The landowners claim that the remaining area cannot be valuated before it comes into existence and therefore the concept "relative value" is meaningless. In their opinion, depreciation in the value of the remaining plot means that the remaining land is worth less (n building rights) than the whole plot was worth prior to expropriation. Or, alternately, the monetary value of the plot after expropriation should be equal to its monetary value before expropriation, even where there is no reduction in building rights.

Notes

1. Alterman, R., "Land Betterment Taxation Policy and Planning Implementation", Urban Law and Policy, 1979, pp. 201—204.
2. Mary E. Brooks, "Mandatory Dedication of Land or Fees in Lieu of Parks and Schools", in Planning Advisory Service, No. 266, Feb. 1971, Chicago.
3. Lincoln Institute of Land and Policy, Roundtable Policy Analysis Series, No. 201, 1978, Incentive Zoning in New York City, a cost Benefit Analysis.
4. Nehama Ami-Rav, Resubdivision of Land as a MeMans of Urban Plan Implementation — M.Sc. Thesis, in Urban and Regional Planning Program, Technion, Israel, Institute of Technology, Haifa, Aug. 1980.
5. See High Court 147/74, Spolinsky vs. Minister of Finance and others, P.D.I. 29(1), p. 421. In this case the Minister of Finance expropriated large areas of land in Jerusalem, parts of which were later used as sites for luxury apartment. Some of these apartments were later sold to foreign residents in foreign currency. The court saw this as a legitimate public need to increase the city's population and to raise the State's income in foreign currency.
6. See High Court 30/55, Commiettee for Defending the Expropriated Lands of Nazareth and others vs. Minister of Finance and others. P.D.I. verdicts 9, p. 1261, Judge Vitkon P. 1264.
7. For details regarding this affair, see High Court 282/71, Binyan vs. Minister of Finance, Israeli Verdicts, 25(2) p. 466.
8. Civil Appeal 268/70, City of Ramat Gan vs. Benjamin Tick, Verdicts, 25(1), p. 87.
9. Civil Appeal 377/79, Edith Pitzer and others vs. The Local Planning & Building Commission of Ramat Gan.
10. High Court 43/79, Lily Goldberg vs. Local Planning & Building Commission of Greater Tel Aviv, P.D.I. 33(3) p. 122.

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cut program that defines and determines the public functions needed in a particular area. The standard approach makes the maximum legal rate of expropriation the prevailing norm instead of tailoring it to realistic needs.

In addition, the practice prevalent in some local authorities, whereby land is taken for public purposes over and above the 40% rate, in return for higher development rights, should be completly eliminated. Such procedures are quite negative from a planning point of view in that they mar the character and goals of the plan that applies to the area.

(E) All the parties questioned agree that the legal rate of expropriation does not fulfill those public needs that tend to rise with the rise in building density. However, the landowners claim that planning should be seperated from expropriation. In an undeveloped area it is the landowner's interest to supply land for public use. However, to them the present rate of 40% is an unbearable burden on the landowner and this rate should under no circumstances be increased but rather decreased.

On the other hand, the planning establishment would like to change the law so as to enable an option of a graduated rate that would rise with increase in planned density. This approach was recommended by the National Planning and Building Council and is similar to the internal procedures adopted by the National Lands Administration.

(F) Most of the interviewed agree that a clear definition of the method for calculating building rates is required and should be included in the Planning and Building Law. The preferable method should be calculation on the basis of the net area after expropriation. Those representing the landowners add, though, that in the case of spot expropriation in a build-up area, developing rights should not be reduced so as to maintain the principle of fairness in dividing the burden of expropriation.

(G) There is a need for a court decision or other means of clarification as to the meaning of the final part of clause 190(A) (1) of the Planning and Building Law, regarding depreciation in the value of the remaining plot. The planning establishment recognizes depreciation only when the **relative** value of the remaining are is reduced after expropriation.

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This clash of interests reflect two opposing attitudes. The persons representing the landowners all strongly believe in the principle of private property, while the public planning institutions all believe in the right of the State to restrict the individual in the name of the "public good".

(B) According to all interested parties, the law regarding the definition of purposes for which land may be expropriated without compensation must be corrected. All group representatives agreed that a more specific definition is needed, one that will limit 'public purposes' to not-for-profit uses. The policy as regards facilities run by non-governmental bodies is not defined well and should be clarified.

The attitude of the planning establishment is that the definition the permitted purposes should be widened to include additional public functions, such as municipal institutions, that today are not included in the list of purposes for which expropriation is possible. This includes municipal government offices, courts etc. The landowners, on the other hand, do not want to widen but rather to narrow the above list to those functions from which the landowners may benefit directly by development of the area. As to spot expropriation, the landowners claim that the only purposes allowed should be those included in clause 220 of the Lands Ordinance (roads, playgrounds) as only with those purposes does the value of the remaining plot rise, thereby compensating somewhat for the expropriation.

(C) There was no clear-cut position on whether there should be differences in application of expropriation related to the different levels of plans. The fact that in Israel there exists some confusion as to the difference between an outline (master) plan and detailed plans makes it difficult to take a definite stand on this issue. It was ascertained from the findings, that the additional land required in planning of an entire urban area should be taken into account. This "loss" should not be subtracted from the land necessary for neighborhood needs.

(D) According to all the groups, the direct ad-hoc approach of expropriationg 40% of each plot should be eliminated. Expropriation should be invoked only on the basis of a clear-

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land may be expropriated without compensation encompasses the list of public land uses that in your opinion are needed for urban planning? And within this context:

What is the proper definition of "public"?

(B) How well does the list of public needs for which it is legal to exact land, distinguish between the different needs that arise from the different levels of planning (neighborhood urban, regional, etc)? Is it desirable to differentiate between them?

