

The Relationship between Town and Country Planning and Economics

by

R. J. DEW

Although Economics is necessarily involved in both Town Planning and Country Planning, it is proposed within this fairly general topic to deal with the relationship between Economics and Planning in urban areas as opposed to the more widespread relationship between Economics and Town and Country Planning.

Three disciplines unite where Town Planning is most effective. The Law provides the necessary procedures, regulations and sanctions. Economics provides the basis specifically financial, and generally in economic principles, e.g. cost/benefit analysis, for decisions on zoning and on the needs of the community as a whole. Architecture and related principles provide as aesthetic an environment as space and finance permit, and are responsible for the final visual product of the requirements of the other two disciplines. It is the resultant product of all three which the general public adores or abhors, yet any adoration or abhorrence is directed towards the architects, planners or "city fathers" and councillors involved in any particular project. To take a local example, many people abhor Auckland's new windowless and sterile Public Library, while admiring the result of restoration of the Art Gallery building, formerly the home of the Public Library.

F. Stuart Chaplain Jr, states:¹

The economics of the urban land use pattern begin with forces extending far beyond the immediate environs of any particular urban centre (sic) of interest, and involve considerations of the structure and functioning of the urban economy as it fits into the larger economy of the region

¹ 'Urban Land Use Planning', (2nd edition), University of Illinois Press, Urbana, 1965, 7.

and the nation. Implicit in this way of approaching the economic basis of land use is a rationale that both the localized and regional forces interact to shape the urban land use pattern, or, more specifically, that external forces affecting the make-up and vitality of the economy act upon internally focussed processes of the urban land market to determine the location of urban functions of the land. To an important degree these regional forces influence how much and at what rate land goes into development.

In the case of our cities, those schemes and projects which would most luxuriously serve the community, e.g. fully self-contained pensioner flats, better teaching facilities in all schools, greater recreational and reserve space, are just not possible because of frequent lack of finance. In this respect the economy, or finance available, is not sufficient to meet such needs. As a result economics, which is more or less the best method of managing and available finance, must play a great part in limiting social projects, while providing the best possible solution to meet the needs of the community. The use of roads will serve as an example.

In order to determine the priorities of road-building within a budget, it is necessary to take traffic-counter recordings, taking the average hourly load over a certain point over a certain period of time. It would be outside the financial capabilities of most established towns and cities to plan and cater for peak-hour traffic. Therefore the requirements are worked out, with finance in mind, for a specified hour when reasonably dense traffic will be able to flow fairly freely. Peak-hour traffic may be 4.30 p.m. - 5.30 p.m. on a Friday. It would be uneconomic to cater for this hour's traffic. The same roads would hardly be used 4.30 - 5.30 p.m. on a Sunday evening. Similarly it would be ludicrous to plan for that hour alone. For perfect economics it is necessary that some discomfort be caused at peak hours, and that some wastage be experienced at lull-hours. The economist must balance the economics of the situation and aim for as far above the average load of the highway as he can afford.

Similarly, it would be uneconomic to have no pollution whatever. To cut out all forms of industrial pollution would be to drastically reduce industrial output; in fact, it would wipe out industry completely. Such an outcome would lead to a great drop in health, general living standards, and employment opportunities. Therefore, pollution must also be controlled sensibly and economically. To expect manufacturers and factory owners to install costly filters and other anti-pollution measures, which may be so expensive as to have them cease business, would be false economics.

There does appear to be a distinction between private and public economics from the financial viewpoint, but in both cases it appears that town planning principles will not be sacrificed. Whereas the private developer appears to have access to sufficient finance yet

may not be able to obtain the requisite permission to build, the local body is traditionally scraping the bottom of the barrel for the finance to meet requirements for public works and community welfare projects, yet is vested with the status and support to meet such needs as far as the community purse will allow. The dilemma for the private investor is whether or not to purchase land with the possibility of failing in his obtaining consent for his specified departure or change of use applications, i.e. whether he makes "a big buck"² or just a "buck". The trilemma for the local body is: "Can we afford it?"

"Should we attempt to meet all the needs of the community and achieve a below-average result?"

"Should we concentrate on specific determined needs and make as good a job as is possible with our limited resources?"

