DEVELOPMENT IMPACT FEES: A PRIMER

By

Carmen Carrión and Lawrence W. Libby¹

The use of development impact fees to finance public facilities that are necessary to service new growth is a practice that has gained importance and acceptance in the last decade. In the U.S. the practice and widespread use of the DIF are asymmetric. Even though DIF are widely accepted, many public officials, developers and the general public do not yet understand the need for DIF and their effect on the economy. There are important policy and legal issues involved. Selected state experience is reviewed here.

Definition

Development Impact Fees are one time charges applied to new developments. Their goal is to raise revenue for the construction or expansion of capital facilities located outside the boundaries of the new development that benefit the contributing development (Nicholas, et al., 1991). Impact fees are assessed and dedicated principally for the provision of additional water and sewer systems, roads, schools, libraries and parks and recreation facilities made necessary by the presence of new residents in the area. The funds collected cannot be used for operation, maintenance, repair, alteration or replacement of capital facilities.

A development impact fee is a form of financial exaction but there are differences in specific terminology from one place to another. In some communities these development charges are called impact fees while others may be called benefit assessments, user fees or connection charges. In other words, a development impact fee is a financial tool to reduce the gap between the resources needed to build new public facilities or to improve ones to serve new residents and the money available for that purpose.

Impact fees became popular when voters resisted higher property taxes and federal revenues for local public facilities declined. Local governments were forced to abandon traditional ways of financing new infrastructure and public services and move toward an alternative source of financing.

¹ Research Associate and Professor, respectively, Department of Agricultural, Environmental, and Development Economics, The Ohio State University, Columbus, Ohio.

Frank and Downing (1988) found four community characteristics that may induce the use of impact fees. First, there is a large population base (How is that important?). Second, the community is experiencing moderate to rapid growth. When a city is growing and its residents wish to maintain a constant level of public services, both infrastructure and current services must increase over time. The city has to decide how to finance the cost of both. Third, the community already faces high property taxes. Evidence shows that communities that devote significant tax resources to the support of growth are most likely to adopt an impact fee scheme as an alternative way of financing development. Finally, there is large capital investment to maintain. As communities grow larger, there is the necessity for a larger sewer system which is more expensive to replace and maintain.

Policy Considerations

Although impact fees do not alter total service or infrastructure costs, they do affect the distribution of these costs. Each community will need to make a policy decision about whether the cost of new infrastructure is charged directly to the new residents or shared, via higher taxes, among all current residents. This is a sensitive issue because previous residents can refuse to raise the taxes needed for new facilities serving new people, or if the costs are charged to new users, previous residents can enjoy the benefits from the construction of new public facilities without paying for them.

The choice of an infrastructure financing method affects the pattern of urban development. For example, residential density and distance from a water or sewer treatment plant influences the costs of sewer facilities or services. Recht (1988) mentions two approaches to determine the cost of any development, the average-cost pricing method that sets a flat connection fee², and a marginal-cost pricing system in the form of a three-part tariff. One part of the tariff would be a charge for the costs of the facility used to provide water and sewer services, like a water treatment plant. The second part of the tariff is a charge for costs of delivering the service, such as the costs of connections or extensions. The third part of the tariff is a charge for actual use based on the short-run costs of producing the service. Under this method, the goal of public officials is to

² A flat connection fee functions as a subsidy to outlying development because the areas less costly to serve subsidize development in areas that are more expensive to serve

determine the location of the central facilities and then price their use. The market would then dictate appropriate and efficient land use patterns.

The premise on which impact fees are based is that development should pay the full marginal cost of providing facilities necessary to accommodate growth. Impact fees, then, might offset many of the subsidies of new development that produce a "leapfrog" urban sprawl pattern that allows development to skip over land closer to the urban area. By adopting impact fees, current residents could ease the burden of provision of incremental infrastructure by shifting future infrastructure costs onto new residents (Brueckner, 1997). Therefore, new residents are essentially buying their way into the community (Nicholas et al., 1991)

Impact fees can be used as an instrument to guide development efficiently when used based on a comprehensive plan (See Leitner and Schoettle, 1993; Brueckner, 1997) and when they are well implemented, allowing local governments to finance construction improvements along with a schedule for their funding and construction, ensuring that the improvements are in place to serve new development. Thus, an impact fee is an effective tool in guaranteeing adequate infrastructure to accommodate and facilitate growth in areas where there is a lack of public facilities, also eliminating substantial infrastructure costs in areas where there is little current development by avoiding a leapfrog urban sprawl pattern.³

Adopting an impact fee scheme may carry additional costs to the city itself. First, all things being equal, businesses may choose to locate in a community without impact fees instead of one that has impact fees, thus retarding urban growth. Second, impact fees require local governments to engage in more professional and sophisticated capital facilities planning, requiring additional administrative staff with the necessary skills. Thus, a disadvantage of the impact fee scheme is that it is more complicated and expensive to implement. A fee system may also reduce the price of undeveloped land because impact fees act as a deterrent to develop open land⁴.