(C) What are the various methods by which planning authorities carry out the expropriation without compensation and what are the planning implications of these? Which ones do you prefer?

(D) How fully does the rate of expropriation without compensation (40%) answer the needs for public land? This question has two sub-questions:

1. The implication in terms of lack of land for public facilities.
2. The implications in terms of surplus of land for public facilities in certain areas.

(E) How fairly does expropriation without compensation distribute the burden of expropriation? This question refers to: the issue of depreciation of the value of the remaining land, the issue of calculating the building rights of a plot according to the 'net' and 'gross' approaches, and the issue of spot expropriation.

Identification Of The Positions Of The Interested Parties And General Conclusions

The set of questions were put to the representatives of the various groups concerned, on the assumption that identification of variety of attitudes and viewpoints would clarify the picture and point to those parties' interests. The conclusions here were the following:

(A) The attitudes of the groups that were interviewed reflect the clash of interests between the land owners on the one hand (both private owners and the Lands Administration) and the public bodies related to public planning on the other hand. This dichotomy applies to almost every issue regarding expropriation without compensation.

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procedures, some based on "gross" and some on "net' densities, i.e., some being based on the area of the original plot prior to any expropriations, and some on the net area of the plot after expropriation.

Identification Of Objectives And Questions To Be Clarified

Expropriation for public purposes as well as the option of exacting up to 40%of a plot without compensation are major planning tools in Israel. Expropriation is a means of achieving objectives related to land policy. It goes without saying, however, that different bodies have different attitudes towards various objectives and each has its own set of priorities based on the interests as will be shown below.

The following is a list of major objectives of exactions policy:

A) Procurement of the needed amount of land for public purposes, in the right place and at the right time, with enough flexibility to be applied to different uses as necessary.

B) Maximal fairness in expropriation.

C) Minimal infringement on the individual rights.

D) Efficiency: the ability to acquire land for public purposes quickly and without delays.

E) Minimal cost to the public.

F) To enable public and court supervision.

G) To constitue a positive means for implementing local plans by providing incentives for public or private development in the desired and at the desired timing.

In order to evaluate Israel's policy of expropriation without compensation in the light of these objectives, a set of questions has been identified which has been used to focus on the position and opinions of the various interest groups and parties.

The set of questions were presented in an interview to key people representing each interest group. These groups included: Lawyers representing private landowners, local Planning and Building Comissions, District Planning and Building Commissions, the Lands Appraisal Department of the Ministry of Justice, the Planning Branch of the Ministry of the Interior, and the Department of Planning of the Lands Administration.

The questions included the following :

(A) How well does the legal definition of public needs for which

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Prior to this amendment, it was possible to expropriate parts of the same plot time after time. After the amendments, in order to calculate the total amount of land to be expropriated, it is necessary to include all the areas that were expropriated at various dates and according to the various expropriation laws. The permissible percentage must be calculated based on the entire area of the original plot before the original expropriation, while ignoring any change in ownership, resubdivision or unification with other plots.

C) The question of how expropriation is related to expropriation without compensation was recently raised before the Supreme Court. [9]) In rejecting the appeal, the court ruled that when an entire plot is expropriated for a purpose for which it is possible to expropriate land without compensation, payment may be made only for the percentage of land over and above that which can be expropriated without compensation. 'Against our will we must admit that the law requires, in effect, a "property tax", whereby each landowner must donate 25% (or 40%) of his land for public needs".

D) The Value of the Remaining Land. The latter part of clause 190(A) (1) of the Planning and Building Law says that no part of a plot may be expropriated, even with payment, if as a result the rest of the plot depreciates in value. The question arises, what does depreciation in the value of the rest of the plot mean ? We can conclude from the decision in the **Lily Goldberg** case ([10]) that depreciation in the value of the remaining plot means reduction in building rights. At the same time the court did not define what reduction in building rights means. Would calculation of building rights based on the net area of the plot (after expropriation) rather than on the gross area be considered a reduction in building rights ? Or perhaps only a reduction in the minimal size of a developable plot or a disfiguration of its regular shape would be considered depreciation in the value of the remaining plot?

This issue bears some important implications for planning, which will be discussed later.

E) Calculation of Building Rights : This is one of the most problematic issues. The method to be used in calculating building rights (usually floor area ratios) has never been spelled out in legislation. The planning establishment has developed a variety of

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paving a new road or widening of an existing road, and development of a playground or recreation area.

Clause 190(A) (1) of the Planning Law expanded both the possibilities of expropriating land without compensation and the uses for which land may be taken. These uses actually include most conceivable public needs, at least on the neighborhood and local level. It should be noted that the definition of 'public needs' in clause 188 is even more general, and only part of these are included in clause 190(A) as legitimate reasons for requiring exactions. In addition, clause 190 (A) instructs that every time the word "quarter" appear in clause 20, of the ordinance "four tenths" should be substituted. This means that is is possible to require exactions of up to 40% of the given plot, instead of the 25% in the Lands Ordinance.

These differences distinguish between the two types of expropriation without compensation as emphasized in the decision re. **Benjamin Tik** [8]). The authorities must choose only one of the ways possible when expropriating land.

These differences point to the fact that when expropriating land for a public use that has been designated in a statutory plan it is advantageous to the local comission to base itself on the Planning and Building Law. However, where the expropriated land is not slated for public use in any master plan, it is necessary to rely on the Lands Ordinance.

Issues Arising from the Laws: Despite the relative clarity of the list of uses for which exactions are allowed in the Planning and Building Law, there are still a number of unresolved issues.