In a New South Wales Land and Valuation Court decision, *Hutcheson v. Ryde Municipal Council*,³ which involved a planning appeal in which permission was sought for the construction of a three-storey block of flats, Else-Mitchell, J., stated:

No doubt there is . . . a demand for flats and for sites in the locality on which flats can be erected, but this does not mean that consent should be granted, for the purpose of planning is to control development contrary to those economic pressures and incentives which would otherwise dictate the nature of building development in any locality.

In *F.J.S.I. Investments Pty Ltd. v. Woolahra Municipal Council*⁴ it was held:

Except where land is sterilised I do not think that economic factors are of much moment. . . . The requirements of sound planning should not be distorted simply to avoid financial loss to an owner who has paid too high a price for land, let alone ensure that he makes a larger profit from his development plans. Indeed, it is the desire to obtain a maximum profit from a venture by insisting on full development of a site which so often results in bad planning and consequent and irreparable injury to the future amenity of the neighbourhood.

The question arises here whether or not such schemes as the building of much needed accommodation should be vetoed for the sake of strict adherence to town planning principles. In reality the purposes of the community are best served by the compromise between private investment interests on the one hand and town planning principles on the other, by allowing uses which do not conform, yet restricting them by the use of conditions, e.g. under section 28C (3) of the Town and Country Planning Act, 1953:

The Council . . . in allowing the application may impose such conditions, restrictions, and prohibitions as it thinks fit.

² Lucifer, 'Stragety (sic) is the way you make a big buck', T.P.Q. Dec. '66, 8.

³ *The Town Planning and Local Government Guide*, Vol. 15 (1969-1970) para. 357, 136. (Feb. 1970). Gifford, K. ed., Law Book Co. of Australia.

⁴ *The Local Government Reports of Australia*, Vol. 17, 141.

Often the private investor⁵ is in a better financial position to provide for some of the community needs, especially with regard to accommodation, both of indigenous population and for visitors and tourists (per motels and hotels) that the council itself, which can then use its resources in the essential fields of health, welfare, education, efficient transport systems and recreation facilities. To achieve a compromise which is effective for all concerned is to face reality. To adhere strictly to traditional town planning principles is to deprive some developer of his profits while depriving a section of the community of much-needed accommodation, which the council itself may not have the means to provide.

The statute governing this branch of the law must needs be flexible, a condition which the Town and Country Planning Act, 1953, achieves in part and fails in others. An example of the allowances made for flexibility in this field is section 28C (3A):

- In allowing or refusing the application, the council shall have regard to—
- (a) the suitability of the site for the proposed use determined by reference to the provisions of the operative district scheme and;
 - (b) the likely effect of the proposed use on the existing and foreseeable future amenities of the neighbourhood, and on the health, safety, convenience, and the economic and general welfare of the inhabitants of the district.

The dilemma of the planner in this respect is well described by Alan Altshuler in "The City Planning Process",⁶ dealing mainly with traffic problems:

Crowded traffic arteries were not caused by people driving randomly through the city, but by trips designed to accomplish particular purposes. The concentration of economic, social, or other facilities on a particular street or a particular corner was a factor that generated the congestion. Most trips were, from the driver's point-of-view, economic in purpose. . . . Economically generated traffic tended to concentrate at places of employment and at retail centers (sic), which together occupied only one eighth of the Twin Cities proper and a much smaller area of the metropolitan area. Highway engineers called such places, where people habitually congregated in large numbers, "major traffic generators". The efforts to widen streets by tearing down buildings adjacent to these generators had the effect of destroying these generators to provide room for street widening—which was like tossing out all the merchandise in a store to make room for a maximum number of customers.

The principal dilemma facing town planners has been covered above. It is now proposed to examine the more specific relationship between economics and town and country planning. N. J. Williamson states:⁷

The traditional land market mechanism has, in the past, been accepted as the best we have known to perform the intricate job of allocation of land to the most productive uses, although it has been recognised

⁵ Not necessarily an individual; perhaps an investment company or similar group of investors formed to invest in property as a safe investment.

⁶ Cornell University Press, Ithaca & London, 4th ed. (1969)—Valley Offset, Inc., at p. 20.

⁷ *Economic Aspects of Town Planning and Land Values!* 1969, Dissertation for Dip. T.P.; I.

that its unfettered use may result in patterns of development where the social costs outweigh the private gains.