3

³ According to Downs, some negative effects of urban sprawl are increased traffic congestion, consumption of large amounts of undeveloped land, need for costly new infrastructure and an exc essive consumption of energy in private transportation. (1998)

⁴ For a more detailed discussion See Brueckner, 1990

According to Kaiser, Burby and Moreau (1988) there are three groups of administrative factors that determine success in adopting an impact fee scheme. First, there must be a need for innovation resulted from a rapid population and employment growth and an increasing demand for public facilities. Second, there must be administrative capacity to innovate, this means that the government structure is able to review, deliberate and implement an impact fee scheme. Finally, there must be land use and facility planning and coordination capacity because impact fees depend on a comprehensive land use and capital improvements program.

Economic Considerations

The demand for facilities increases over time as a result of population growth and change in community preferences. The problem of trying to meet the increasing demand is that the public facilities expansion is generally a lumpy investment⁵. Current costs of constructing facilities needed in the future are estimated but the cost should be spread among all future users, not just the new development.

Most facilities have efficient service areas, in that they are constructed and operated at the least cost for users within that area. The problem is that people outside the service area can use those facilities as free riders, where there is no exclusivity in the service areas. In theory, impact fees overcome this problem because new development is charged only for its expected level of use of the new facility and not for the total cost.

Impact fees may lead to certain types of inequities as well. Fees are equitable horizontally if the new developments are the same size and kind but impact fees are non-equitable vertically in that lower value developments pay more in impact fees than higher value developments of comparable community impact. Also, an impact fee scheme may discriminate against low-income households because it raises housing prices and, in a competitive market and in the short term, the developer will attempt to pass these costs onto the buyers.⁶

⁵ The facility is built infrequently and cannot be expanded incrementally to approximate smoothly linear increases in size. Examples are water and sewer plants, schools, libraries, major roads and parks. The construction of local roads, neighborhood parks, police, fire, emergency medical, are examples of capital investments that can be expanded gradually.

⁶ Huffman et al. 1988 and Singel and Lillydahl (1990) provide an empirical analysis where they evaluate the effect of impact fees on the housing market in Loveland, Colorado; Nicholas, 1995.

There is the need to determine who will pay development impact fees. It is easier to pass impact fees forward from developers to consumers, than backwards from developers to landowners (National Association of Home Builders, 1997). If this is true then there is the assumption that buyers of new housing will pay the fees through higher prices due to impact fees. On the other hand, if the fee is imposed before developers have had a chance to account for them, developers will have to pay the fee out of their profits (Nicholas, 1997). In a theoretical context, the incidence of impact fees would be similar to the incidence of other kinds of taxes (see Musgrave and Musgrave, 1989).

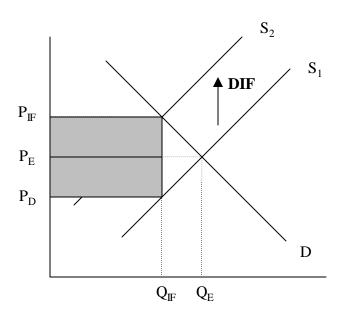


Figure 1

If the housing market is competitive before impact fees, housing demand, denoted as D in figure 1, and housing Supply (S_1) are in equilibrium, where Q_E is the output of housing in equilibrium and P_E is the price of housing in equilibrium. When impact fees are implemented, denoted as IF in the figure, the supply curve shifts to the left, from S_1 to S_2 , indicating a higher cost of production. The result is a lower housing output Q_{IF} , a higher housing price P_{IF} and a lower price received by the developer P_D . The shaded area represents the community's revenue.

Another question that arises is the relative share of the impact fee paid by seller and buyer. The answer depends on the elasticities of demand and supply curves. If

buyers of new homes are not price responsive (demand is inelastic) they will pay a greater portion of the impact fee. In the short term, both buyers and developers bear part of the burden unless developers offset their share of the fee by reducing lot or dwelling size, quality and amenities (See Huffman et al, 1988).