A) What is the definition of the term "public needs" as it appears in clauses 190(A) of the Planning Law? Does "public" refer to the type of service given, or to the persons who operate it? In other words, can land be expropriated for "public" type activities supplied by non-governmental authorities ?

B) One of the more interesting issues pertains to the cumulative total are allowed for expropriation without compensation. According to the Land Ordinance (clause (20(1)), the "plot" from which the percentage of land expropriated without compensation is to be calculated, is defined as all contiguous land under one ownership.

In 1964 a law was passed to amend the Lands Ordinance:

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Methods of Expropriation: The Land Ordinance defines two types of expropriation: One is where the Minister of Finance undertakes expropriation of his own initiative or at the request of a second party (Clause 22(1)). The second way is where this authority is granted by the Minister to another party (Clause 22(2)). The 1965 Planning and Building Law in clause 190A authorizes the local Planning and Building Commission to expropriate land, but the actual expropriation is carried out with the aid of the Land Ordinance.

The Owner's Rights — Each of the two laws defines differently the owners' rights in expropriation. Under the Lands Ordinance, the Minister of Finance has almost unlimited authority over expropriation with compensation, and the private land owner has almost no way to defend himself or herself. Even when the expropriated land is later obviously being used for private commercial purposes, the courts have usually not seen fit to order the authorities to return or even to resell the land at the market price to the former owners. 7)

Under the Planning and and Building Law, however, the owner has several ways to defend himself. Clauses 195 & 196 give the owner first option in buying back the land where the use of the land has changed from that which was declared when the land was expropriated to an unpermitted category. If the land was expropriated without compensation, the owner can choose between payments or return of the land.

In light of these differences between the two laws, it is not surprising that the authorities prefer to apply the Lands Ordinance when expropriating land with compensation, and to apply the Planning and Building Law when expropriating land without compensation. The higher rate of expropriation allowed is naturally the reason for the latter tendency.

Exactions Under the Lands Ordinance and under the Planning & Building Law — The right to expropriate land without compensation is vested by the Planning and Building Law (Clause 190(A)). This clause is based on clause 20(2) of the Lands Ordinance which states that compensation will be paid if the amount of expropriated land is larger than a quarter of the entire plot. Then, the land may be slated for two types of users only :

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may be expropriated. The body authorized is the local Planning & Building Commission.

In the case of expropriation with compensation, the Lands Ordinance does not define the objectives for which it is legal to expropriate land. Clauses 2-3 in the Lands Ordinance allow for Finance Minister to expropriate with compensation, any land he or she considers necessary for public use. [5]) The Planning and Building Law, on the other hand, differentiates between the objectives for expropriation with compensation and those without, but in either case the list is defined and limited.

The Relationship with the Planning Process : Procedures originated with the Lands Ordinance are not dependent upon the existence of statutory planning procedures. The Finance Minister is authorized to expropriate land or to authorize some other party to do so, even where the land is not slated for expropriation in any statutory plan. Under the Planning & Building Law, however, expropriation both with and without compensation is subject to planning procedure. Clause 189 in the Planning and Building Law permits expropriation only when the land is slated for public use in a statutory plan and only when such use falls within one of the categories for which expropriation is permitted, as listed in clauses 188 and 190.

The List of Public Purposes : The Planning and Building Law explicitly defines the categories of public uses for which land may be expropriated, both with and without compensation (Clauses 188 and 190). No such definition exists in the Lands Ordinance for land that is expropriated with compensation and the definition of 'public use' is left to the discretion of the Minister of Finance.

According to the legal precedent, the Lands Ordinance grants the Minister of Finance the absolute discretion in this matter. Supreme Court Judge Vitkon [6]) comments : "It is not our task to decide whether a use for which land is required is legally considered a public use, since according to clause 5(2) of the Land Ordinance, publication of the notice is overriding evidence that such use is public, and is not to be questioned". On the other hand, the purposes for which land may be expropriated **without** compensation by means of the Lands Ordinance, are well defined in Claus 20(2). The only purpose permitted are: roads, playgrounds and recreation.

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These areas suffer from a lack of land for public services due to the rapid population growth and obsolete methods of land subdivision.

Another problem is the fact that land owned by the State does not guarantee that land be automotically acquired for municipal public uses. The various government agencies vie with each other over acquisition of land for their particular purposes, and the local authorities often lost out. Local authorities thus often find it necessary to 'expriopriate'' from the Israel Land Administration, rather than from private owners. This situation raises questions regarding the relationship between the Administration and the local authorities. These two bodies do not always see eye to eye on questions of how and when to use exactions. Against this background, expropriation without compensation stands out as one of the few tools that local authorities have for acquiring valuable assets, in a process that they to a large extent control — the statutory planning process.

In order to analyze the uses and limitations of this tool, we shall now present its legal framework. Analysis of the legal situation leads to the identification of various questions which bear implications for planning, and which require further clarification.

Land Expropriation In Israel — The Legal Framework

The State's right to expropriate land is defined in a number of laws. There are two principal legal arrangements that apply to urban planning as regards land expropriation. The first is the 1943 Lands Ordinance (Appropriation for Public Purposes), usually applied in cases of "regular" expropriation (with compensation. The second is the 1965 Planning and Building Law which is usually invoked for expropriation without compensation but also includes an arrangement for "regular" expropriation. The interrelationship between expropriation with and without compensation in these two laws will be presented next.

The authority to expropriate land: Each of the two laws provides a different authorization. The Lands Ordinance grants the Finance Minister general authority and almost unlimited discretion regarding expropriation of land with compensation. On the other hand, the authorization given by the planning and Building Law is defined and limited by a finite list of objectives for which land

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market distributes land according to economic criteria only and does not supply public goods adeqately. At the other extreme is nationalization of all the land so that the problem of expropriation prior to development does not even arise.