Professor R. U. Ratcliff⁸ maintains that the outgrowth of the market process of competitive bidding for sites among potential users of land is an orderly pattern of land use spatially organised to perform most efficiently the economic functions that characterise urban life. This economic assumption centres upon the theories of the perfect market and perfect competition. A perfect market is one where similar goods are sold at the same price (with due allowances for transport costs), where buyers and sellers are aware of what is happening throughout the market and are liable to buy and sell in any part of it. For this state to be in existence there must be perfect competition which involves an absence of monopoly on both supply and demand sides, and no governmental interference by price control, rationing or other device. According to Professor Ratcliff, in perfect market natural zoning would result. Land users of similar or complementary character would normally group themselves with maximum benefit to the property owners and to the community. He states:^{9 10}

The perfect land market would produce a pattern of land uses in the community which would result in the minimum aggregate of land value for the entire community. The most convenient arrangement results in the lowest aggregate transportation costs, the advantages of the more convenient sites are reduced.

Williamson suggests that the perfect market is, in fact, fallacy, albeit a desirable one. It is also one of the reasons why town planning exists.

Is the failure of pure economic theory the basis for the existence of the Town Planning "discipline"? Ratcliff believes that good planning by increasing accessibility and including greater fluidity of population, diminishes the scarcity value of choice locations and hence reduces the rent they can command. It is submitted that socio-economic factors and the gregariousness of persons in various social and economic "classes" combined with historically poor or non-existent town planning is another reason which raises rents. For example, in the Auckland Metropolitan area, geographically desirable areas (from view and location points of view) such as the heights around Mission Bay and St Heliers and the heights around Ponsonby demonstrate the anomalies of the land market. In the latter, the non-existence of Town Planning in the early days produced a maze of houses on tiny sections, planned only by their simplicity of style, which can now most accurately be described as slums. In the former,

⁸ *'Urban Land Economics'*—McGraw Hill Book Co., N.Y.

⁹ *Ibid.* 385; vide Williamson at p. 1.

¹⁰ For a comparative study of private-public motor transport, vide Frederick A. Dahms—*The Journey to work in Auckland*, T.P.Q. June '68, 14.

a fairly tightly controlled residential building programme combined with good amenities and an influx of social and bourgeois "desirables" has made the rent range between the two ludicrously disproportionate when one considers that the only real advantage of the richer areas, disregarding their socio-economic factors, is the better recreational and cultural amenities provided by controlled and thoughtful planning. Town Planning, then, is the tool that could properly proportion land market values in geographically similar areas while maintaining efficiency in public amenities and transportation requirements.

Ratcliff states:

The perfect city plan is that which creates the lowest total of land values, for this a reflection of basic efficiency.

He maintains that the basic objective of city planning is to obtain the same land use pattern that would emerge naturally from the process of the urban Real Estate market under conditions of perfect competition. Ratcliff's view is but one of several in the context of the place of land market value in planning. The Metropolitan Association of Real Estate Boards, New York, in its critical analysis of the plan for rezoning New York in 1951 states:¹¹

... if the price system is not doing it (putting land to its highest and best use) is that not evidence that we in the aggregate do not want it done?

C. F. Wendt, an economist, states:¹²

It is believed that the inclusion or exclusion of a particular kind of shop should not be decided by planners but rather by the economics of the particular situation. . . . Obviously those which are needed will survive while those for which there is little demand will be forced to go elsewhere.

This is all very well if one looks only as far as commercial and industrial uses, but what of educational, health, recreational, private residential and general welfare uses. These may not be demanded by the economics of any particular situation. For example, if the best or only site available for a school or library falls where a factory (if a non-conforming existing use) exists, then which should survive? That which earns a private investor his fortune, or that which will serve vital community needs the better? One would have to balance the qualities of the situation—e.g. the benefits of education as opposed to employment coupled with individual fortune-seeking—to arrive at a result.

Brian Anstey in "The Distribution Pattern of Land Values", which

¹¹ *Ibid.* 386.

