items are excerpted from the LISC matrix, double asterisk are Sable and Kling.

Social Value Indicators

Metric Indicators	Metric	Objective
		Indirect Value
Comparison of pre-occupancy and post-occupancy surveys of business tenants.	Net new jobs provided by businesses leasing space. (Total jobs less any that existed prior to relocation)	Job Creation*
New employee information forms administered by all business tenants for each hire.	Jobs provided to disadvantaged workers by businesses leasing space.	
Annual Employment and Benefits Survey administered to each employer.	Number of jobs provided which meet the local living wage standard.	
Annual report on enrollments and placements completed by training providers.	Number of formal job training spots provided.	Job Training Opportunities*
Annual tenant income certification Annual comparison of rents to income statistics published by HUD	Rent as a percentage of area median income	Rental Housing Affordability*
Community needs assessment survey conducted at least every three years.	Percentage of project's tenants that provide services that were previously unavailable in the community	Citizenship
Financial Audits.	Amount of annual unrestricted cash flow generated by the project for use as organizational operating support or to subsidize services to building residents.	Income Generation*
Ownership and previous business experience information requested on rental application.	Percentage of tenants that are disadvantaged businesses which would not otherwise be able to lease comparable space.	Small Business Development*
Annual area rent study.	Percent by which rents for nonprofit (arts, service, etc.) tenants are below market rents for the area.	Nonprofit* Office Space*
		Non-Market Value
	Combination of private incentives and public programs to maximize public benefits	Public Accessibility**
	"…As more households use these resources or as they use them to a greater collective intensity, able to integrate symbolic meaning into their lives as members of a community or culture. This model assumes that the proliferation of historic knowledge and experience leads to common social identity, and cultural continuity and, hence, community value. Therefore, each household benefits from the collective experience of the built resource regardless of whether or not it directly consumes the resource (i.e. even if its own private consumption is zero, it benefits so long as the household's neighbors contribute to generating this social value)." (Sable and Kling, 2001)	Shared Experience Values**
	"Preservation generates individualistic non-use values that are independent of any actual access, consumption, or sharing, but that are supplied jointly to all households by the existence and magnitude of historic resources" (Sable and Kling, 2001)	Additional Non-use Values (i.e. option, existence and bequest values)**
	Combination of preservation and access create social sharing externality	Social Sharing**
	Creating an aesthetic signature and cache for a place, adding "address" value to a project.	Imaging/branding

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Articulating the positive impacts of a real estate project is very important to gain acceptance by the community and city planners. Discounted cash flow and fiscal impact analyses are the current best practice tools to achieve this end, however, non-market value may also be helpful. Many involved in the real estate industry—developers, planners, and social investors recognize this value, but fail to quantify it. While cultural economists have made progress in creating models to value these intangible assets, the relevance to real estate is minimal. There are other models, however, that advance the traditional metrics and may be useful to the real estate industry.

In researching and speaking with social investors, it is clear that there is a range of interpretation regarding "non market value" of an investment. For example, Goldman Sachs has a very loose intuition about what is socially beneficial and a very clear understanding of financial return hurdles while LISC has very clear social value indicators as well as total return hurdles—this is likely the result of their overall mission and stakeholder composition. Yet, each of the entities described in Section IV grasp the importance of social benefits to the bottom line. While social investor's fluency with explicit social value indicators and metrics vary, clearly identifying these indicators and arriving at a series of metrics is an important step for developers to articulate the fiscal and social benefits of a real estate project to municipalities, municipal partners and to financial partners.

There are several "double bottom line" models that attempt to quantify social value beyond the bottom line. The SROI model will be looked at in detail, however, because it is based on the typical DCF model that developers commonly use and is likely to have the most impact value as a result.

