

## Chapter 37

### The Wealth of Nature

#### **Serving the Environment and Economy Through Regional Planning**

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#### **Economy versus environment?**

How do economists make the case for regional planning? First, perhaps, they need to convince themselves. Many economists believe there is likely to be a trade-off between the objectives of environmental planning and economic welfare. Even if one grants that planning to protect environmental resources suppresses growth, this position relies on a conventional, and incomplete, view of what economic welfare means.

In 1992, for example, the Center for Urban Policy Research (CUPR) at Rutgers University studied the economic impact of the newly-established New Jersey State Plan. This report was mandated by the state legislature and completed under state supervision. One section of the CUPR report estimated that the State Plan would reduce statewide infrastructure costs by \$1.3 billion due to its encouragement of compact development and growth in areas with excess infrastructure capacity. “With less construction spending,” the report argued, “there will be fewer construction jobs and, through the multiplier, fewer jobs in industries that are related to construction.” (Burchell et al. 1992, p. 43.) The authors went on to estimate that the State Plan

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would lead to 9,000 fewer people, 11,000 fewer jobs, and \$1.7 million less personal income in the year 2010 when compared to trend development.

In an economy the size of New Jersey's, these numbers are not all that significant. Nor is it obvious that the report's authors — let alone its readers — viewed these projected plan impacts with alarm. Too often, however, calculations like these are used to argue that a given environmental or planning regulation will exact a penalty in the form of reduced economic growth. This kind of argument relies on a very narrow understanding of economic welfare. The concept of economic welfare should include not only the income opportunities that become available through growth and spending, but also the aesthetic, recreational, and quality-of-life benefits of open space. The fact that it is difficult to put a price tag on these latter kinds of benefits does not make them any less real. Indeed, the free market's failure to take such benefits into account could well mean that the higher, trend growth scenario is the "wrong" one, while the more sluggish planned growth scenario forecast by CUPR represents the true social optimum.

In an article that makes clear he is no tree hugger, urban economist Jan Brueckner makes precisely this point. He argues that farmers are unable to charge for the open space and anti-congestion services they provide unwittingly to their residential neighbors. These services have genuine economic value; but without any obligation to pay for them, the neighbors behave as "free riders." Any introductory economics textbook can tell you the result of such a situation. The economic good — scenic open space, in this case — will be *underprovided* relative to the universal standard of welfare to which all economists subscribe. Brueckner concludes that some regulation of urban sprawl may be justified in order to retain open space benefits. (Brueckner 2000, p. 167.)

This argument about the quality-of-life benefits of open space is frequently extended to the provision of so-called “ecosystem services” that support human life in a more fundamental way. Perhaps the most famous domestic example of land preservation passing a cost-benefit test on grounds of ecosystem services is the Catskills Memorandum of Agreement. Under this agreement, the City of New York supposedly agreed to buy \$1 billion worth of land in the Catskills watershed to provide the same drinking water protection services that would otherwise require the construction of a \$6 to \$8 billion filtration plant. (Chichilnsky & Heal 1998, pp. 629-630.)

In a challenge to the conventional wisdom on this case, environmental ethicist Mark Sagoff argues that there is no historic or scientific relationship between land development in the Catskills and the City’s water quality; undeveloped land and the filtration plant were *not* substitute forms of capital. Instead, he argues, the Memorandum of Agreement ended a legal fight between the City and the federal government over a new EPA filtration mandate, while providing a useful cover story for the acquisition of open space that environmentalists wanted to set aside for other reasons. In practice, real estate development in the Catskills has been negligible, and a clear-eyed calculation of its own interest in water supply has caused New York City to invest far more in Catskills physical plant than in land set-asides since the Memorandum was signed. (Sagoff 2002, pp. 16-21.)