Land Expropriation Without Compensation

Public authorities in countries whose policy is based partly or solely in private property, usually have the power to expropriate land for public purposes when needed. In most cases, however, expropriation of land is legal only when compensation is paid. Land expropriation without any compensation whatsoever is much more rare.

In both England and Israel, the right to compensation, though not enshrined in a constitution, is grounded in legal precedent, whereas in the U.S., this right is stated in the Constitution. Expropriation without compensation is not considered legal in the U.K. or the U.S., but alternative methods exist for acquiring land for public needs, with the same effect.

One method is 'Dedication' defined as land donated to the city by the developer along with complete ownership rights.[2]) "Fees in Lieu" is another method where monetary payment is made in lieu of land. Payment is based on the amount of land that is usually given, or that should have been given. In "Incentive Zoning", the private developer is encouraged to allot land for public use or to build public services, and in return receives various benefits, such as higher building percentages (Roundtable Policy, 1978).[3])

In Israel, land expropriation without compentation is one of the more important means of plan implementation and is in fact almost the sole means used by the planning authorities. Israeli law, as opposed to that of the most Western countries, permits expropriation of up to 40% of the plot for public purposes. Such a high percentage of expropriation without compensation grounded in a statute is extremely rare.

Ostensibly acquisition of land for public needs should therefore be a very easy task in Israel. Furthermore, most of Israel's territory (about 92%) is under some kind of public ownership and under the jurisdiction of the National Lands Administration.[4]) The statistics, however, are slightly misleading. Most of the remaining land is located in the highly populated coastal cities.

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Amnon Frenkel and Dr. Rachelle Alterman

EXACTION OF LAND FOR PUBLIC PURPOSES IN ISRAEL *

Introduction

One of the most important tools that local authorities have for acquiring land for public purposes is dedication of land — also called "exaction of land". This tool permits the local authorities to expropriate for public purposes up to forty percent of the land area designated for development without compensation or purchase.

Exaction of land is one of the most widely and commonly used means of plan implementation and is well defined in the 1965 Planning & Building Law. As such it is one of the more important facets of Israel's land policy.

This article will present an analysis of exactions in Israel, viewing them as a means for implementing planning policy.

Land Policy

Land policy can be defined as public intervention with private property by various means, in order to achieve public goals. [1])

The assumption justifying intervention tnto private property is that land is a pubic asset belonging to the community as a whole, even where it is partially or mostly in private hands. This rejects the view that private ownership of the land confers upon the owner absolute, unlimited rights of usage.

One of the more important and problematic subjects that land policy deals with the procedure by which land is acquired for public purposes. The designers of land policy have various means of implementation at their disposal, from the most radical type of intervention to the less radical.

At each end of the spectrum stands an extreme solution to the problem of acquiring land for public needs. One way is to leave land allocation to the free play of the private market. In this case the needed ollocation is no guaranteed since the private

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* This article is based on part I of a research project entitled "Land Expropriatin", Without Compensation for Public Purposes as a Means of Plan Implementation", by Rachelle Aterman & Amnon Frenkel comissioned by the Land Use Research Institute and carried out at the Urban Center for Urban and Regional Studies at the Technion.

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The Authority and Private Lands

According to the Law, it would appear that the Authority has no responsibility for lands under private ownership.

However, for practical purposes, privately-owned land within the urban boundaries, on which the planned construction capacity is not being utilized, whether fully or partially, puts a heavy burden on the public.

As a result of this under-utilization, the public — through the municipalities or the central government — must install and maintain infra-structure networks and public institutions which are not fully utilized.

As a result of this under-utilization is the increasing movement of urban population to the suburbs, thus damaging the urban fabric; the constant eating away at the limited amount of State agricultural land; and the using up of an increased amount of the Authority's land supply.

The Authority must find a way to increase the use of this private land, whether through speeding up the reparcelling process, as mentioned in the above section on replenishing the land supply, both through initiating a system of taxation as an incentive for doing so and, in special cases, through expropriation for public purposes, as also mentioned in the section on replenishing the land supply.

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It is unreasonable for a lesse of Authority land to pay the public twice for the same improvement — once, according to the Law, to the local authority, and once to the Lands Authority, according to the Authority's rights in the leasing contract.

I recommend that, when Improvement Tax Law becomes operational and the payment goes to the local authority —, the lessee will not pay anything to the Land Authority for improve-portunities, in every case of purchasing the rights for land use at their full value, it is described that the system of tenders and public supply be maintained and expanded.

Expansion of the tender system requires greater involvement by th Authority in the planning and development process, in order to put out tenders for land available and ready for use. This will result in the maximum income and the utilization of building rights in the shortest possible time, benefitting both the lessee and the public.

As the processes for carrying out transactions, it is recom-mended that the present situation not be changed, according to which the builder arranges the payments for land use before beginning construction.

Any arrangement which does not ensure the arrangement of payments before the beginning of construction, and leaves such arrangement of payments to the Authority to a later stage, or combination deals, will mean that a zizable part of the value for land use **will not be received by the Authority.**

In public housing, it is recommended that an investigation be made of the tender system, in which the value of the land is a fixed factor; apartment specifications are fixed; and the compe-tition between contractors is over the price of the apartment to the purchaser. Whoever offers the lowest price, wins.

To ensure the efficiency of this construction, it is desirable that these tenders begin in the range of at least 200-300 dwelling units.

It is recommended that the system be reinforced whereby the land is transferred to the lessee for a **specified construction and development period,** and only upon completion of the work will the lessee be granted leasing rights.

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Annual leasing fees are today based an an annual rate of the unpaid balance of the original value of the land.