Legal Considerations

There are a many court cases on impact fees, focusing primarily on local government authority to ratify the impact fee and state and federal limitations⁷. An impact fee must meet three constitutional tests. First, the fees must meet a substantive due process test, where the local government has the authority to assess, collect and spend impact fees for a determined public facility.8 The manner of assessment, collection, and expenditure must clearly qualify the payment as a fee and not a tax.⁹

Second, the equal protection test, the fees must be applied to all parties on the same basis. All new development that imposes an impact must be assessed the same kind of fees, although fees may vary by the magnitude of impacts and the fees must be rationally related to the public purpose¹⁰.

Finally, the "takings" test must assure that the local authority objective is sufficiently close to the method chosen to accomplish the stated objective and that property is not "taken" without just compensation. 11

From different court cases, three nexus tests of impact fees have been developed to meet the constitutional tests: (1) the "reasonable relationship" test is based on California exaction practices and requires that there is a reasonable connection between the fee charged to the developer and the needs generated by that development. (2) The

6

⁷ See Leitner and Schoettle (1993) for information in specific court cases. Also there is an analysis of State Impact Fee Legislation.

⁸ Home Rule Authority is normally found to include the power to impose impact fees. See also, in Development Impact Fees: Policy Rationale, Practice, Theory & Issues (1988), discussions from Juergensmeyer, Stroud and Andrew & Merriam related to this matter. See, e.g. Pennsylvania Coal v. Mahon 260 U.S. 393, 415 (1992)

⁹ See, e.g., City of Fayetteville v. IBI, Inc., 659 S.W.2d 505, 507 (Ark 1983); Eastern Diversified Properties, Inc v. Montgomery County, 319 Md. 45, 570 A.2d 850 (1990).

¹⁰ In other words, there must be a rational relationship between the need for new facilities to accommodate growth and the fees new development pays to finance those facilities. See also, Contractors & Builders Association of Pinellas County v. City of Dunedin, 329 So.2d 314 (Fla. 1976); Ivy Steel and Wire Co v. City of Jacksonville, 401 F. Supp. 701 (Fla. 1975);

¹¹ Nollan v. California Coastal Comm'n, 107 S. Ct. 3141 (Cal. 1987); Dolan v. City of Tigard, 114 S. Ct. 2309 (1994)

12 See Leitner and Schoettle(1993), This test has been applied only in Illinois and Rhode Island.

"specifically and uniquely attributable" test that requires that the fee charged to the developer is directly and uniquely attributable to that development.¹³ (3) The "rational nexus" test, which states that there be a proportionality between the amount charged to the developer and the type and amount of facilities demand generated by the development and that there be a reasonable connection between the use of the fees and the benefits accumulated to new development¹⁴.

State Legislation

Several states have passed statewide legislation that affects the ability of public agencies to levy impact fees. The use of impact fees has expanded in the last 15 years. Leitner and Schoettle (1993), analyzed the statutes governing impact fees adopted by twenty states with a general impact fee legislation. Also they highlighted, that the development of impact fees legislation across states has been asymmetric and diverse, ranging from very specific, comprehensive, and restrictive, as is the case for the Texas and Illinois impact fee statutes to very brief and general, such as the legislation in New Jersey or Indiana.

Some examples

<u>California</u> – Assembly Bill1600, which became effective on January 1, 1989, regulates the way that impact fees are imposed on development projects. The agency imposing the fee must (1) identify the purpose of the fee; (2) identify the use to which the fee is to be put, including the public facilities to be financed; (3) show a reasonable relationship between the fee's use and the type of development project; (4) show the reasonable relationship between the public facility to be constructed and the type of development; and (5) account for and spend the fees collected only for the purposes and projects specifically used in calculating the fee.

<u>Florida</u> -- The Growth Management Act of 1985 requires local agencies to maintain adequate service levels for public facilities and prohibits approval of development that would cause a reduction in service level for existing users. The act also

¹³ Pioneer Trust and Savings Bank v. Village of Prospect, 16 N.E. 2d 799 (Ill. 1961)

¹⁴ See, Home Builders & Contractors Ass'n v. Board of County Comm'rs, 469 U.S. 976 (Fla. 1984); Nicholas et. al. (1991); Salt Lake County v. Board of Educ. Of Granite Sch Dist., 808 P.2d 1056 (Utah 1991); Contractors and Builders Ass'n of Pinellas County v. City of Dunedin, 329 So.2d 314 (Fla. 1976), cert denied, 44 U.S. 876 (1979)

¹⁵ They mention that prior to 1987 only three states had a general impact fee legislation: California, Arizona and New Jersey.

requires the local government to provide public facilities that are consistent with the community's land-use plan. The act does not specifically allow impact fees, since the courts have ruled that the authority to levy such fees is a function of the Florida Constitution. But "concurrency" as a development rule accomplishes much the same purpose.