Notwithstanding this tarnishing of an example that has achieved legendary status among environmentalists, the Catskills case still has several lessons to impart to regional planners. The first lesson is that providing effective ecosystem services to humans frequently requires a *combination* of natural and human-made capital. This assertion should be second nature to regional planners, who understand that there is a lot more to regional planning than simply

preserving vacant land. With this principle in mind, of course, the cost-benefit analysis of regional planning becomes even more challenging, because of the enormous number of partially-engineered landscapes that a planner (as opposed to a water agency facing a federal ultimatum, for example) must consider.

A second lesson of the Catskills case is that, in contrast to the job of water filtration, the quality-of-life benefits of scenic open space are self-evident, and are recognized by a large segment of the local community — as well as by environmentalists and tourists who live farther afield. So it turns out that the free-rider problem noted above exists alongside significant open space purchase programs, as well as regulatory restrictions that have similar effects on preservation, but which do not involve compensation to landowners. These latter programs are of course controversial, but one fact is beyond dispute: Citizens' perceived gains and willingness-to-pay for the quality of life benefits of regional planning are substantial, and can presumably be tapped in more creative ways. Such benefits can also exist at a considerable distance from the place where the regional planning actually takes place.

One example may be found in the New Jersey Highlands Act, a new regional planning program described in Chapter 3. This regional planning program will attempt to use TDRs to compensate large landowners facing development restrictions in the plan's "preservation area." A tax on drinking water has also been proposed as a funding source for purchasing land or development rights in the Highlands. This is one of the few proposals regarding the Highlands on which environmentalists and farmers find themselves in complete agreement. (Chambers 2004.) The water tax would put part of the burden of preservation on a large group of state residents living outside the Highlands. The argument for the water tax seems to rely on an analogy to the Catskills case: "If we do *not* buy this land, New Jersey's water users will have to pay that much

more for treatment infrastructure later on. Better a small investment in land now, than a large capital expenditure down the road.”

Even if we agree with Sagoff that the water supply benefits of undeveloped land are overstated, the idea of a broad-based tax for land preservation still makes a great deal of sense. For one thing, preserved open space generates flood control benefits that are more straightforward than the supposed water supply benefits. Here, the choice of buying land now or expanding culverts and storm sewers later (not to mention rebuilding washed-out infrastructure) looks like a real one. In addition, as argued above, the recreational, scenic, and quality-of-life benefits about to be delivered by the Highlands Plan are significant. I suspect that day to day, the typical New Jersey voter thinks more about these kinds of benefits, than about the official rationale for a piece of legislation that carries the title “Highlands Water Protection and Planning Act”.

In economics, one common solution to a free-rider problem is to coerce payments out of those who value the service but do not pay for it. There appears to be ample justification in this case for a tax that goes beyond water users to include citizens throughout the state and even nonresidents, perhaps through charges on campsites or other services likely to be used by tourists.

### **Net benefits of Planning**

Much of the previous section makes an economic case for open space preservation, while at the same time arguing that regional planning involves a whole lot more than that. This section will consider the economics of regional planning using the larger perspective it deserves.

For better or worse, most regional plans in America do not seek to control population growth directly. Instead, they seek to design and redistribute growth so that the low-density

residential landscape we have become accustomed to is replaced by a more diverse mix of open space and higher-density towns, cities, and villages.

This raises the question of which type of landscape is actually the optimal one from an economic point of view. Regional planners should perhaps be a bit less smug about the superiority of their own peculiar design vision. For one thing, the frequent claim that high-density suburban centers will permit mass transit flies in the face of mountains of evidence on Americans' attachment to the automobile. That having been said, it is virtually impossible for an economist (or anyone else) to define the economically optimal landscape with confidence. All we can say is that there are reasons to believe that a landscape planned at a regional scale will be an improvement over one that is not.

The most basic question to ask is, "what is the regional plan replacing?" It is *not* replacing a set of unconstrained free-market choices that reflect "what people and businesses really want." Instead, regional planning is imposed on a landscape that is already highly-regulated at the local level. The shortsightedness and outright selfishness of much local land use regulation has been discussed by a number of planning scholars and practitioners over the years. I have made this point in defense of regional planning before. (Gottlieb 1999, pp. 51-64.) The critique of local planning and zoning also seems to be picking up steam among those who are directly in charge of training local planners. (See, e.g., Pendall 2000; Levine 2006.)