I recommend the following arrangement for past lessees, up to the end of the site's leasing period:

In order to ensure national opportunities for the re-use of land, the leasing system must be based on **uniform leasing periods for such site** (according to a "city" or neighborhood building plan" or any definition which will be determined as the work proceeds) and not according to a period for each lessee, as is done today.

This system, of a leasing period **for an entire site,** will allow for an investigation into the use of the site and its re-planning before the end of the period, and will allow a re-thinking according to the new needs. It will thus prevent the deterioration of existing areas such as can be found today all over the world, including Israel (areas of south Tel Aviv, old Safad, Rosh Pinna, Barnea-Ashkelon, neighborhoods in Jerusalem, etc.).

About ten years before the end of the leasing period, the replanning will determine the usage for an additional leasing period, for one of the following ways:

4.1 **Sites which have no change in designation** — an additional leasing period (methods of payment for this period will be discussed seperately).

4.2 **Sites which necessitate total removal** — cancellation of leasing, with no possibility of renewal (methods of compensation to the leassees will be discussed seperately).

4.3 **Sites which have a change of designation for part of the area** — according to the new designation (as stated, to conditions which will be discussed seperately).

5. **Land as an Economic Asset and the Leasing Method**

Land use has great economic value which is influenced both by methods of land utilization and by conditions on the entire market. The values of land use cannot be seperated from the total economic market system.

An Improvement Tax Law was recently enacted expressly determines the rights of the local authority in the entire area of improvements.

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Allocation Policy

In land allocation policy, under the present conditions in Israel, in which interested parties outnumber the allocation opments, on condition that the calculation if the Improvement Tax set by the local authority will be determined in conjunction with the number of years left to the lease, within the framework of the leasing agreement with the Lands Authority. Thus, when the leasing period of the site has ended, all the lessee's rights will end — both the original rights which were paid to the Land Authority and the additional rights for which the Improvement Tax was paid.

The proposed arrangement will prevent the run-around which occurs today in many cases, the search for **"ad hoc"** solutions, and injustice to the public.

It is recommended that the Lands Authority provide the local authorities, especially the smaller ones, with professional guidance in the are of improvements, to ensure payment by those owing such payments.

Long-Standing Lessees

The most complicated area, which represents a public and administrative burden on the Authority, are the long-standing lessees who have not yet been included in the capitalized leasing system.

Should my recommendation set forth in the section of tmprovements be adopted, according to which all payments demanded from the lessee for a change of designation, change of utilization and additional construction will be paid to the local authority, all long-standing lesses will be exempt from these payments to the Authority.

Consent fees paid to the Authority as a result of a rise in the value of the land, minus inflation, must in fact be included in the State Land Betterment Tax. In my opinion, they must not be collected first by the Authority and then be deducted when paying the Land Betterment Tax, as is done today.

The Betterment Tax rates change from time to time, according to the social-economic policy of the government, thus reflecting the democratic process and the absorption of surplus assets.

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7.1 Built-up Housing Developments

To impose on all of them, unilaterally and without additional payment, the capitalization method, up to the end of the leasing period.

7.2 Dwellings with Adjacent Land

Since all those who have taken up leases during the past decade have paid 80% of the leasing fees, and most of those who did so previously have already paid consent fees to the Authority during that period, 80% rights should be recognized for them as well, and capitalization should be made a condition for the balance of the period, at the time of the transfer of rights.

7.3 Industry, Commerce and Hotels

In the cases, which do not involve a relatively large number: to examine each case and allow inclusion in the capitalization method, by deducting the value of payments made in the past, as preliminary leasing fees and consent fees.

8. Financial Significance

It would seem that, in the short-term, my recommendations would decrease the income of the Authority which it transfers to the state Treasury:

Payments for improvements — to the local authority.

Payment of consent fees — as part of Land Betterment Tax.

Elimination of the collection of leasing fees.

However, implementation of my recommendations as a whole will, in the long run, result in a significant increase in the Authority's income, as a result of an increase in the supply of land and its allotment at full value of the use of the land.

In addition, I would emphasize that, within the framework of the Israel Lands Laws of 1960, the Authority was not expected to serve as a conduit for collecting taxes and levies for the Treasury, but to administer the State lands. The acceptance of my recommendations as a whole would represent the best method for administering the lands for the benefit of the State and its inhabitants.

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3.4 Sites of Temporary Construction during the 1950's

Asbestos huts, etc., on land on which it is possible to build about 2½ dwelling units upon relocation of every unit, according to an examination carried out some time ago. The removal of these sites has a public importance in itself, from the human and social aspects, and could also result in land gains.

3.5 Neighborhoods with Adjacent Supplemental Plots

Areas with farm plots adjacent to the houses, which were set up before the establishment of the State or during its first years. These plots of 1—2 dunams were intended to aid the resident with supplementary income. Most of these plots are no longer cultivated, thus making them urban areas for all practical purposes.

Dividing the plots and re-planning the area can provide an important source of land for construction with adjacent land which is so much in demand today.

3.6 Old Cities

In cities where property was abandoned by Arab residents (Jaffa, Haifa, Lod, Ramle, Acco, etc.), there are areas where relocation must be completed, thus allowing both for the rehabilitation of the residents and for the construction of a greater number of dwelling units.

The National Price for Under-Utilization of the Land

★ Under-Utilization of the existing infrastructure (empty schools in south Tel Aviv, for example).

★ The gradual move to the surburbs enlarges the network of highways, increases transportation costs, and is a waste of work hours and national resources.

★ Constant inroads into agricultural land.

The Authority must increase its organizational and financial involvement to advance the above matters, in order to place at the public disposal lands available within urban sectors.