¹² 'The Theory of Urban Land Values', 33 *Land Economic Journal*, (1959) 288.

is a study of certain changes in land value in the London area, states:¹³

It (Planning) seems likely to serve the community best where it seeks no less to discover the natural pattern and the inherent value and to release and foster these, than where it seeks to prevent the bad use or restrict the over-use. The market value is a pointer to the community value, not to be slavishly followed but not to be despised.

Williamson states:¹⁴

The well known theorem that if a perfectly balanced competitive market is left to its own devices without interference, it will eventually settle down to a stable equilibrium, as well as requiring a perfectly competitive market also maintains that welfare will be maximised when equilibrium between demand and supply has been reached. . . . The market may be described as a rationalising force producing a framework which may be suitable to use in structuring a land use policy as it does set standards and economic terms. Whether those economic standards should be adopted by 'Planning' which seeks to *maximise the general welfare* (not necessarily carrying economic connotations) is another question.

Sections 3 and 18 of the Town and Country Planning Act, 1953, generally (in the former) and specifically (in the latter) outline the purpose of the legislation with regard to (i) regional schemes, which includes the First Schedule, and relates to uses of general regional significance; and (ii) district schemes, which states the general purpose of the district scheme:

. . . the development of the area to which it relates (including, where necessary, the replanning and reconstruction of any area therein that is already been subdivided and built on) in such a way as will most effectively tend to promote and safeguard the health, safety and convenience, and the economic and general welfare of the inhabitants, and the amenities of every part of the area.

It is submitted that because the perfect market is perhaps a happy fiction, and because of the purpose of planning outlined by the legislation above, the economics should only enter the field of town planning where cost/benefit analysis and other such statistical analysis is required by the local council and planners to work out the most efficient way of accomplishing a planning purpose within the available financial limitations.¹⁵

The maximisation of general welfare and not a state of perfect competition between commercial and industrial interests should be the goal of town planning. Economics, therefore, is of value to town planning but should be the planner's servant, not his master.

Williamson in his chapter on the "*Economic Objectives of Planning*"¹⁶ lists the views of some eminent economists on the relevance

¹³ 1950-1964, p. 39,—being the report of the proceedings of a colloquium held in London on 13th-14th March, 1965, under the auspices of the Action Society Trust—Peter Hall ed.—Sweet & Maxwell, N.Z.

¹⁴ Ibid. p. 2.

¹⁵ vide supra for discussion on this point.

¹⁶ Ibid. 6.

and use of economics in town planning. D. J. Reynolds¹⁷ of the Institute of Economic Affairs Ltd, London sees the economic system as a means of expressing the wants of consumers and reconciling them with the scarcity of resources available for their satisfaction. J. K. Galbraith, an eminent American economist, maintains that the economics system expresses not the wants of the consumer, but the wants of the producer who gears the consumer to products through intense advertising. This is an expression of the state of the Capitalist Economy, which, in terms used by Professor W. W. Rostow,¹⁸ Professor of Economic History, Massachusetts Institute of Technology, has reached the age of mass-consumption brought about by an economic mechanism called circular or cumulative causation.¹⁹ Reynolds' aim is to apply economics to the problems of the physical environment now and in the future so as to maximise human welfare. An immediate consequence of this aim is that all valuations are ultimately expressed in terms of human preferences and choices, rather than by vaguer and more mystical ideas of value, of which the most frequently encountered is "the public interest". He states:²⁰

Although this objective emphasises the importance of economics in planning, it is not therefore suggested that economic efficiency is the end of all human endeavour. The highest goal must be conceived as something like human welfare, or 'the good life'. Economics is merely a means by which it may be achieved, it is not an end in itself.

To an economist the aim of sections 3 and 18 of the Town and Country Planning Act is equated with the most efficient use of resources. He considers it part of the planner's business to see that values are maintained. The use to which land is put is very important. If it is used in a suitable way, this would increase efficiency but if it is used in an unsuitable way this would prevent the release of the real value of land.

The Relationship between Town Planning and Land Values²¹ can be used as a measurement of efficiency for judging a course of action or situation.

Land Values arise because there are competing uses for given sites. This competition is inherent in an economic society. . . . According to D. J. Reynolds (supra), the significant question of how far land values are important as an objective in planning is answered simply by reason of

¹⁷ *Economics, Town Planning and Traffic*—Institute of Economic Affairs Ltd., London, Ch. 1.

¹⁸ *Stages of Economic Growth*—Cambridge University Press.