<u>Illinois</u> – 605 ILL. COMP. STAT. ANN. 5-901 *et. esq.* Statute adopted in 1988, allows collection of transportation impact fees for roads that are directly affected by traffic demands generated by new development. The statute is an example of the "specifically and attributable" test.

<u>New Jersey</u> – N.J. STAT. ANN. 40:55D-42. The Transportation Development District Act of 1989 allows the creation of transportation improvement districts and transportation development districts. The districts are formed by the New Jersey Department of Transportation on petition of local officials. The legislation provides for the development of a master traffic plan to measure the extent of existing deficiencies and the impact of future development. Impact fees may then be charged to new development based on specific impacts and any projects necessary to offset the impacts.

<u>Texas</u> – TEX. LOCAL GOV'T CODE ANN. 395.001 *et esq*. The state of Texas is cited as having the first legislation that specifically allows cities to impose impact fees. The Texas law, unlike other states' legislation, specifies not only the procedure for calculating fees but also the formulas to be used and those improvements that may be financed by impact fees (Bogard, 1990).

<u>Kentucky</u>—The state of Kentucky has an open space mitigation fee for Lexington-Fayette County, as an appendix of the Lexington-Fayette County zoning ordinance. It is part of an urban County Comprehensive Plan. The ordinance also considers credit for open land dedication. If the area proposed for development includes lands dedicated for parks in the Expansion Area Master Plan, the developer will dedicate such lands to the Lexington-Fayette County Governments in lieu of paying an exaction fee. The interpretation of the state of the paying an exaction fee. The interpretation of the state of the paying an exaction fee. The interpretation of the state of the paying an exaction fee. The paying the paying the paying an exaction fee. The paying the

8

¹⁶ Assuring that new development is served by adequate public facilities and bears a proportionate share of the cost of improvements necessary to provide roads, parks, open space, sanitary sewer treatment.

¹⁷ The developer will obtain a credit for the value of such lands against any park exactions that may be due.

<u>Indiana</u>— IND. CODE ANN. 36-7-4-1300 *et esq*. The impact fee legislation adopted by state of Indiana reflects the public concern for affordable housing. Besides, Indiana impact fee ordinance states that a single and unified impact fee is imposed on each new development.

<u>Ohio</u> -- Meck and Pearlman in their annual update of *Ohio Planning and Zoning Law* (2000) provide an excellent review of important cases. The following draws heavily on their work. Ohio has no specific enabling legislation for local development impact fees. Several recent court cases address the constitutionality of utility tap-in fees or recreational excise taxes imposed by municipalities under their general home rule authority. The cases focus on the authority to impose such fees and the "reasonableness" of the fee, that is, the relationship between the fee charged and the actual cost of providing the service in question.

One of the first Ohio cases was the 1967 dispute between Englewood Hills, Inc. and the Village of Englewood. A Montgomery County appeals court ruled in that case that Ohio municipalities may levy tap-in charges for water and sanitary sewer services if the fees are "fair and reasonable and bear a substantial relationship to the cost involved in providing the service." There was sufficient engineering evidence that the fees in question bore a direct relationship to per unit cost of providing the service.

The Ohio Supreme Court confirmed a municipality's authority to impose sewer tap-in or connection fees in Amherst Builders Association versus the City of Amherst.²⁰ The Court noted that the connection fee must bear "a reasonable relationship to the entire cost of providing service to those new users." The fees must not be available for general services, only for the sewer system. Fees may be based on replacement cost, less depreciation, or on estimated sewer flowage from various users.

Another example of municipalities exercising their home rule power is in Towne Properties versus the City of Fairfield,²² in which the Ohio Supreme Court affirmed a municipality's authority to impose an excise tax on new homes in the city to generate funds for needed public recreation facilities. The Court held that municipalities might

¹⁸ Englewood Hills, Inc. V. Village of Englewood, 14 Ohio App.2d 195, 198, 237 N.E..2d 621, 624 (Montgomery 1967)

¹⁹ Article XVIII, Section 4 of the Ohio Constitution.