4. Reuse of Land

Together with the activities mentioned above to make land use more efficient, consideration must be given to changes which have occurred over the years in land uses — division in ownerships, unforseen needs, etc.

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of the total site for "public use", according to its meaning by law)

f. Long-range planning to prepare a planned supply for all types of uses.

g. Preparation of uncultivated land for agricultural cultivation

h. Completion of basic infrastructures as 'advance development" of sites planned for development in the coming decade

i. Planning and preparations for draining the sea in priority areas along the coast.

All income of the Authority must be directed towards replenishing the supply of land and for its development.

● Making Land Use Efficient

Wasteful land use in past years and changes in life styles which occurred in the past decades have resulted in large land areas, within urban boundaries, which are at present under-utilized.

A survey prepared in 1973 for the Ministry of Housing and for the Authority by Architect Z. Hashimshoni, as well as other investigations undertaken, showed that the under-utilization of land, within the framework of **approved construction plans, encompasses hundreds of thousands of units.**

Nonetheless, it must be clearly understood that this land supply is not readily available, and without comprehensive action this unused land supply cannot be placed at the disposal of builders.

The above land supply is spread out within the following types of areas:

31. Empty Private Plots within the Built-up Urban Area

these plots, which represent a family 'savings', pass from generation to generation and benefit from the public investment in urban development.

3.2 Partially-utilized Plots

Plots located in areas now designated for dense construction, on which stand one-story houses, mainly in cities which were the original settlement of the coastal and inland areas.

3.3 Areas Requiring Planning

A parcelled area which cannot be built upon at present, and which requires unification and re-parcelling without the owner's consent. This is being done slowly (areas across the Yarkon, south Holon, Bayit Vegan in Jerusalem, etc.)

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Micha Talmon

GUIDELINE FOR LAND POLICY IN ISRAEL

(Urban Sector)

● General

Land is the basis for all areas of human activity.

The State's supply of land must fill the needs of this activity for future generations.

The land policy must find the balance between the daily, current needs and the short — and long-term needs, within the limitation of the State's borders and its ever-increasing needs.

The constant rise in the standard if living and the increase in population necessitate increasing use for public purposes, e. e., sites for recreation, education, entertainment, roads, ports, airports, and security installations, in addition to housing, commercial, industrial and public service needs.

The population in the urban sector has a clear interest in preserving the agricultural lands located between urban settlements, as green belts and recreation sites, in addition to the national interest of agricultural produce and its importance.

A discussion of land policy must take into account the unique aspects of the land :

★ Land is an entity which cannot be manufactured.

★ Land is an entity which cannot be transferred from area to area.

★ Land has no value in and of itself, only in relation to planning and usage factors.

● Replenishing the Land Supply

The need to replenish the land supply necessitates a dynamic and long range policy over many years in the following areas:

a. Preservation of possesion, fighting against incursions and seizure of lands.

b. Constant aquisition according to a long-range plan

c. Unification and parcelling of land without the consent of owners of urban sites, the non-development of which causes urban and economic harm.

d. Allotments for public purposes of private sites in priority locations (through granting of legal rights to the **development**

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high degree of flexibility increase the risk of land being appropriated by economical or political pressure groups within or without the community.

A mechanism of checks and balances is needed therefore to prevent deterioration of the land-use system. Such mechanism must be linked to a continuous process of education and dissemination and should be understood and approved by the leading elements of the community.

It is difficult to predict the development trends of social patterns. These depend on the human and social progress of the settlers, their prior behavioral traits, and the general socio-political environment. The spatial patterns, however, should be adaptable to any associative forms that may be opted for the future.

This dictates a high degree of flexibility in the physical plans, in order to enable a successive transition from subsistence to specialized farming, providing at the same time the conditions for communal development. An adequate land distribution system is imperative for creating a framework in which the smallholder may eventually be able to operate within larger economic units.

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The pace of land distribution is another important element. Turning over the full land quota to the settler right at the outset of the project, generally implies increased output through expanded acreage, rather than higher productivity per unit area through intensification. While the first approach may be easier to implement where land is available, the fact is often overlooked that it may take years before the entire land allotment is brought under cultivation. This time lag can be put to use for applying an incremental development process which is better suited to the institutional and financial capacity of the executing agency.

Beside budgetary constraints the local potential for absorbing changes may also require a moderate pace of growth. Too rapid an increase of income may outrun the settlers' aspirations and stifle propensities for higher productivity. In effect, the hurried transition from subsistence to specialized farming and the premature introduction of labour-aving devices have often been the cause of real or disguised unemployment.

The described problems point to the need for improved land allotment techniques with a built-in element of flexibility that wil make them adjustable to the changing requirements of modern farming. For example, by turning over only part of the planned land quota to the settlers, with the rest held pending until the first part is fully exploited, the savings in land, infrastructure and upkeep, could be used to incorporate more settlers into the scheme, thereby creating larger communities and thus achieving a wider distribution of benefits.

This may enable, in return, better services which are indispensable prerequisite of successful rural development. The balance of lands to be added later, may be located when necessary beyond the usual perimeter, since it may be expected that the farmers will be able progressively to overcome larger distances to work. A related aspect is the concentration of agricultural lands in blocks of homogenous crops and the equitable distribution of holdings, both in terms of soil quality and distance to work.