Social Return on Investment: The Roberts Enterprise Development Fund (REDF)

The Roberts Enterprise Development Fund (REDF)[112] is an organization dedicated to developing long term solutions for large social problems such as poverty and homelessness. The organization consults with a portfolio of nonprofit social enterprises (NSE) to increase organizational ability of the NSE to provide sustainable, long term solutions to social problems. The firm also creates tools that aid these organizations—including innovative methods to quantify the social impact of investments. Counted among these tools is Social Return on Investment (SROI). While REDF cannot claim sole provenance of the concept of SROI, the organization has evolved a method to monetize and quantify "socio-economic" values which are very similar to "indirect value" as defined earlier by the "total value" equation. REDF defines socio-economic value as

> [creating value] making use of resources, inputs, or processes; by increasing the value of these inputs; and then by generating cost savings and/or revenues for the public sector. These cost savings and revenues may be realized in decreased public dollar expenditures and in increased revenues to the public sector through additional taxes paid.

"Socio-economic" value will be referred to as "indirect value" for consistency with the rest of this study. Along with socio-economic value, the SROI model also calculates enterprise value which is the financial return on an investment. Again for consistency reasons, "enterprise value" will be referred to the equivalent "private value" as defined earlier by the "total value" definition.

The SROI model measures value and returns as indicates below:

Measuring Value:
- Calculate Private Value
- Calculate Indirect Value
- Calculate Blended Value

Measuring Return:
- Calculating Private Index of Return

[112] The Roberts Enterprise Development Fund (2001) "SROI Method: Analyzing the value of Social Purpose Enterprise within a Social Return on Investment Framework." Not published see REDF website: http://redf.org

Calculate Indirect Index of Return
Calculate Blended Index of Return.