¹⁹ This economic principle maintains that there is a Circular or Cumulative process continuously pressing levels downward, or raising levels upward, in which one negative or positive factor is, at the same time, both cause and effect of the other factors.

²⁰ *Ibid.* 3.

²¹ In economics 'value' is sometimes used to mean 'exchange value', and sometimes to mean 'utility' or 'value in use'. Per Williamson, the context of exchange value' is inferred.

the fact that land values are merely a reflection of points of attraction and position and transport costs, and, as such, have no independent validity as a planning objective. The question of how far planning should aim to maximise or minimise land values does not arise. He claims that planning should merely aim at the optimum layout by comparing the advantages of various developments and ignoring the effects on land values. Land values should be ignored as a planning objective or effect.²²

Williamson queries:²³

What must be agreed between planners and economists is that as land values are a measure of efficiency in Planning, is the situation efficient when values are maximised as Lean suggests²⁴ or when values are minimised as Professor Ratcliff suggests? (supra).

and

There is no doubt that the operation of town planning affects land values,²⁵ the question is rather to what extent and how does planning affect values? *The Uthwatt Report*²⁶ stated that the effect of Town Planning on land values is to shift or redistribute them. If it is planned in the future to use land for a different use than at present, then its value will be affected. If the present use is permitted elsewhere there will be a tendency for the present value to shift to that position.

The rezoning or reallocation of land uses necessitates a shift in values, e.g.—Residential land being rezoned Commercial; a motorway designation being placed on the land. *The Uthwatt Report* states:²⁷

The public control of the use of land, whether it is operated by means of existing planning legislation or by other means, necessarily has the effect of shifting land values; in other words, it increases the value of some land and decreases the value of other land, but it does not destroy land values. Neither the total demand for development nor its average annual rate is materially affected, if at all, by planning ordinances.

Lean & Goodall,²⁸ and presumably many others, contend that the Uthwatt Report assumes that Town Planning does not affect land values, which assumption on the part of the Committee would seem to most to be an immature one. They contend that any reduction in land values would denote a reduction in economic efficiency, which, from an economic viewpoint, may be equated with bad planning. They state:²⁹

Since the economic objective of Planning is to lead to a more efficient use of resources, and a better utilisation of land is signified by higher land values, the contention that Planning merely shifts values must be rejected. Town Planning by changing accessibility, complementarity and the supply of land to different uses, can increase or decrease land values overall, as well as causing a redistribution of values.

It is generally known that the ways in which Planning restricts and controls free development:

²² Ibid 18,—excerpted from Reynolds (supra) Ch. 3, 53.

²³ Ibid 19.

²⁴ *Aspects of Land Economics*—Estate Gazette Ltd., London.

²⁵ e.g. rezoning, designations.

²⁶ *Expert Committee on Compensation and Betterment*—Uthwatt, L. J.—cmd. 6386 (1942).

²⁷ At p. 15, para. 26.

²⁸ Op. cit. 246.

²⁹ Ibid.

- (a) the power to allocate or zone land for particular uses;
 - (b) the power to restrict changes in the use of buildings;
 - (c) the power to restrict the intensity of land use;
- are known as "Negative Control Measures", all seeking to regulate the supply side of the market mechanism. Williamson suggests that:³⁰

. . . most zoning controls have elements of economic irrationality because zoning laws are local and deal with micro-economics, and because economic relationships between the size and shape of buildings and the size and shape of sites are not yet well understood. Another factor is that continuing changes in transport, consumer preferences and construction technology make for rapid obsolescence of those few facts we already possess.

In concluding, Williamson states:³¹

Land use controls such as zoning and density restrictions also contain elements of economic irrationality. Because of their nature, such measures cannot be applied equitably and may penalise some land owners while favouring others.

This consideration does not apply to the speculator or big investor, who is likely to know of any impeding decisions involving his property, but to the home-owner who establishes a home in the hope that he will one day be able to sell at a profit and buy some thing a bit better.