The wielding of land resources for the purpose of ensuring equity and flexibility, introduces another aspect which is essentially a social one. Even though planners may be in position to impose a given spatial or organizational system, the outcome will depend largely on the collaboration of the settlers and the various executing agencies. Also, planning approaches which pursue a

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Prof. Jacob O. Maos

LAND DISTRIBUTION IN SMALLHOLDER SETTLEMENT SCHEMES IN DEVELOPING COUNTRIES

Various developing countries with abundant reserves of virgin land usually apply land resources, rather than capital, as the main production factor for the settlement of smallholders (family farms). Although admissible, economically speaking, such an approach must be judiciously used in the case of peasants who are still in the subsistence stage and on a comparatively low technological level. The issues involved are distances to fields and services, as well as equity in the distribution of resources, all of which affect the proper functioning of the individual farming family in the transition from subsistence to the market-oriented farming, and the viability of the rural community as a whole. These aspects merit particular care because of the high cost of infrastructure involved in the opening of new lands and the irreversibility of physical planning decisions once implemented and converted into rigid facts.

In general the extent of land allotted per farming family is calculated according to given income targets, to be reached when the project is fully consolidated. Such income targets, however, tend to be subject to conflilting criteria (e. g. maximization of benefits over costs, versus maximum spread of benefits). Frequently, excessively-sized holdings are offered as an incentive for attracting settlers. As a result, areas and distances become inflated to the point of rendering the project inoperative as a human settlement system, aggravating the notorious rural problems of low densities, lack of communication and feeling of isolation.

The quantification of land inputs, similar to those of labour, capital and management, is possible only when accurate data are available or when the can be reasonably assesed. The size of holdings can then be calculated by means of production functions, based on optimum intensities of land use and estimated parameters of utility. In practice, however, the size of holdings is defined arbitrarily, on the base of hypothetical data. In view of the uncertainty regarding agro-economic factors, and the unwillingness to gamble on advancing farming methods, planners prefer to err on the large side when determining the size of holdings.

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flexibility of substitution is per unit, there is no influence of land price on its component share of construction costs.

The above analysis is based on the assumption that it is the contractor who determines the density according to profit considerations, as in Houston (Texas). But in reality, master plans exist which usually determine the density in advance. It thus appears that the above analysis is not relevant. However: first, density is taken to mean the input of the rest of production factors per land unit.

I have heard that contractors complained that they are being asked for excessive prices for land supplied for single-family houses built in Ramat Aviv Gimmel. From my analysis it seems that this complaint is unfounded. There is a justification for the construction of single- family houses if there is a specific demand for land for them, which provides compensation for income which could have been received, had the contractors built upon it the standard density of 16-story buildings. If there is no such demand, there is no prior justification for allotting part of the area for the construction of single-family housing in such an exclusive location. In the absence of such great demand, it appears strange to build single-family houses in Ramat Aviv Gimmel and high-rise building in Ramat Hasharon when considering the commuting distance to the center of Tel Aviv.

● Summary

My position concerning the question of the land component in construction costs can be summed up in three points:

1. The increase in land price is an unavoidable result of the increase in the demand for housing.
2. The increase in land prices does not necessarily have to result in a parallel rise in the land price component in construction costs, and in principle can result in a decrease in the land component.
3. It is possible that there has been an unreasonable rise in the land price component but, if so, it was caused by a rigidity in master plans and their unsuitability to social needs.

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$$W = \frac{Lr}{Kp + Lr} = \frac{1}{\frac{Kp}{Lr} + 1}$$

where W = land price component in expenditures
L = amount of land
K = rest of production factors
r = price of the land
p = price of the rest of production factors

As can be seen, the land price component in the construction costs rises with the price of the land, and with the relation of the land to the rest of the production factor. In other words, the land component in the costs depends in the relative price of the land, and in inverse proportion to construction density (in the sense of construction costs per land unit). It is thus clear that, within a given area, the land component in construction costs will continue to decrease as the density increases.

It is no wonder, therefore, that if in Ramat Aviv Gimmel, 16-story buildings and single-family houses are placed side by side, the land price component in the latter must be very high.

The land price increase, which I explained previously, contributes of course to a rise in the land price component in building costs, as long as the density in not increased by much. But if the building density increases sufficiently as a result of the increase in the cost of the land, it is possible that the land price component will decrease and not increase. This is dependent on the degree of interchangeability between land and the rest of the production costs, both in the production of apartments and apartment consumption. In other words, it depends on the degree to which a housing consumer is willing to have a larger dwelling area in exchange for density, and to what degree a contractor can build a given number of housing units more densely without raising expenditures.

From a formal mathematical point of view, we define this exchangeability as flexibility of substitution. The mathematical formula states: if the flexibility of substitution is higher than one then the increase in the land price will cause a decrease in the land component. If the flexibility of substitution is smaller than one, the rise in land price will cause its share to be larger. For example, if the production function is of the Cobb-Douglas type, where the

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of view of productivity or accessibility) An increase in the supply, which could contribute to a decrease in the rent, can be accomplished only by increasing productivity. Ricardo refers to the physical productivity of the land: Von Thuenen and the urban models refer to increasing the area within a given accessibility to transportation. In other words, an improvement in the transportation system in these models is comparable to an increase in productivity, which causes an increase in the land supply. (In more sophisticated urban models, the land supply is defined as the local amount of land at a level of accessibility which does not exceed a certain level; i.e., the supply of urban land is defined as the total amount of land which is 20 minutes, or half an hour, or an hour, etc., distant from the centers of activity. If we attempt to apply this model to the urban reality of Jerusalem, this means that the land supply will increase and apartment prices will decrease, if the amount of land which can be developed within an area 20 minutes' drive from the city will increase, everything else being constant.)

It is clear that the increase in supply can also be attained by releasing for construction accessible land held for speculative purposes. (This does not mean, of course, that **a priori** there is no justification for holding onto accessible lands for spculative purposes, since holding land reserves in urban centres is an important subject in itself, related to the dynamics of urban development.)