The economic benefits of regional planning flow largely from the fact that many urban systems, like watersheds, commutersheds, and housing markets, exist at a scale much larger than the decision-making units of local government. This fundamental mismatch between the scale of impacts and the scale of decision-making holds for individuals as well as for towns (driving and home buying being the main examples). It would be a remarkable coincidence indeed if a system

with this many externalities and common property resources produced an optimal economic outcome.

That is the easy part of the argument. The hard part of the argument is deciding exactly how to move the system away from the *status quo*. This thorny problem is the main reason why economists prefer not to plan, but to *price*. The benefit of simply increasing the price of activities with negative spillovers is that individuals remain free to choose their preferred lifestyles: these are not dictated by a central planner. A good example of a pricing solution to problems arising at the urban fringe is developer impact fees. It should be no surprise, then, that by-the-book economist Jan Brueckner favors impact fees as an antidote to urban sprawl. (Brueckner 2000, pp. 166-167.) It must be acknowledged, however, that the precise calibration of the many impact fees that would actually be required to fix market failures in a complex urban setting is beyond the ability of policy makers, even regional ones. So regional planning, even if it is based on opinion surveys and outright hunches, becomes a useful ‘second best’ solution to market failure from the economist’s point of view.

The discussion so far has been fairly theoretical, so let us return to the benefits of regional planning that can actually be measured in dollars. Most of these relate to the more efficient use of infrastructure caused by concentrating development at the large scale (city redevelopment) or at the small scale (denser subdivisions). Turning to the small scale first, estimates of the infrastructure cost savings from compact development at the subdivision scale are typically in the range of 15% or so. (Burchell et al. 1998.) This sounds good until you realize that almost all the infrastructure within a subdivision is built by developers and then rolled into the cost of the homes. It follows that this kind of infrastructure is, in many ways, a private good for which homebuyers are more than willing to pay. What is the governmental interest in

eliminating this 15% premium on the cost of the sewer pipe running down Fair Oaks Lane? If it can be shown that these extra costs are paid *involuntarily* — the result of minimum lot size restrictions that skew the market, then we are back to our argument about the perversity of local land use regulations. Without this proof, however, the pure cost-of-sprawl argument stands on thin ice.

When it comes to off-site infrastructure, like schools, city roads, and wastewater treatment plants, the fiscal argument for regional planning is somewhat more compelling — this is cost-of-sprawl reasoning at the larger scale. Using a state-level infrastructure model that I helped develop for the New Jersey State Planning Commission, the Center for Urban Policy Research calculated that the 1990 New Jersey State Plan would save \$740 million in state and local road costs, and \$440 million in water supply and sewer infrastructure costs over a twenty-year planning horizon. (Burchell 1992, pp. xiv-xv; Gottlieb & Reilly 1990; Reilly 1990.) These savings are generated mostly by a projected redistribution of people and jobs across municipal boundaries, not within them. (Whether the people and jobs would go willingly is not addressed.) Interestingly, the CUPR team found no effect of the State Plan on school infrastructure costs, commenting that “the oft-repeated scenario of significant excess capacity in urban and closer-in suburban schools, and deficient capacity in exurban and rural schools is, in reality, a myth.” (Burchell 1992, p. xvi.)

To put the CUPR numbers in perspective, at this writing the governor of New Jersey has just proposed massive budget cuts in order to close a \$3.4 billion deficit in the state budget, and possibly chip away at a level of debt that is roughly ten times this amount. (Chen 1998.) Even if we convert CUPR’s estimate of planning’s cost savings to 2008 dollars, the twenty years’ worth of projected savings amount to only half of the state’s annual budget deficit, and less than one



percent of the state's outstanding debt — and the state is not the only governmental entity with fiscal responsibility for these infrastructure systems. So Smart Growth is certainly a start, but infrastructure savings from planning are not a panacea for solving the fiscal problems of a large urban state. That is why I return repeatedly in this essay to planning's quality of life benefits.