Williamson declares:³²

Zoning does not create value, but it interferes with the operation of the market and to this extent it operates as a locator (sic). If used correctly it can enable a planner to promote suitable development in accordance with his plan, but only if it is used rationally and in accord with market influences. . . . Cost/benefit studies present another rational economic tool which can be useful to planning. In order to operate this quantitative (sic) technique successfully the ethical consideration of what constitutes a cost and a benefit, and where the margin for a statistical analysis is to be drawn, must first be determined. Cost/benefit analysis is a valuable technique which may be used to give planning action economic rationality, but it is not to be slavishly adhered to for determining a course of action. As yet a suitable technique has to be devised for measuring welfare in monetary terms and until this is done planners must use the technique with caution.

Cost/Benefit Analysis

Cost/benefit studies on final plans and proposals are used to facilitate the selection of the most worthwhile among alternative investments and policies. Such calculations seek to establish the advantages and relative cost of one scheme and the benefits accruing to the community from its undertaking, over the costs and benefits involved in an alternative scheme or schemes.

³⁰ Ibid 27.

³¹ Ibid 44.

³² Idem.

To date the planning profession has not developed a method for identifying and comparing benefits and costs in relation to the operation of 'planning', mainly because opportunities to assess an opened situation rarely exists. It is easy enough to assess costs and benefits arising out of specific projects such as the construction of a road or bridge, but to determine what the benefits are from the operation of an exercise as diffuse as planning, has so far been beyond the capabilities of planners or economists.³³

It is submitted that such a result is predictable from cost/benefit analysis because of the inaccuracy of predicting ever-escalating costs and attempting to put a value on such abstracts as community welfare, although actual need may be easier to specify. "Need" is apparent. "Desirable amenities" are covert and less easily definable as to cost and selection. They may be looked upon almost as community luxuries.

Problems arise where it is sought to reduce benefits to monetary terms in order to define their value. Other difficulties are the drawing of an arbitrary time scale over which to measure the benefits, knowing how to handle the increased complexity when several projects are being studied and the variables are casually related. Williamson states:³⁴

Cost/benefit studies can measure the financial consequences of a course of action by equating the costs. For example, economists can tell what the cost would be in preserving a source of mineral wealth from production by measuring the value of the production foregone, but the ethical question of making a decision to preserve the resources to protect an ecological system must be made on another basis, usually a value judgement originating in the metaphysical realm (sic). Cost/benefit analysis is a valuable technique which may be used to give planning action economic rationality, but it is not to be slavishly adhered to for determining a course of action. Unless welfare costs and benefits can in some way be measured in monetary terms, the technique can only be used in an inductive way to justify an existing situation or to further the aims of a sector of the economy seeking to maximise some economic system.

The definition, purpose and aims of cost/benefit analysis are established in terms somewhat more suited to the layman's ear by J. T. Ward in an article,³⁵ "*Cost/Benefit Analysis for Town and Country Planning*". After pointing out that the free market system of property value does not work, i.e. it results in a socially unacceptable land use pattern, Ward explains:³⁶

The private developer is interested in his own balance sheet, and does not take into account the impact of his development in the form of costs which he does not have to compensate, nor benefits for which he cannot charge. The land market works imperfectly in the private sector and hardly at all in the public sector where the provision of schools, open space and other social amenities lies outside the price nexus. Hence the need for the community to exercise some measure of control over the functioning of the property market. . . .

³³ Ibid 10.

³⁴ Ibid. 11.

³⁵ T.P.Q. March '66, 20.

³⁶ Idem.

and³⁷

A major difficulty in applying traditional economic concepts to land use planning is that many of the costs and benefits involved in development are not subject to the usual procedures of price formation and so are not amenable to the normal criterion of profit maximisation (or cost minimisation). Cost/benefit analysis has evolved as a technique which is applicable to projects where such 'extra-market' forces are of major significance; it is particularly appropriate therefore to (sic) analysing schemes for public investment, or private schemes which have widespread social implications and are subject to regulation. This form of analysis has been extensively applied in American studies of water resource development³⁸ and of highway construction, and, more recently, to many other aspects of public expenditure.³⁹ It is interesting to note that it has also received considerable attention in Russia where the lack of a free market mechanism precludes the use of the traditional criterion in western countries.

He suggests the following framework⁴⁰ for a cost/benefit analysis of a development. Reasons of space do not permit anything but the skeletal framework:

- (i) Recognition of the point of view from which the study is made.
- (ii) Definition of the development plan.
- (iii) Consideration of all feasible alternatives.
- (iv) A detailed economic analysis of the plan including a review of intangibles.
- (v) Policy recommendation and decision.