Up to now I have discussed the theory. Through an empirical analysis of the causes of the rise in apartment prices in Israel during 1959—1975, we did indeed find that the increase in income/credit for housing and the increase in the urban population which created an increase in the demand for housing, were the main factors in the rice in apartment prices. The rise in land prices was a result of these factors.

● Land Price Component in Construction Expenditures

I shall now return to the specific problem of the land price component in construction costs. This factor is expressed in percentages. It is arrived at through the calculation of the relation between the cost of the land and the total costs, or between the expenditures for the land and the price. The expenditure on the land is arrived at by multiplying the quality of the land by its price, and its division by the total expenditures:

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Moreover, the fields which were previously marginal will become profitable and will enter the pool of cultivated land. As explained, the rent increase is a result of an increase in the demand for the agricultural product (for example, because of an increase in the population). But from the point of view of the entrepreneur who manages the field (hires workers and rents the field), the price rises because of an increase in expenditures, because now he leases the field for a higher rent.

I will discuss an urban model below, but even now the analogy to the housing market can be seen. The manager of the field is the contractor, **from whose point of view** the rise in the rental fees is what caused the rise in expenditures and price, and not vice versa.

Von Thuenen's model is similar in principle to Ricardo's model, but is closer to the urban model. Von Thuenen assumes that the fields are identical from the standpoint of productivity, but are located at varying distances from the market. A more productive field is one located closer to the market, allowing for savings in transport expenditures to the market. A "marginal field," in Von Thuenen's model, is a field so distant from the market that it is not feasible to cultivate it at existing prices. An increase in the demand for products causes a rise in prices, and cultivation is begun on marginal fields, i.e., fields located at the fringes of the area under cultivation. Again, like Ricardo's model, the rise in the price of the product raises the profits of the owners of fields near the market, and thus the rent. The managers of fields which are not marginal are forced to pay a higher price for the land they are leasing.

The urban models, which were developed at the begining of the '60's, are based on Von Thuenen's model. The simplest of them is Mowring's model. According to this model, a balance is fixed so that the price of an apartment in every place near the center is equal to the savings in transportation expenditures, in comparison with someone living on the periphery of the urban area. With the increase in demand for housing, the urban area expands and the periphery moves further away. Thus, the savings in transportation expenses grow, and with them the rent.

One motif is repeated in all these models: the source of the rent increase is the increase in demand, while supply remains fixed; a given quantity of land at a given quality (from the point

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It can thus be seen that the construction expenditures included in the Index did not cause the price increase of the apartments. The increase was related to the other components of the apartment price: the land and profits. Since the construction market is a competitive market (many contractors), it is difficult to assume that the entrepreneurs' profits would be higher than the normal profit rates.

Thus, the remaining factor, whose increase "explains" the rise in apartment prices, is the land. The impression is given, therefore, that the source of apartment price increase can be traced to the policy whereby land is supplied for construction. But this impression is false, as both theory and empirical analysis show.

The bases of economic theory for determining land rent can be found in the models of the classicists David Ricardo and Von Thuenen, who lived in the first half of the 19th century. Their model posits the existence of competition between those working the land (entrepreneurs) and the owners of the fields. The demand for agricultural products was determined by the income and size of the population. The supply was determined by the wages for labor and the productivity of the fields. When the price for agricultural produce was determined, and given the labor wage, every entrepreneur could calculate the profit he could obtain from a given field. This profit is equal to the agricultural rent. If the rent were lower, the entrepreneur would compete to get the field for cultivation, and since the owner of the field would lease it for the highest price, the rent would rise to the level of the profits. If the rent was higher the profits, no entrepreneur would be prepared to lease the field, and its owner would be forced to lower the rental fee.

The rental fee for fields is different, of course, for each field, according to its productivity. A marginal field is one for which productivity is so low that it would be impossible to make a profit by working it.

What happens when demand rises as a result of the increase in population or income? According to the model, the price of the product will rise. Thus the profits which can be gotten from each field will rise, as will the rent which the entrepreneur will be willing to pay the owners of the fields, and thus the rent will rise.

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Prof. David Pines

THE LAND COMPONENT IN APARTMENT PRICES

Introduction

I shall be discussing the land component in apartment prices or in construction costs. Some define the problem more formally as the proportion of expenditures on land to the total construction costs. I shall also refer to this specific definition further on, but at this point ti should be emphasized that there is no significance to the land component in this formal sense. If we know, for example, that the land component is today 25 percent, and five years ago it was only 23 percent, this would not indicate, with certainty, a negative development. Moreover, we cannot even attribute this to the increase in land prices. I shall explain this in more detail below.

Relation between land prices and apartment prices

I want to devote the main part of my lecture to the question of the relation of the land price of the apartment, or, more specifically, to what extent the increase in apartment prices is a result of a rise in land prices caused by an incorrect land policy. It is but natural that land users (i.e., contractors) will want to receive "a lot of land, cheap," and will accuse whoever sells them land at prices which are continually rising, for the increase in apartment prices.

However, when one examines the question more closely, it turns out that it is not the one selling or leasing land for construction who is the "villain" responsible for the price increase. On the contrary, the opposite relation holds: the rise in apartment prices, which is a result of the increase in demand, is the factor causing the increase in land prices, and not the opposite.

At first glance, it appears that the relationship is the opposite. Between the years 1959 and 1981, apartment prices rose at an average annual rate of more than 4% over the rate of the increase in the Consumer Price Index. In other words, the real price of apartments rose at an average annual rate of more than 4%. In terms of the "Standard Consumer Basket," an apartment in 1981 costs 2.4 times the same apartment in 1959. During the same period, the Index for Inputs for Residential Construction, which does not include land and profit, rose of one percent only at an everage annual rate.

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