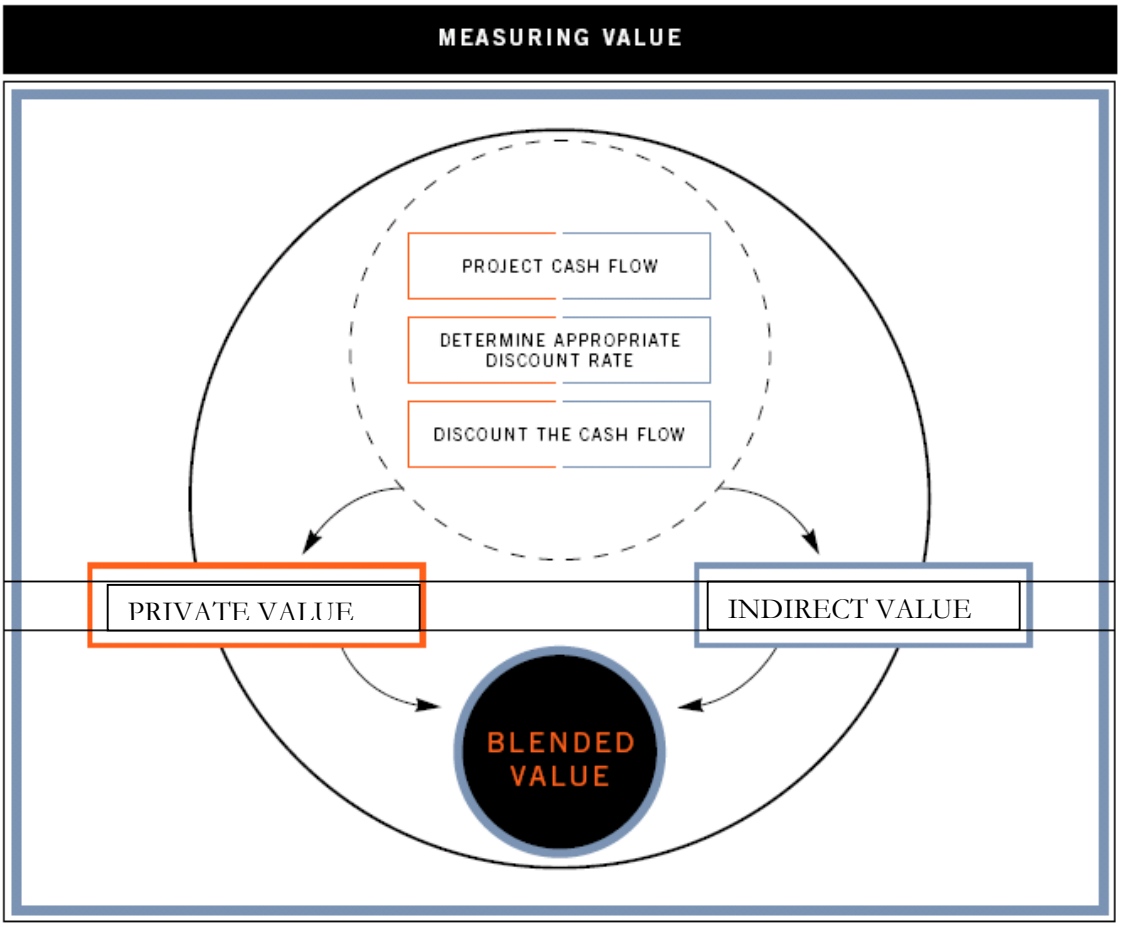

Figure: *Measuring Value* image is modified from REDF 2001.

For the purposes of this thesis, the value measurement will be explored in detail as will the Blended Index of Return.

Measuring Value

The process of calculating private value is very similar to the DCF method used by a developer or owner to calculate economic value. As in Section II, the same before tax cash flow projection over a ten year time horizon can be used. The reversion value is calculated using a going out cap rate and the free cash flow is discounted at the developers opportunity cost of capital.

Indirect Value is calculated in a very similar way to private value—the cash flows are projected, the terminal value is capped to get a reversion value in year ten, and the cash flows are discounted back to time zero. Indirect cash flows are counted as both public sector savings and tax revenue (or benefits to community) less social operating expenses. REDF notes that these "are not real cash flows," but instead serve as proxies to monetize the public savings that can be attributed to indirect the social impact of a development. Thus the imputed value that is calculated based on social value indicators and metrics is very similar to projections calculated in a fiscal impact study—which never actually accrue to any one person, but do impact a community. The benefit of this process is that private value and indirect value are in one place and will be combined to arrive at a blended value. So, unlike a fiscal impact study that sits in isolation from developers cash flow projections, this method incorporates the two.

The metrics and indicators used in REDF are different from those mentioned earlier in this section. REDF's objective is to alleviate poverty and homelessness and as such use different indicators (projected number of target employees, average public cost savings per target employee; average incremental increase in income taxes per target employee; and the projected social operating expenses of an enterprise). In the case of measuring the indirect benefits of real estate, the social indicators and metrics listed in the previous chart could be used. These indicators, however, are more qualitative in nature and are most effective as additional qualitative evidence. The data gathered from fiscal impact studies is best used in this case because the developer is responsible for collecting this data anyway. One could imagine that there is an inherent challenge in the determination of relevant line items—which line items should you track given that many of these items will involve the additional cost of labor and time to quantify. This is less of an issue in real

estate because the data from the fiscal impact study—which has already been gathered—could be used. Once the "indirect cash flows" based on fiscal impact indicators is collected and cash flows are projected the free cash flow is discounted back to time zero to get the present value. Determining the discount rate for the indirect cash flow can be a challenge. REDF uses a municipal bond rate as a proxy discount rate—under the assumption that the level of risk is similar to muni bonds. Muni bonds are debt obligations of state or local government that offer a promised return to investors. This approach makes sense in approximating the discount rate.

Finally, the private value and the indirect value are added together—less any long term accrued debt—to arrive at the Blended Value.

Private Value	PV $
+	
Indirect Value	PV $
=	
Total Value Created	PV $
-	
Less Long Term Debt	$
---	---
Blended Value	$

Measuring Return

REDF has also created a tool to measure the "monetizable" return on an investment. To do this one needs to know how much was invested in a project, how much monetizable value was created, and then there needs to be a comparison of the investment value created. REDF defines this using an Index of Return.