By selecting a number of alternative plans and calculating the respective advantages of benefits received and costs incurred, coupled with common sense, discretion and sound planning principles, it should be possible to arrive at the best planning decision by employing the above-outlined method. There is no reason why such a method could not be applied to lesser local council schemes, e.g. a library, as well as larger regional schemes, such as the planning of a motorway. Ward provides an example in the cost/benefits of the Lyttelton Road Tunnel as opposed to the use of the Sumner Road, and then looks⁴¹ at intangibles which are difficult to assess in this way:

Much progress has been made in recent years in evolving ingenious methods of measuring what were formally regarded as intangibles; an example is a measure of the costs of accidents through assessment of expenses of hospital treatment, loss of productive work etc., although the human suffering involved must still remain outside these material scales. In cases where quantitative measurement is still not feasible, however, intangibles can be included in the formal analysis in an indirect

³⁷ Quoting Nemidinov, V.S., *The Use of Mathematics in Economics*—A. Nove ed.—Oliver & Boyd, Edinburgh (1951).

³⁸ J. V. Krutilla & Eckstein, *Multiple Purpose River Development*—Hopkins, Baltimore, 1958.

³⁹ R. M. McKean, *Efficiency in Government Through Systems Analysis, publications & Operations Research*, No. 3, Rand Corp., Wiley, N.Y., 1958.

⁴⁰ *Ibid* 21.

⁴¹ *Ibid* 23.

way that helps to make the decision more rational. For example, it may be possible to put a value on the aesthetic pleasure afforded by a corner of Hagley Park, but a comparison of alternative proposals would make it maybe (sic) impossible to put a value on the aesthetic value of the motorway through that corner. The cost of preserving scenic beauty can in this way be made explicit.

Cost/benefit analysis can be distorted on the cost scale by the element of time—e.g. rising prices in construction and land values. Even so, such analysis is a valuable tool as a basis for making decisions, the final decision, naturally being based on judgement. Ward suggests⁴² that its use could be more widespread and that it could well provide the analytical basis for broader and more constructive planning than we have experienced in the past.

M. H. Pritchard during a seminar,⁴⁴ "*Cost/Benefit Analysis in Project Evaluation*", presented a paper entitled "*Some Implications of Economic Factors on Land Use Planning*" in which he admonished planners for not making the best use of available economic methods and also pointed out the restrictive nature of some of the Town Planning legislation.

He firstly demanded that Planning had a noticeable bias toward the physical aspects of the environment. He stated:

Town Planning is often divided into economic, social and physical areas to the overall detriment of planning, in the past at least, because of the tremendous emphasis on physical planning. For example, even where planning has been undertaken for the highest social or economic reasons there has been a great concern, both in New Zealand and elsewhere, to further these aims by legislating for the control of the physical constituents of the city or town, the roads, parks, or the bulk and location of buildings, because these are 'easiest' to control.

A more specific example within the definition of physical planning would be the one where a predominantly social and economic problem, such as "slum" housing, is "solved" by redeveloping the physically decayed areas of cities with better structures. This type of policy not only shifts the cause of the problem elsewhere, it even affects the economics of the solution because the gain in housing stock will have to be offset against the accelerated depreciation of housing elsewhere in the city.

It would not be unjust in this and similar situations to say: "The plan of one generation becomes the social problem of the next",⁴⁵ or "today's 'benefit' becomes tomorrow's 'cost'." He points out the relevance and benefits of cost/benefit analysis and then deals with the relevance of economics as a whole to town planning legislation.

⁴² Ibid 25.

⁴³ One should keep in mind that this article was written in 1966.

⁴⁴ Presented at the University of Waikato, November, 1967.

⁴⁵ W. Peterson—*On Some Meanings of Planning*, American Institute of Planners Journal, May, 1966, 140.