²⁰ Amherst Builders Ass'n v. City of Amherts, 61 Ohio St.2d 345, 348, 402 N.E.2d 1181, 1184 (1980).

²¹ Amherst Builders Ass'n v. City of Amherts, 61 Ohio St.2d 345, syllabus, 402 N.E.2d 1181(1980)

adopt a local charge on new development, absent an express or implied prohibition by the state legislature.

When a local government attempts to impose fees that exceed the cost of providing the service related to tapping into the utility, a court would hold the fees invalid. For example, in State ex. Rel. Waterbury Development Co. v. Witten, ²³ the Ohio Supreme Court affirmed a Lucas County appeals court in striking down a water tap-in charge required before building permit could be issued as having no relationship to the present or future cost of providing water. The Waterbury appeal also invalidated a "New Park Development Fee" required prior to the issuance of building permits for residential, commercial or industrial construction. The appeals court noted that persons owning homes prior to the passage of the ordinance had not been taxed even though they were entitled to use the parks.

The next case illustrates the consequences of enacting impact fees without the proper planning groundwork. A Cuyahoga County appeals court invalidated on federal and state equal protection grounds the City of Westlake impact fee requiring payment as a condition for issuance of a building permit. The fee, characterized as a tax, passed shortly after voters rejected an income tax referendum. The court contended that the ordinance authorized the city council to use the impact fee revenue from new commercial, industrial and residential development to maintain existing recreational facilities, "which are also used, and presumably presently supported by property and income taxes, by the present residents of the city."²⁴

In 1993, the city of Beavercreek, Ohio established an impact fee on new land developments within an area of the city defined as an "impact fee district." The purpose is to provide for the new streets, roads, and related traffic facilities associated with the new development. The fee is paid with application for a zoning permit or final residential plat approval concerning the land to be developed in the special impact fee district. Funds collected from the developers of the land within the district will go into a special trust fund for providing traffic system improvements necessitated by new development. No funds may be used for periodic maintenance. The impact fee ordinance was intended

²² Towne Properties v. City of Fairfield, 50 Ohio St.2d 356, 364 N.E.2d 289 (1977)

²³ State ex rel. Waterbury Dev. Co v. Witten, 58 Ohio App.2d 17, 387 N.E.2d 1380(Lucas 1977)

²⁴ Building Indus, Ass'n of Cleveland & Suburban Countiesv. City of Westlake, 103 Ohio App.3d 546, 660 N.E.2d 501 (Cuyahoga 1995)

to shift an appropriate share of the cost of new roads and streets onto the new development.

The Court contrasted the Beavercreek ordinance with those in Towne Properties and Westlake. Impact fee dollars go to a separate fund, thus restricting their use to constructing the roads needed to serve new development. The Court found that the ordinance was based on sound land use planning, passed the dual nexus test linking the fee to demonstrated need and appropriate level and did not constitute a regulatory taking. The trial court declared the Beavercreek ordinance to be a constitutional exercise of home rule authority. But the Greene County Court of Appeals reversed in favor of the plaintiffs, Homebuilders Association of Dayton and the Miami Valley. The court concluded that the impact fees should be characterized as a tax. One reason, said the court, was because the city financed the defense of the ordinance out of the fees themselves, although typically defending litigation against challenges is a general city responsibility, not something unique to a particular ordinance. Using the fees in an adversarial context to support litigation costs, while not absolutely prohibited, "makes the ordinance operate more like a tax than a fee." The Court ruled against the city because of the absence of a matching fund to augment impact fees collected.

The Ohio Supreme Court received this case in November 1999 and issued its finding in June 2000 reversing the Appeals Court decision and upholding the Beavercreek ordinance. The city had made an extraordinary effort to limit the fee to developments necessitating related new transportation expenditures. A deduction was made for "pass through" existing traffic, and specific exemptions were granted. The court was persuaded that the impact fee was indeed a fee and not a tax and that a matching fund was not required to remain a constitutionally valid action under home rule authority.

Conclusions

1. Development impact fees acknowledge that new development frequently creates infrastructure costs greater than the revenue generated for the municipality providing the service.