Index of Return= Projected Value Created in the Future/ Investment to Date

The ideal index value should be greater than one indicating that for every dollar invested one dollar of value has been created. So for example an index value of $10 means that for every dollar invested, $10 dollars of value is created.[113]

To calculate the investment to date, the present value of all investments to date is aggregated—between the private value (traditional DCF) and indirect (fiscal impact). This amount is discounted by using a weighted discount rate, again, using the private discount rate and the indirect discount rate. For example:

	VALUE	% OF VALUE	DISCOUNT RATE	% OF RATE
ENTERPRISE	$ 411,906	2%	12.08%	0.23%
SOCIAL PURPOSE	$20,861,055	98%	6.65%	6.52%
			Weighted Average Discount Rate	6.76%*

*numbers not additive due to rounding error

Figure: Example of Investment to Date as seen in REDF SROI reader, 2001

The discount rate derived from the above calculation can be applied to the historical aggregate investment to get the present value of investments to date.

[113] SROI Method, 2001

	1999	1998	1997	1996	TOTAL
HISTORICAL INVESTMENT	$133,750	$ 209,000	$ 25,000	$ 47,000	$ 414,750
PRESENT VALUE OF HISTORICAL INVESTMENT	$133,750	$ 223,118	$ 28,492	$ 57,183	$ 442,543
			Investment to Date		$ 442,543

Figure: Application of weighted discount rate to investment to date, REDF 2001

The private index of returns is calculated by comparing financial performance to the investment required—the present value of projected cash flows divided by the investment to date. The indirect index of returns is calculated by comparing the monetizable social impact (fiscal impact) to the investment it required. The blended index value of return shows the return on both the private asset and the indirect social benefits as compared to the investment to date. Again in both cases, the index should be interpreted as described previously—for every one dollar invested, $x of value is created.

This is a very interesting method for developers, in part, because the data for this process is already available—developers will have both DCF projections and fiscal impact data. This method simply brings the two pieces together and yields a readily understandable metric: for every dollar invested $x of value is created. There are some limitations to the process, however. One of the short term challenges is that there is not currently an index of returns from development projects. The lack of industry comparables makes the individual index value a little less compelling. There is no way to tell what a Blended Index of Return of 40 means relative to other properties because index values are not calculated across the board.[114]

[114] Ibid

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In 1961 New York City passed a zoning law requiring developers to create public space and amenities in exchange for building taller structures. Under this legislation a total of 82 acres of open space was built in exchange for 16 million square feet of floor space. This *quid pro quo* reshaped 503 "privately" owned public spaces.[115] It also underscores an important point regarding the non-market value of a public space. In 1961 city planners felt that NYC was wanting of additional public space and as such promoted this legislation, however as time passed these spaces became less valuable to the city because they were so abundant. It could be argued that today, the plazas and parks that resulted from the 1961 legislation benefit the private owner more so than the residents of the city because of diminishing returns of public benefit. In fact the study, Privately Owned Public Space: The New York City Experience, concluded that 41% of these spaces were of marginal value, plus many of the building owners were not in compliance with the legislative requirements to make the spaces publicly accessible to the public.[116]

Measuring intangible non-market value is akin to hitting a moving target. Non-market value is difficult to calculate unless there is a complicated model, such as that offered by Sable and Kling, with the appropriate data. Even then the assumptions change over time. As in the case of the NYC plazas or even the earlier example of preserving historic structures, there are diminishing returns for such an investment. As more structures are preserved and as more parks are built they become less valuable to the users. Thus the total value equation is unquantifiable, at least for the purposes of real estate developers. Recall the equation:

[115] Gotham Gazette web site: http://www.gothamgazette.com/article/issueoftheweek/20010205/200/232
[116] Kayden, J. S., New York (N.Y.). Dept. of City Planning., et al. (2000). Privately owned public space : the New York City experience. New York, John Wiley.