Looking at section 18 of the Town and Country Planning Act, 1953, he states:

It could be claimed that this (s18) is of no more help in deciding what factors are to be considered in assessing a proposed work than such high-sounding phrases as 'to the greatest good' or 'the most economic use of land'. . . . However the draft scheme included in the regulations (1960) is much more specific and therefore potentially of greater help: 'Future building in the district will be so directed as:—

- (a) To avoid the indiscriminate mixture of incompatible uses;
- (b) To economize in the servicing of the district;
- (c) To maintain the stability of individual property values;
- (d) To maintain and provide amenities appropriate to every locality; and
- (e) So far as is practicable to avoid the encroachment of urban uses upon land of high actual or potential value for the production of food.

These objectives shall be secured as far as is possible by allocating particular areas or zones for compatible uses of land and buildings, by grouping future buildings and other development in the appropriate zone, and in some cases by securing compatibility by imposing special conditions. . . . It would not be stretching the intention of the legislation to make the assumption that by 'economic and general welfare' is meant 'the greatest benefit at the least cost to the community'.

Dealing with property values as a measure of success, Pritchard summarises the explanation of the pattern of land uses in urban areas as follows:

- (a) the functional interdependence of certain activities;
- (b) the profitability of clustering through the sharing of common or public facilities;
- (c) the need for separate facilities such as a port;
- (d) prestige value from the right address;
- (e) similar rent paying ability, which equates with space requirements;
- (f) miscellaneous factors such as inertia, historic accident or physical difficulties of the site.⁴⁸

Pritchard concludes⁴⁹ that at present (then 1968):

. . . we have only the crudest techniques in use to analyse the land use activities that are carried on in urban areas. We only know in general terms a few of the characteristics generated by land use activities, and we are *in no way certain* whether these are economically desirable or undesirable from a planning point of view. . . . What should be clear is that some economic aspects that at present we know little about (sic) could be immensely important in producing improvements in the theory of the subject, and, because of this, those things which planners have considered in the past and which have formed the basis for cost/benefit analysis for various public works, may be far less important in the next few years.

Conclusion

It is hoped that the above treatment of some aspects of the ways in which Economics can be of use to Town Planning demonstrates that it cannot be disregarded as a force and as a basis for decision-

⁴⁶ T.P.Q. September '66, 14 at 15.

⁴⁷ *Ibid.* pp. 16-17.

⁴⁸ Excerpted from D. H. Davies 'Land Use in Central Cape Town', Longmans, S.A., 1965.

⁴⁹ *Ibid* 18.

making. The treatment of the economic aspects have not been exhaustive,⁵⁰ but those aspects omitted were left out for reasons of space rather than that they do not warrant close consideration.

By explaining fairly fully the important theories of price and value, efficiency, and cost/benefit analysis and the faults of the perfect market and perfect competition expectations, it is hoped that it has been shown that the use of economics by town (and country) planners is essential and of substantial importance to the subject of Town Planning as a whole. It is submitted that it is desirable that Town Planning remain flexible⁵¹ to allow a balanced urban environment while maintaining rigid principles against the unfettered development of a free enterprise market.

The main thesis of this paper is to show that without the disciplines of economics to advise it and law to control it, planning cannot hope to survive in the future when population and commercial and industrial growth will have to be provided for and when the evils of slums, pollution and their related problems will manifest themselves even more forcefully upon the urban environment. Similarly, without the survival of planning, it is doubtful whether cities will be able to survive.

Finally, it is submitted that to attain and maintain a maximisation of general welfare for the urban community, the disciplines of law, economics and planning must remain intertwined in the field of Town and Country Planning each to be studied, understood, aided and used to the best advantage by others. Obviously, in some cases, it may be impossible to obtain optimum economics in a metropolitan environment subject to many other pressures and a history of bad or non-planning. It is to be further hoped that the old idea that "this generation's planning is the next generation's problems" can, to some extent be proved unfounded.

⁵⁰ I have not included such aspects as compensation, betterment, supersession, optimum growth and their relation to specific areas of planning. For further reading vide: E. D. Fraser, *'Does Optimum City Size Equal Decentralization?'*; T.P.Q. March '70, 18; June '70, 30; Dahm's *'Economics of the Public Transport System'*, T.P.Q. '70, 24; Dudding, I. H., *'Likely Increase in Motor Vehicle Ownership'*, T.P.Q. March '69.

⁵¹ Vide C. van Eck on the need for flexibility in Town and Country Planning, T.P.Q. March '70, 24; June '70, 30. vide also Fraser's article, *op. cit.*