25 Home Builders Ass'n of Dayton v. City of Beavercreek, 1998 WL 735931, Nos. 97-CA-113, 97-CA-115.

- 2. Development impact fees may raise the cost of development and conceivably will affect location decisions by residents or businesses. If those location decisions are highly price responsive (elastic demand) then such other methods as metered user fees may be more appropriate for the municipality than impact fees.
- 3. Policy experience with impact fees is highly diverse, inconsistent from state to state. Some have statewide enabling statutes dealing specifically with local impact fees. In other states authority is given to certain municipalities. In others, by far the more numerous, impact fee policy has evolved through court tested specific efforts by municipalities or other jurisdictions to generate funds they need to provide needed and demanded services. In Ohio, municipalities and home rule townships have acknowledged authority to develop an impact fee structure, subject to constitutional tests of equal protection and due process. Essentially, valid fees must be related to the demanded cost of required new services and must be used for those services only.

References

- Altshuler and Gomez-Ibañez. "Regulation for Revenue" The Political Economy of land use Exactions. Washington, DC: The Brookings Institution, 1993.
- Bogard A. (1990) "Impact fees in a small Texas City" Gov. Finance Review. 5(3), 15
- Blewett, Robert A., Arthur C. Nelson. 1988. A public Choice and Efficiency Argument for Impact fees. In Development Impact Fees: Policy Rationale, Practice, Theory, and Issues, edited by Arthur C. Nelson. Chicago: Planners Press, American planning Association, 281-89.
- Brueckner, Jan A. 1997. Infrastructure financing and urban development: The economics of impact fees. Journal of Public Economics. 66.383-407.
- Chadbourne, Joseph H. and Mary Chadbourne, 2000. Common Ground. A Practical Guide to Protecting Rural and Urban Land. A Handbook for Making Land-Use Decisions. 3rd Ed. Chadbourne & Chadbourne, Inc.
- Downs, Anthony. 1998. The Most Important Cost of Suburban Sprawl. The value of Land. Annual Review Lincoln Institute of Land Policy.
- Frank, James E., and Paul B. Downing, 1988. Patterns of Impact Fee Use. In Development Impact Fees: Policy Rationale, Practice, Theory, and Issues, edited by Arthur C. Nelson. Chicago: Planners Press, American planning Association, 3-21.
- Juergensmeyer, Julian C. 1988. The Development of Regulatory Impact Fees: The Legal Issues. In Development Impact Fees: Policy Rationale, Practice, Theory, and Issues, edited by Arthur C. Nelson. Chicago: Planners Press, American Planning Association, 96-112.
- Huffman, Jr., Forrest, Arthur A. Nelson, Marc T. Smith, and Michael A. Stegman, "Who Bears the Burden of Development Impact Fees?" Journal of the American Planning Association. 54(1):9-55
- Kaiser, Edward J., Raymond J. Burby, and David H. Moreau. 1988. Local Governments' Use of Water and Sewer Impact Fees and Related Policies: Current Practice in the Southeast. In Development Impact Fees: Policy Rationale, Practice, Theory, and Issues, edited by Arthur C. Nelson. Chicago: Planners Press, American Planning Association, 22-36.
- Leitner, Martin L. and Susan P. Schoettle. (1993) A Survey of State Impact fee Enabling Legislation. Urban Law 25.491
- Meck, Stuart and Kenneth Pearlman. (2000) Ohio Planning and Zoning Law. Baldwin's Ohio Handbook Series. West Group.

- Musgrave, Richard A., and Peggy B. Musgrave. 1989. Public Finance in Theory and Practice, 5th ed. New York: McGraw-Hill.
- National Association of Home Builders, Impact Fee Handbook, Washington, DC, 1997.
- Nelson, Arthur C. 1995. Development Impact Fees: The Next Generation. In Exactions, Impact Fees and Dedications: Shaping land-use development and funding infrastructure in the Dolan era. Edited by Robert H. Freilich and David W. Bushek. State and Local Government Law Section/American Bar Association, 87-106
- Nicholas, James C., Arthur C. Nelson, and Julian C. Juergensmeyer. 1991. A Practitioner's Guide to development Impact Fees, American Planning Association.
- Recht, J. Richard. 1988. Rose Bushes Have Thorns. In Development Impact Fees: Policy Rationale, Practice, Theory, and Issues, edited by Arthur C. Nelson. Chicago: Planners Press, American Planning Association, 380-87.
- Ross, (1992) Journal of Urban Planning and Development
- Singell, L.D. and J.H. Lillydahl. 1990. An empirical examination of the effect of impact fees on the housing market. Land Economics 66.82-92
- Weinstein, Alan. Ohio Cle Land Use and Zoning. Seminar Impact Fees. Cleveland-Marshall College of Law, Cleveland, Ohio