Total Social Value =	*Private Value (1) + Value of an Asset to Non-Owner (2) + Non-Excludable, Non-Rival Intangible Value (3)*

Developers and their financial partners (social investors) can closely approximate private value and the value to non-owner users and municipalities can estimate the value to non-owner users, but the final piece of this puzzle remains unsolved. Despite best efforts to quantify non-market value, it is only through negotiation that developers and planners determine which social costs and social benefits make economic sense and sense to the community.

Cities are charged with optimizing public benefits and city officials want to see projects developed that successfully meet these ends. A municipality would like to see a developer recognize in a concrete way that additional social value could be created through a project. For this reason, enumerating the total value of a project is an important selling point for a developer when negotiating with a municipality. In addition, a developer builds political capital when he engages in such projects—Norman Leventhal's Post Office Square project is an excellent example. Given that quantifying total social value of a real estate project is so difficult, assigning costs and benefits to each stakeholder is determined during the negotiation process. In order to capture what is perceived to be additional social value (because again, it is too complicated to quantify), negotiations between a developer and a municipal planning body will be extensive and could run from fluid permitting process to flexible financing options (TIFs, for example) to relaxed zoning requirements. Because non-market benefits are intangible and hard to measure the developer, financial partners, and the city should be cautious in this process for several reasons:

1. "Fair share" determined in an informationally inefficient industry: All stakeholders should be sure that they are not giving or taking too much. This is a difficult point because the real estate industry is not transparent or informationally efficient, so determining the tipping point or break point for either party is difficult to approximate. In fact, this lack of transparency can work to the developer's advantage during negotiations where claims of profitability or project breaking points are impossible to confirm in any substantial way.
2. When does it end?: How are relevant social metrics chosen for each project and determined to be reasonable measures of social value? Which criteria are important and useful and when is it just rent-seeking behavior?
3. Reassessing Impact: As in the case of the New York City plazas built under the 1961 legislation, a municipal body needs to re-examine the impact of public goods. There is a threshold at which too many parks or too many historic structures do not make economic sense and municipal agencies need to be aware of this. Developers and financial partners will also be aware of the diminishing value and will be less willing to pay for these diminished benefits. Reassessment is a challenge within a government framework that does not focus on a re-assessment and re-evaluation of policies and laws on a regular basis—once on the books, always on the books.
4. Public Private Partnerships invite conflict of interest: Public private partnerships can be very effective at pushing forward development, but these partnerships also ask public agencies to be both entrepreneurial and publicly interested, which can be in conflict.
5. Timing: There are moments when a developer can argue effectively that a muncipical government should bear more of the cost (either directly or indirectly) to capture more

social benefit. This point should be early--as early as possible. The planning process is by its nature very public and transparent. If a developer works through draft versions of a plan after many community meetings, etc and the planning board approves one of these, then it will be difficult to then go back and amend the plan because "value was left on the table." There is a general political lethargy to amend agreed-upon public amenities. A solution for the timing issue is to be flexible and creative upfront. For example, a developer could propose to substitute a better-designed amenity in place of a larger amenity. So this is a quality/quantity issue that would be impossible to negotiate after the fact, but might have legs if broached early on.

6. Creative financing tools: Regardless of timing, creative financing tools can help to make a project feasible.

Social Investors are a new force that can help to achieve greater social benefit despite the inability to quantify the contribution. Negotiating terms with an investor is incredibly important to the feasibility of a project. These capital sources are looking for projects with significant upside growth potential and social benefits; a developer needs to convincingly relay that the project of interest will meet these investment hurdles. The SROI index value described in the previous section could help to accomplish this goal. As noted earlier, this will clearly spell out the amount of value recouped for the dollar invested. The industry could benefit from an industry wide index makes a lot of sense, for interested investors and for municipalities.

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