### **Making the Case**

Over years of working as an economist with planners and planning advocates, I have frequently been troubled by a tendency to put the measurable dollar benefits of regional planning into a completely different compartment than the aesthetic, quality of life, and environmental benefits. Advocates who do this often look for hard numbers on the infrastructure side, hoping that such numbers will persuade the “hard-headed business community” of the advantages of smart growth planning. But as I have suggested, these numbers rarely amount to a grand slam, so calculating and reporting them separately is not exactly putting your best foot forward.

Through my association with the Land Policy Institute at Michigan State University, I have been involved in precisely these kinds of efforts to persuade business leaders of the dollar-and-cents benefits of smart growth, which Michigan Governor Jennifer Granholm supports in principle. On the one hand, Michigan has fallen on hard times, so any policy designed to get more bang out of the public buck is welcome — even necessary. On the other hand, the easily measured benefits of smart growth planning are modest, while a conservative state founded on manufacturing finds it difficult to embrace anything that looks like a restriction on free enterprise. For obvious reasons, the negative effects of growth are less severe in Michigan than elsewhere, and do not appear to be generating a tidal wave of complaints from the kind of affluent residents who drive the smart growth movement forward in other places.

In places like New Jersey and northern California, however, the problems associated with rapid growth have gotten the attention of the business community all on their own. Growth management and quality of life represent a significant portion of the mission of regional civic organizations, like Joint Venture Silicon Valley, that are chaired by the CEOs of large local businesses. The interest of businesses in local quality of life, which of course has an effect on recruiting, can be seen in the many regional data monitoring projects that emphasize amenity and infrastructure variables.

In central New Jersey I have been involved, as a subcontractor to the Regional Plan Association, with something called the Somerset County Regional Center Vision Initiative.<sup>1</sup> This project is essentially a design-oriented plan that tries to concentrate development and improve transportation infrastructure in a pre-existing edge city. Somerset's planning goals are very much in line with the New Jersey State Plan.

What has really struck me about the Somerset planning process is the active participation, at the board level, of the Somerset County Business Partnership, a chamber of commerce that advertises itself, interestingly, as a "Smart Growth Organization." My interaction with the leadership and my knowledge of this particular county (including down-zoning in a place called Hillsborough) leads me to believe that an implicit bargain has been struck, in which the county's exurban residents are more than happy to funnel virtually all growth into the old, relatively poor city of Somerville, while the residents there are more than happy to accept it. Here is a smart growth consensus uniting the business community with regional planners and progressive social activists. It probably could not have happened as easily at a scale larger than a single county, or involving cities as troubled as Newark or Camden. It is driven, admittedly, by the no-growth sentiments of affluent suburban residents — business executives acting in their role as

homeowners as well as facility builders and corporate recruiters. The danger, of course, is that the residents of Somerville will be actively excluded from moving to adjacent suburbs; but for now I shall give the political power structure in Somerset County the benefit of the doubt.

I find myself persuaded that the “business case” for regional planning essentially makes itself — but only in fast-growing, congested areas where the amenity costs of growth are widely recognized. Furthermore, unless you attach dollars and cents to the aesthetic and environmental benefits of regional planning, it is not clear that the numbers will ever be persuasive. That remains a valid exercise. The framework of economics encompasses everything. Regional planning is either a net winner in economic terms or it is a net loser. It can’t be both simultaneously. All factors cannot be easily measured, but that is no reason to be defensive about the modest fiscal benefits or the restriction on development opportunities that regional planning sometimes brings about. Not only are the benefits of regional planning likely to be substantial, they are also likely to be large enough to compensate the few who lose.<end>

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<sup>1</sup> See [www.rpa.org/projects/regionaldesign/suburbanredesign/somersetregionalcenter.html](http://www.rpa.org/projects/regionaldesign/suburbanredesign/somersetregionalcenter.html).